

DATA SUMMARY POSTING

Station: Midwest Generation Joliet #29 Generating Station

Regulated Unit(s): Pond 2 (IEPA ID No. W1970450047-02)

In accordance with the new Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments (State CCR Rule) groundwater monitoring was completed during the 1st quarter 2024 which includes the entire list of parameters specified under Section 845.600(a)(1) and (b). Table 1 is a summary table of all available CCR monitoring data to date including any data generated previously as part of the Federal CCR Rule monitoring. In addition, Table 2 provides a summary of turbidity data which was collected as part of State CCR Rule requirements which is a data parameter that was not required under the Federal CCR Rule.

No background statistics or proposed Groundwater Protection Standards are included on these tables. The background statistics and Proposed Groundwater Protection Standards were submitted to Illinois Environmental Protection Agency (EPA) as part of the Application for Initial Operating Permit submitted October 31, 2021. Upon Illinois EPA approval of the Operating Permit and Proposed Groundwater Protection Standards, the approved comparison values will be included on the tables for subsequent data comparisons/evaluations.

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Joliet Station #29, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	Selenium	Thallium	
MW-10 up-gradient	10/28/2015	0.47	100	200	0.41	7.04	84	790	< 0.003	< 0.001	0.041	^< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0060	0.2981	< 0.0025	< 0.002	
	2/10/2016	0.41	100	200	0.44	7.17	120	820	< 0.003	0.001	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0067	< 0.438	< 0.0025	< 0.002	
	5/12/2016	0.29	100	300	0.42	7.02	110	920	< 0.003	< 0.001	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0051	< 0.414	< 0.0025	< 0.002	
	8/31/2016	0.36	89	170	0.46	6.95	100	760	< 0.003	< 0.001	0.039	^< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.010	< 0.0002	0.0077	< 0.394	< 0.0025	< 0.002	
	11/2/2016	0.48	100	130	0.45	6.99	95	720	< 0.003	0.0018	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.0061	< 0.626	< 0.0025	< 0.002	
	2/6/2017	0.44	120	190	0.36	6.99	88	820	< 0.003	0.0011	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.00086	0.014	< 0.0002	0.0056	< 0.389	< 0.0025	< 0.002	
	4/26/2017	0.35	120	200	0.35	7.27	87	760	< 0.003	0.0015	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.006	< 0.34	< 0.0025	< 0.002	
	6/14/2017	0.29	91	160	0.43	7.48	75	690	< 0.003	< 0.001	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0072	< 0.356	< 0.0025	< 0.002	
	8/2/2017	0.45	97	170	0.38	7.23	110	750	< 0.003	0.0011	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0079	< 0.429	< 0.0025	< 0.002	
	10/18/2017	0.61	120	140	0.41	7.11	130	820	< 0.003	0.0012	0.04	^< 0.001	< 0.0005	< 0.005	< 0.001	0.00059	0.013	< 0.0002	0.0066	< 0.422	< 0.0025	^< 0.002	
	4/24/2018	0.4	110	260	0.39	7.28	120	910	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/17/2018	0.63	120	180	0.42	7.30	110	810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/24/2018 R	0.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/2019	0.56	130	410	0.39	7.17	95	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/3/2019 R	NA	NA	230	NA	NA	NA	830	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/2019	0.35	90	130	0.36	7.40	59	650	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/20/2020	0.85	120	250	0.41	6.90	100	960	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/11/2020 R	0.26	NA	NA	NA	NA	NA	770	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/22/2020	0.34	110	230	0.41	7.11	93	850	< 0.003	0.001	0.043	^< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0057	NA	< 0.0025	< 0.002	
	5/18/2021	0.33	140	350	0.39	7.16	210	1200	< 0.003	0.0014	0.06	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.015	< 0.0002	0.0055	< 0.4800	< 0.0025	< 0.002	
	6/29/2021 R	NA	160	420	NA	7.32	190	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/30/2021	0.28	120	330	0.37	7.56	170	990	^+< 0.003	0.0012	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0065	0.51	< 0.0025	< 0.002	
	11/16/2021	0.39	120	260	0.38	7.01	150	1000	< 0.003	0.0012	0.049	^+< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0066	0.692	< 0.0025	< 0.002	
	3/3/2022	0.47	120	280	0.41	7.05	190	1000	< 0.003	0.0014	0.055	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0066	< 0.4	< 0.0025	< 0.002	
	5/26/2022	0.39	120	280	0.41	6.96	160	1000	< 0.003	0.0013	0.046	^+< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0064	< 0.593	< 0.0025	< 0.002	
	8/31/2022	0.33	110	240	0.41	6.58	160	970	< 0.003	0.0012	0.042	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0057	0.534	< 0.0025	< 0.002	
	11/9/2022	0.32	110	240	0.57	7.00	150	880	< 0.003	0.0014	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	^+< 0.0005	0.01	< 0.0002	0.0055	0.728	< 0.0025	< 0.002	
	12/20/2022 (R)	NS	NS	NS	0.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/28/2023	0.36	130	330	0.38	7.06	170	1200	< 0.003	0.0012	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0058	< 0.787	< 0.0025	< 0.002	
	5/3/2023	0.37	130	310	0.39	6.99	190	1100	< 0.0030	< 0.0010	0.053	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.014	< 0.00020	0.0068	< 0.487	< 0.0025	< 0.0020	
	7/20/2023	0.33	110	250	0.39	6.95	160	960	< 0.0030	< 0.0010	0.048	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.011	< 0.00020	0.0053	0.623	< 0.0025	< 0.0020	
	10/26/2023	0.40	120	300	0.41	6.96	160	1100	< 0.0030	0.0011	0.050	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.011	< 0.00020	0.0064	0.739	< 0.0025	< 0.0020	
	1/23/2024	0.49	110	260	0.37	6.96	160	970	^+< 0.0030	0.0013	0.056	^+< 0.0010	< 0.00050	< 0.0050	< 0.0010	0.00064	0.014	< 0.00020	0.0067	0.720	< 0.0025	< 0.0020	
MW-03 down-gradient	10/28/2015	0.34	110	230	0.41	7.11	110	960	< 0.003	0.0015	0.100	^< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	< 0.0050	0.41	< 0.0025	< 0.002	
	2/10/2016	0.49	100	220	0.44	7.31	130	790	< 0.003	0.0017	0.100	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0060	< 1.68	< 0.0045	< 0.002	
	5/10/2016	0.48	95	240	0.44	7.07	130	800	< 0.003	0.0011	0.095	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0062	< 0.326	0.0030	< 0.002	
	8/31/2016	0.49	100	250	0.45	7.18	120	920	< 0.003	0.0013	0.095	^< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0086	< 0.373	0.0051	< 0.002	
	11/2/2016	0.34	87	190	0.44	7.45	94	780	< 0.003	0.0019	0.082	< 0.001	< 0.0005	0.0051	< 0.001	< 0.0005	< 0.010	< 0.0002	0.0059	0.965	0.0032	< 0.002	
	2/6/2017	0.40	97	140	0.39	7.35	77	720	< 0.003	0.0019	0.093	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0066	< 0.356	0.0028	< 0.002	
	4/26/2017	0.54	100	210	0.36	7.03	120	820	< 0.003	0.0017	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.010	< 0.0002	0.0088	< 0.411	0.0052	< 0.002	
	6/14/2017	0.45	88	190	0.44	7.43	75	760	< 0.003	0.0014	0.09	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0072	< 0.358	0.0037	< 0.002	
	8/2/2017	0.41	99	200	0.40	7.34	110	850	< 0.003	0.0022	0.10	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0065	0.414	0.005	< 0.002	
	10/18/2017	0.35	93	160	0.42	7.11	100	850	< 0.003	0.0015	0.088	^< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0055	< 0.417	0.0026	^< 0.002	
	4/24/2018	0.52	100	220	0.42	7.2	150	930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/31/2018 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/17/2018	0.25	100	250	0.4	7.04	110	870	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/2019	0.43	120	280	0.4	7.27	140	880	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/3/2019 R	NA	NA	NA	NA	NA	NA	65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/2019	0.34	100	150	0.4	7.32																	

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Joliet Station #29, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	Selenium	Thallium	
MW-05 down- gradient	10/28/2015	0.64	100	160	0.39	7.12	120	790	< 0.003	0.0011	0.057	^ < 0.001	< 0.0005	< 0.005	0.0013	< 0.0005	0.018	< 0.0002	0.0088	0.6231	0.0031	< 0.002	
	2/10/2016	0.46	110	220	0.39	7.25	120	790	< 0.003	0.0028	0.071	< 0.001	< 0.0005	0.0062	0.0013	0.0022	< 0.02	< 0.0002	F1 0.0053	1.09	< 0.0025	< 0.002	
	5/10/2016	0.8	150	220	0.46	6.88	290	950	< 0.003	0.0023	0.075	< 0.001	< 0.0005	< 0.005	< 0.001	0.0022	0.014	< 0.0002	0.008	< 0.40	0.019	< 0.002	
	8/31/2016	1.0	140	99	0.56	6.81	260	820	< 0.003	< 0.001	0.07	^ < 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.012	< 0.42	0.02	< 0.002	
	11/2/2016	0.41	98	130	0.37	7.26	100	700	< 0.003	0.0022	0.056	< 0.001	< 0.0005	0.0051	< 0.001	0.0017	0.015	< 0.0002	0.0061	0.438	< 0.0025	< 0.002	
	2/6/2017	0.48	150	180	0.30	7.22	120	790	< 0.003	0.0016	0.082	< 0.001	< 0.0005	< 0.005	< 0.001	0.0016	0.021	< 0.0002	< 0.005	0.564	0.0029	< 0.002	
	4/26/2017	0.67	110	F1 190	0.37	7.28	170	770	< 0.003	0.0014	0.063	< 0.001	< 0.0005	< 0.005	< 0.001	0.0008	< 0.01	< 0.0002	0.0066	< 0.411	0.013	< 0.002	
	6/14/2017	0.44	75	150	0.46	7.47	110	670	< 0.003	0.0012	0.044	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0076	< 0.316	0.0029	< 0.002	
	8/2/2017	0.28	83	170	0.35	7.30	99	770	< 0.003	< 0.001	0.054	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.0053	0.659	< 0.0025	< 0.002	
	10/18/2017	0.42	110	110	0.38	7.16	95	720	< 0.003	0.002	0.067	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.0023	0.018	< 0.0002	< 0.005	< 0.371	0.0029	^ < 0.002	
	4/24/2018	0.31	110	300	0.34	7.33	130	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/31/2018 R	NA	NA	NA	NA	NA	NA	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/17/2018	0.31	110	210	0.36	7.29	93	810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/2019	0.38	130	500	0.31	7.11	84	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/3/2019 R	NA	NA	150	NA	NA	NA	890	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/2019	0.31	180	130	0.3	7.44	64	590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/4/2019 R	NA	89	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/20/2020	0.32	100	270	0.37	7.03	67	890	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/22/2020	0.52	92	180	0.38	7.16	85	720	< 0.003	0.0012	0.069	^ < 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0054	NA	0.003	< 0.002	
	5/18/2021	0.37	130	410	0.3	7.00	160	1300	< 0.003	0.0015	0.1	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.023	< 0.0002	< 0.005	< 0.5970	< 0.0025	< 0.002	
	6/29/2021 R	NA	NA	430	NA	7.33	150	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/27/2021	0.36	100	300	0.3	6.94	140	960	^+ < 0.003	0.0014	0.069	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.015	< 0.0002	< 0.005	0.528	0.0027	< 0.002	
	11/16/2021	0.44	120	260	0.3	7.08	140	970	< 0.003	0.0016	0.079	^1+ < 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.0069	0.738	< 0.0025	< 0.002	
	3/3/2022	0.43	110	230	0.3	7.04	140	900	< 0.003	0.0015	0.074	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	< 0.005	0.514	< 0.0025	< 0.002	
	5/26/2022	0.55	120	320	0.31	6.86	140	1100	< 0.003	0.003	0.082	^+ < 0.001	< 0.0005	< 0.005	< 0.001	0.0018	0.015	< 0.0002	< 0.005	< 0.656	0.0029	< 0.002	
	8/31/2022	0.43	110	240	0.32	6.5	130	1100	< 0.003	0.0015	0.066	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.016	< 0.0002	< 0.005	< 0.421	< 0.0025	< 0.002	
	11/9/2022	0.39	120	230	0.42	7	120	910	< 0.003	0.0021	0.068	< 0.001	< 0.0005	< 0.005	< 0.001	0.00093	0.015	< 0.0002	< 0.005	< 0.501	< 0.0025	< 0.002	
	2/28/2023	0.60	160	130	0.35	7.15	260	980	< 0.0030	0.0019	0.080	< 0.0010	< 0.00050	< 0.0050	< 0.0010	0.00084	0.013	< 0.00020	0.011	< 0.685	0.022	< 0.0020	
	3/23/2023 R	0.46	130	NA	NA	NA	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/3/2023	0.50	110	270	0.30	6.96	120	910	< 0.0030	< 0.0010	0.072	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.016	< 0.00020	< 0.0050	< 0.604	0.0027	< 0.0020	
7/20/2023	0.45	110	240	0.30	6.94	120	900	< 0.0030	0.0011	0.070	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.016	< 0.00020	< 0.0050	< 0.607	< 0.0025	< 0.0020		
10/26/2023	0.42	110	220	0.32	6.96	150	910	< 0.0030	0.0012	0.073	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.015	< 0.00020	0.0050	1.16	0.0025	< 0.0020		
1/23/2024	0.49	110	210	0.29	6.93	210	1000	^1+ < 0.0030	0.0012	0.098	^1+ < 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.016	< 0.00020	0.0050	0.779	< 0.0025	< 0.0020		

Notes: All units are in mg/l except pH is in standard units and radium is in pCi/L.
 DNYA - Data not yet available.
 F1 - MS and/or MSD Recovery outside of limits.
 NA - Not analyzed. No confirmation resample required.
 ^+ - Continuing calibration verification is outside acceptance limits, high biased.
 R - Resampled under federal rule.

Table 2. Turbidity Measurement Data, Midwest Generation, LLC, Joliet #29 Generating Station

Well ID	Date	Turbidity (NTU)
MW-03	3/2/2021	0.45
	4/10/2021	22.9
	4/25/2021	2.40
	5/18/2021	2.53
	6/11/2021	2.34
	6/29/2021	2.86
	7/19/2021	37.40
	8/9/2021	2.71
	8/30/2021	5.70
	9/27/2021	10.27
	11/16/2021	0.80
	3/3/2022	0.00
	5/26/2022	4.26
	8/31/2022	4.10
	11/9/2022	32.60
	2/28/2023	6.98
5/3/2023	3.00	
7/20/2023	5.90	
10/26/2023	3.50	
1/23/2024	90.70	
MW-04	3/2/2021	81.89
	4/10/2021	5.96
	4/25/2021	3.02
	5/18/2021	2.52
	6/11/2021	2.80
	6/29/2021	3.34
	7/19/2021	47.4
	8/9/2021	4.13
	8/30/2021	18.3
	9/27/2021	1.76
	11/16/2021	4.20
	3/3/2022	0.00
	5/26/2022	1.23
	8/31/2022	3.78
	11/9/2022	43.50
	2/28/2023	62.10
5/3/2023	6.30	
7/20/2023	6.00	
10/26/2023	1.60	
1/23/2024	80.10	
MW-05	2/25/2021	1.57
	4/10/2021	8.36
	4/25/2021	2.42
	5/17/2021	5.20
	6/11/2021	14.22
	6/29/2021	5.33
	7/19/2021	26.9
	8/9/2021	3.69
	8/27/2021	8.70
	9/27/2021	14.92
	11/16/2021	8.84
	3/3/2022	3.25
	5/26/2022	1.28
	8/31/2022	8.87
	11/9/2022	63.4
	2/28/2023	58.32
5/3/2023	2.50	
7/20/2023	6.00	
10/26/2023	1.10	
1/23/2024	7.12	
MW-10	3/2/2021	26.07
	4/10/2021	7.31
	4/25/2021	5.21
	5/18/2021	3.73
	6/11/2021	6.65
	6/29/2021	9.49
	7/19/2021	14.5
	8/9/2021	10.08
	8/30/2021	9.3
	9/27/2021	16.3
	11/16/2021	5.59
	3/3/2022	2.86
	5/26/2022	2.08
	8/31/2022	2.93
	11/9/2022	19.6
	2/28/2023	17.13
5/3/2023	2.6	
7/20/2023	5.6	
10/26/2023	1.4	
1/23/2024	82.7	

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: James Thorne
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Generated 2/12/2024 12:06:27 PM

JOB DESCRIPTION

Joliet #29 CCR

JOB NUMBER

500-245243-1

Eurofins Chicago

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization



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Authorized for release by
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Case Narrative

Client: Midwest Generation EME LLC
Project: Joliet #29 CCR

Job ID: 500-245243-1

Job ID: 500-245243-1

Eurofins Chicago

Job Narrative 500-245243-1

Receipt

The samples were received on 1/23/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.1° C and 2.4° C.

Metals

Method 6020B: The initial low level calibration verification (ICVL) result for batch 751409 was above the upper control limit. The affected analytes are: Be and Sb. Sample results were below the lower limit, and have been reported as qualified data.

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

General Chemistry

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

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Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 4500 Cl- E	Chloride, Total	SM	EET CHI
SM 4500 F C	Fluoride	SM	EET CHI
SM 4500 SO4 E	Sulfate, Total	SM	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-245243-1	MW-03	Water	01/23/24 12:14	01/23/24 16:20
500-245243-2	MW-04	Water	01/23/24 10:57	01/23/24 16:20
500-245243-3	MW-05	Water	01/23/24 13:14	01/23/24 16:20
500-245243-4	MW-10	Water	01/23/24 14:35	01/23/24 16:20
500-245243-5	Duplicate	Water	01/23/24 00:00	01/23/24 16:20

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Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: MW-03
Date Collected: 01/23/24 12:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0023		0.0010		mg/L		01/24/24 07:54	01/24/24 21:16	1
Boron	0.34		0.050		mg/L		01/24/24 07:54	01/29/24 13:01	1
Barium	0.13		0.0025		mg/L		01/24/24 07:54	01/24/24 21:16	1
Beryllium	<0.0010	^1+	0.0010		mg/L		01/24/24 07:54	01/24/24 21:16	1
Calcium	96		0.20		mg/L		01/24/24 07:54	01/29/24 13:01	1
Cadmium	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:16	1
Cobalt	<0.0010		0.0010		mg/L		01/24/24 07:54	01/24/24 21:16	1
Chromium	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:16	1
Molybdenum	0.0054		0.0050		mg/L		01/24/24 07:54	01/24/24 21:16	1
Lead	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:16	1
Antimony	<0.0030	^1+	0.0030		mg/L		01/24/24 07:54	01/24/24 21:16	1
Selenium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/25/24 17:27	1
Thallium	<0.0020		0.0020		mg/L		01/24/24 07:54	01/24/24 21:16	1
Lithium	0.013		0.010		mg/L		01/24/24 07:54	01/24/24 21:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		02/08/24 10:30	02/09/24 08:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	990		10		mg/L			01/24/24 21:52	1
Chloride (SM 4500 Cl- E)	240		10		mg/L			01/24/24 16:49	5
Fluoride (SM 4500 F C)	0.42		0.10		mg/L			01/24/24 15:25	1
Sulfate (SM 4500 SO4 E)	160		25		mg/L			01/31/24 16:45	5

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: MW-04
Date Collected: 01/23/24 10:57
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-2
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0020		0.0010		mg/L		01/24/24 07:54	01/24/24 21:19	1
Boron	0.42		0.050		mg/L		01/24/24 07:54	01/29/24 13:05	1
Barium	0.091		0.0025		mg/L		01/24/24 07:54	01/24/24 21:19	1
Beryllium	<0.0010	^1+	0.0010		mg/L		01/24/24 07:54	01/24/24 21:19	1
Calcium	99		0.20		mg/L		01/24/24 07:54	01/29/24 13:05	1
Cadmium	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:19	1
Cobalt	0.0085		0.0010		mg/L		01/24/24 07:54	01/24/24 21:19	1
Chromium	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:19	1
Molybdenum	0.0056		0.0050		mg/L		01/24/24 07:54	01/24/24 21:19	1
Lead	0.00051		0.00050		mg/L		01/24/24 07:54	01/24/24 21:19	1
Antimony	<0.0030	^1+	0.0030		mg/L		01/24/24 07:54	01/24/24 21:19	1
Selenium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/25/24 17:30	1
Thallium	<0.0020		0.0020		mg/L		01/24/24 07:54	01/24/24 21:19	1
Lithium	0.018		0.010		mg/L		01/24/24 07:54	01/24/24 21:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		02/08/24 10:30	02/09/24 08:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	970		10		mg/L			01/24/24 21:55	1
Chloride (SM 4500 Cl- E)	200		10		mg/L			01/24/24 16:50	5
Fluoride (SM 4500 F C)	0.38		0.10		mg/L			02/09/24 13:58	1
Sulfate (SM 4500 SO4 E)	150		25		mg/L			01/31/24 16:48	5

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: MW-05

Lab Sample ID: 500-245243-3

Date Collected: 01/23/24 13:14

Matrix: Water

Date Received: 01/23/24 16:20

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0012		0.0010		mg/L		01/24/24 07:54	01/24/24 21:23	1
Boron	0.49		0.050		mg/L		01/24/24 07:54	01/29/24 13:09	1
Barium	0.098		0.0025		mg/L		01/24/24 07:54	01/24/24 21:23	1
Beryllium	<0.0010	^1+	0.0010		mg/L		01/24/24 07:54	01/24/24 21:23	1
Calcium	110		0.20		mg/L		01/24/24 07:54	01/29/24 13:09	1
Cadmium	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:23	1
Cobalt	<0.0010		0.0010		mg/L		01/24/24 07:54	01/24/24 21:23	1
Chromium	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:23	1
Molybdenum	0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:23	1
Lead	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:23	1
Antimony	<0.0030	^1+	0.0030		mg/L		01/24/24 07:54	01/24/24 21:23	1
Selenium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/25/24 17:34	1
Thallium	<0.0020		0.0020		mg/L		01/24/24 07:54	01/24/24 21:23	1
Lithium	0.016		0.010		mg/L		01/24/24 07:54	01/24/24 21:23	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		02/08/24 10:30	02/09/24 08:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1000		10		mg/L			01/24/24 21:57	1
Chloride (SM 4500 Cl- E)	210		10		mg/L			01/29/24 12:47	5
Fluoride (SM 4500 F C)	0.29		0.10		mg/L			02/09/24 14:03	1
Sulfate (SM 4500 SO4 E)	210		50		mg/L			01/31/24 16:49	10

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: MW-10
 Date Collected: 01/23/24 14:35
 Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-4
 Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0013		0.0010		mg/L		01/24/24 07:54	01/24/24 21:37	1
Boron	0.49		0.050		mg/L		01/24/24 07:54	01/29/24 13:12	1
Barium	0.056		0.0025		mg/L		01/24/24 07:54	01/24/24 21:37	1
Beryllium	<0.0010	^1+	0.0010		mg/L		01/24/24 07:54	01/24/24 21:37	1
Calcium	110		0.20		mg/L		01/24/24 07:54	01/29/24 13:12	1
Cadmium	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:37	1
Cobalt	<0.0010		0.0010		mg/L		01/24/24 07:54	01/24/24 21:37	1
Chromium	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:37	1
Molybdenum	0.0067		0.0050		mg/L		01/24/24 07:54	01/24/24 21:37	1
Lead	0.00064		0.00050		mg/L		01/24/24 07:54	01/24/24 21:37	1
Antimony	<0.0030	^1+	0.0030		mg/L		01/24/24 07:54	01/24/24 21:37	1
Selenium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/25/24 17:37	1
Thallium	<0.0020		0.0020		mg/L		01/24/24 07:54	01/24/24 21:37	1
Lithium	0.014		0.010		mg/L		01/24/24 07:54	01/24/24 21:37	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		02/08/24 10:30	02/09/24 08:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	970		10		mg/L			01/24/24 22:00	1
Chloride (SM 4500 Cl- E)	260		20		mg/L			01/24/24 17:00	10
Fluoride (SM 4500 F C)	0.37		0.10		mg/L			02/09/24 14:07	1
Sulfate (SM 4500 SO4 E)	160		25		mg/L			01/31/24 16:48	5

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: Duplicate

Lab Sample ID: 500-245243-5

Date Collected: 01/23/24 00:00

Matrix: Water

Date Received: 01/23/24 16:20

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0012		0.0010		mg/L		01/24/24 07:54	01/24/24 21:40	1
Boron	0.45		0.050		mg/L		01/24/24 07:54	01/29/24 14:45	1
Barium	0.093		0.0025		mg/L		01/24/24 07:54	01/24/24 21:40	1
Beryllium	<0.0010	^1+	0.0010		mg/L		01/24/24 07:54	01/24/24 21:40	1
Calcium	110		0.20		mg/L		01/24/24 07:54	01/29/24 14:45	1
Cadmium	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:40	1
Cobalt	<0.0010		0.0010		mg/L		01/24/24 07:54	01/24/24 21:40	1
Chromium	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:40	1
Molybdenum	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 21:40	1
Lead	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 21:40	1
Antimony	<0.0030	^1+	0.0030		mg/L		01/24/24 07:54	01/24/24 21:40	1
Selenium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/25/24 17:41	1
Thallium	<0.0020		0.0020		mg/L		01/24/24 07:54	01/24/24 21:40	1
Lithium	0.016		0.010		mg/L		01/24/24 07:54	01/24/24 21:40	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		02/08/24 10:30	02/09/24 08:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	970		10		mg/L			01/24/24 22:02	1
Chloride (SM 4500 Cl- E)	220		10		mg/L			01/24/24 16:48	5
Fluoride (SM 4500 F C)	0.29		0.10		mg/L			02/09/24 14:12	1
Sulfate (SM 4500 SO4 E)	200		50		mg/L			01/31/24 16:47	10

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

QC Association Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Metals

Prep Batch: 751230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total Recoverable	Water	3005A	
500-245243-2	MW-04	Total Recoverable	Water	3005A	
500-245243-3	MW-05	Total Recoverable	Water	3005A	
500-245243-4	MW-10	Total Recoverable	Water	3005A	
500-245243-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-751230/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-751230/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 751409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total Recoverable	Water	6020B	751230
500-245243-2	MW-04	Total Recoverable	Water	6020B	751230
500-245243-3	MW-05	Total Recoverable	Water	6020B	751230
500-245243-4	MW-10	Total Recoverable	Water	6020B	751230
500-245243-5	Duplicate	Total Recoverable	Water	6020B	751230
MB 500-751230/1-A	Method Blank	Total Recoverable	Water	6020B	751230
LCS 500-751230/2-A	Lab Control Sample	Total Recoverable	Water	6020B	751230

Analysis Batch: 751577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total Recoverable	Water	6020B	751230
500-245243-2	MW-04	Total Recoverable	Water	6020B	751230
500-245243-3	MW-05	Total Recoverable	Water	6020B	751230
500-245243-4	MW-10	Total Recoverable	Water	6020B	751230
500-245243-5	Duplicate	Total Recoverable	Water	6020B	751230
MB 500-751230/1-A	Method Blank	Total Recoverable	Water	6020B	751230
LCS 500-751230/2-A	Lab Control Sample	Total Recoverable	Water	6020B	751230

Analysis Batch: 751935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total Recoverable	Water	6020B	751230
500-245243-2	MW-04	Total Recoverable	Water	6020B	751230
500-245243-3	MW-05	Total Recoverable	Water	6020B	751230
500-245243-4	MW-10	Total Recoverable	Water	6020B	751230
500-245243-5	Duplicate	Total Recoverable	Water	6020B	751230
MB 500-751230/1-A	Method Blank	Total Recoverable	Water	6020B	751230
LCS 500-751230/2-A	Lab Control Sample	Total Recoverable	Water	6020B	751230

Prep Batch: 753245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	7470A	
500-245243-2	MW-04	Total/NA	Water	7470A	
500-245243-3	MW-05	Total/NA	Water	7470A	
500-245243-4	MW-10	Total/NA	Water	7470A	
500-245243-5	Duplicate	Total/NA	Water	7470A	
MB 500-753245/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-753245/13-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 753469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	7470A	753245

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QC Association Summary

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Metals (Continued)

Analysis Batch: 753469 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-2	MW-04	Total/NA	Water	7470A	753245
500-245243-3	MW-05	Total/NA	Water	7470A	753245
500-245243-4	MW-10	Total/NA	Water	7470A	753245
500-245243-5	Duplicate	Total/NA	Water	7470A	753245
MB 500-753245/12-A	Method Blank	Total/NA	Water	7470A	753245
LCS 500-753245/13-A	Lab Control Sample	Total/NA	Water	7470A	753245

General Chemistry

Analysis Batch: 751341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	SM 2540C	
500-245243-2	MW-04	Total/NA	Water	SM 2540C	
500-245243-3	MW-05	Total/NA	Water	SM 2540C	
500-245243-4	MW-10	Total/NA	Water	SM 2540C	
500-245243-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-751341/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-751341/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 751361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	SM 4500 F C	
MB 500-751361/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-751361/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 751394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-245243-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-245243-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-245243-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-751394/52	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-751394/53	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 751865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
MB 500-751865/15	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-751865/16	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 752223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-245243-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-245243-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-245243-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-245243-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-752223/75	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-752223/76	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

QC Association Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

General Chemistry

Analysis Batch: 753484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-2	MW-04	Total/NA	Water	SM 4500 F C	
500-245243-3	MW-05	Total/NA	Water	SM 4500 F C	
500-245243-4	MW-10	Total/NA	Water	SM 4500 F C	
500-245243-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-753484/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-753484/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-245243-5 MS	Duplicate	Total/NA	Water	SM 4500 F C	
500-245243-5 MSD	Duplicate	Total/NA	Water	SM 4500 F C	

QC Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-751230/1-A
Matrix: Water
Analysis Batch: 751409

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 751230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		01/24/24 07:54	01/24/24 20:00	1
Barium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/24/24 20:00	1
Beryllium	<0.0010	^1+	0.0010		mg/L		01/24/24 07:54	01/24/24 20:00	1
Cadmium	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 20:00	1
Cobalt	<0.0010		0.0010		mg/L		01/24/24 07:54	01/24/24 20:00	1
Chromium	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 20:00	1
Molybdenum	<0.0050		0.0050		mg/L		01/24/24 07:54	01/24/24 20:00	1
Lead	<0.00050		0.00050		mg/L		01/24/24 07:54	01/24/24 20:00	1
Antimony	<0.0030	^1+	0.0030		mg/L		01/24/24 07:54	01/24/24 20:00	1
Thallium	<0.0020		0.0020		mg/L		01/24/24 07:54	01/24/24 20:00	1
Lithium	<0.010		0.010		mg/L		01/24/24 07:54	01/24/24 20:00	1

Lab Sample ID: MB 500-751230/1-A
Matrix: Water
Analysis Batch: 751577

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 751230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.0025		0.0025		mg/L		01/24/24 07:54	01/25/24 17:16	1

Lab Sample ID: MB 500-751230/1-A
Matrix: Water
Analysis Batch: 751935

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 751230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		01/24/24 07:54	01/29/24 12:54	1

Lab Sample ID: LCS 500-751230/2-A
Matrix: Water
Analysis Batch: 751409

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 751230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.100	0.0967		mg/L		97	80 - 120
Barium	0.500	0.505		mg/L		101	80 - 120
Beryllium	0.0500	0.0501	^1+	mg/L		100	80 - 120
Cadmium	0.0500	0.0497		mg/L		99	80 - 120
Cobalt	0.500	0.503		mg/L		101	80 - 120
Chromium	0.200	0.191		mg/L		95	80 - 120
Molybdenum	1.00	0.903		mg/L		90	80 - 120
Lead	0.100	0.0967		mg/L		97	80 - 120
Antimony	0.500	0.516	^1+	mg/L		103	80 - 120
Thallium	0.100	0.0957		mg/L		96	80 - 120
Lithium	0.100	0.0992		mg/L		99	80 - 120

Lab Sample ID: LCS 500-751230/2-A
Matrix: Water
Analysis Batch: 751577

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 751230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	0.100	0.0902		mg/L		90	80 - 120

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QC Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-751230/2-A
 Matrix: Water
 Analysis Batch: 751935

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 751230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	0.968		mg/L		97	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-753245/12-A
 Matrix: Water
 Analysis Batch: 753469

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 753245

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		02/08/24 10:30	02/09/24 08:11	1

Lab Sample ID: LCS 500-753245/13-A
 Matrix: Water
 Analysis Batch: 753469

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 753245

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00201	0.00208		mg/L		104	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-751341/1
 Matrix: Water
 Analysis Batch: 751341

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			01/24/24 21:37	1

Lab Sample ID: LCS 500-751341/2
 Matrix: Water
 Analysis Batch: 751341

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-751394/52
 Matrix: Water
 Analysis Batch: 751394

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			01/24/24 16:45	1

Lab Sample ID: LCS 500-751394/53
 Matrix: Water
 Analysis Batch: 751394

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.7		mg/L		99	85 - 115

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QC Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: MB 500-751865/15
 Matrix: Water
 Analysis Batch: 751865

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			01/29/24 12:17	1

Lab Sample ID: LCS 500-751865/16
 Matrix: Water
 Analysis Batch: 751865

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	21.0		mg/L		105	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-751361/3
 Matrix: Water
 Analysis Batch: 751361

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			01/24/24 13:12	1

Lab Sample ID: LCS 500-751361/4
 Matrix: Water
 Analysis Batch: 751361

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	10.2		mg/L		102	90 - 119

Lab Sample ID: MB 500-753484/31
 Matrix: Water
 Analysis Batch: 753484

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			02/09/24 12:56	1

Lab Sample ID: LCS 500-753484/32
 Matrix: Water
 Analysis Batch: 753484

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	9.90		mg/L		99	90 - 119

Lab Sample ID: 500-245243-5 MS
 Matrix: Water
 Analysis Batch: 753484

Client Sample ID: Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.29		5.00	5.14		mg/L		97	75 - 125

QC Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 500-245243-5 MSD
 Matrix: Water
 Analysis Batch: 753484

Client Sample ID: Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.29		5.00	5.11		mg/L		96	75 - 125	1	20

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-752223/75
 Matrix: Water
 Analysis Batch: 752223

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			01/31/24 16:05	1

Lab Sample ID: LCS 500-752223/76
 Matrix: Water
 Analysis Batch: 752223


Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	19.7		mg/L		98	88 - 123

Eurofins Chicago

2417 Bond Street
University Park, IL 60484
Phone 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

 | Environment Testing

Client Information		Sampler: <i>IAN JOHN HAWKSON</i>	Lab PM: Mockler, Diana J	COC No: 500-120311-45941 1	
Client Contact: Patrick Allenstein		Phone: <i>630 290 6850</i>	E-Mail: Diana.Mockler@et.eurofins.com		Page Page 1 of 1
Company: KPRG and Associates, Inc.		PWSID:	Analysis Ref: 500-245243 COC		
Address: 14665 West Lisbon Road, Suite 1A		Due Date Requested:	Field Filtered Sample (Yes or No) 6010C, 6020A, 7470A 2540C, 4500_F_C, SM4500_C1_E, SM4500_S04_E 903.0, 904.0	Total Number of Containers	
City: Brookfield		TAT Requested (days):			
State, Zip: WI, 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Phone:		PO #: 4502085968			
Email: patricka@kprginc.com		WO #:			
Project Name: Joliet #29 CCR/ Event Desc: Quarterly MWG Joliet #29 CCR		Project #: 50011568	Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - H2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)		
Site: Illinois		SSOW#:	Other:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Special Instructions/Note:
					Preservation Code: D N D
1 MW-03	1-23-24	12:14	G	Water	N N X X X
2 MW-04	1-23-24	10:57	G	Water	N N X X X
3 MW-05	1-23-24	13:14	G	Water	N N X X X
4 MW-10	1-23-24	14:35	G	Water	N N X X X
5 Duplicate	1-23-24	-	G	Water	N N X X X
				Water	
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested I, II, III, IV, Other (specify)			Special Instructions/QC Requirements		
Empty Kit Relinquished by:		Date	Time	Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time: 1-23-24 16:20	Company: KPRG	Received by: <i>[Signature]</i>	Date/Time: 1/23/24 1020 Company: CETA
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time: Company:
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time: Company:
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.9+2.4, 1.6+2.1			

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-245243-1

Login Number: 245243

List Source: Eurofins Chicago

List Number: 1

Creator: Hernandez, Stephanie

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4.2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: MW-03
Date Collected: 01/23/24 12:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751409	RN	EET CHI	01/24/24 21:16
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751577	RN	EET CHI	01/25/24 17:27
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751935	RN	EET CHI	01/29/24 13:01
Total/NA	Prep	7470A			753245	MJG	EET CHI	02/08/24 10:30 - 02/08/24 12:30 ¹
Total/NA	Analysis	7470A		1	753469	MJG	EET CHI	02/09/24 08:16
Total/NA	Analysis	SM 2540C		1	751341	CLB	EET CHI	01/24/24 21:52
Total/NA	Analysis	SM 4500 CI- E		5	751394	TR	EET CHI	01/24/24 16:49
Total/NA	Analysis	SM 4500 F C		1	751361	SO	EET CHI	01/24/24 15:25
Total/NA	Analysis	SM 4500 SO4 E		5	752223	TR	EET CHI	01/31/24 16:45

Client Sample ID: MW-04
Date Collected: 01/23/24 10:57
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751409	RN	EET CHI	01/24/24 21:19
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751577	RN	EET CHI	01/25/24 17:30
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751935	RN	EET CHI	01/29/24 13:05
Total/NA	Prep	7470A			753245	MJG	EET CHI	02/08/24 10:30 - 02/08/24 12:30 ¹
Total/NA	Analysis	7470A		1	753469	MJG	EET CHI	02/09/24 08:18
Total/NA	Analysis	SM 2540C		1	751341	CLB	EET CHI	01/24/24 21:55
Total/NA	Analysis	SM 4500 CI- E		5	751394	TR	EET CHI	01/24/24 16:50
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 13:58
Total/NA	Analysis	SM 4500 SO4 E		5	752223	TR	EET CHI	01/31/24 16:48

Client Sample ID: MW-05
Date Collected: 01/23/24 13:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751409	RN	EET CHI	01/24/24 21:23
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751577	RN	EET CHI	01/25/24 17:34
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751935	RN	EET CHI	01/29/24 13:09
Total/NA	Prep	7470A			753245	MJG	EET CHI	02/08/24 10:30 - 02/08/24 12:30 ¹
Total/NA	Analysis	7470A		1	753469	MJG	EET CHI	02/09/24 08:20

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Lab Chronicle

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR

Job ID: 500-245243-1

Client Sample ID: MW-05
Date Collected: 01/23/24 13:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	751341	CLB	EET CHI	01/24/24 21:57
Total/NA	Analysis	SM 4500 CI- E		5	751865	TR	EET CHI	01/29/24 12:47
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 14:03
Total/NA	Analysis	SM 4500 SO4 E		10	752223	TR	EET CHI	01/31/24 16:49

Client Sample ID: MW-10
Date Collected: 01/23/24 14:35
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751409	RN	EET CHI	01/24/24 21:37
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751577	RN	EET CHI	01/25/24 17:37
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751935	RN	EET CHI	01/29/24 13:12
Total/NA	Prep	7470A			753245	MJG	EET CHI	02/08/24 10:30 - 02/08/24 12:30 ¹
Total/NA	Analysis	7470A		1	753469	MJG	EET CHI	02/09/24 08:22
Total/NA	Analysis	SM 2540C		1	751341	CLB	EET CHI	01/24/24 22:00
Total/NA	Analysis	SM 4500 CI- E		10	751394	TR	EET CHI	01/24/24 17:00
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 14:07
Total/NA	Analysis	SM 4500 SO4 E		5	752223	TR	EET CHI	01/31/24 16:48

Client Sample ID: Duplicate
Date Collected: 01/23/24 00:00
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751409	RN	EET CHI	01/24/24 21:40
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751577	RN	EET CHI	01/25/24 17:41
Total Recoverable	Prep	3005A			751230	BDE	EET CHI	01/24/24 07:54 - 01/24/24 13:54 ¹
Total Recoverable	Analysis	6020B		1	751935	RN	EET CHI	01/29/24 14:45
Total/NA	Prep	7470A			753245	MJG	EET CHI	02/08/24 10:30 - 02/08/24 12:30 ¹
Total/NA	Analysis	7470A		1	753469	MJG	EET CHI	02/09/24 08:24
Total/NA	Analysis	SM 2540C		1	751341	CLB	EET CHI	01/24/24 22:02
Total/NA	Analysis	SM 4500 CI- E		5	751394	TR	EET CHI	01/24/24 16:48
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 14:12
Total/NA	Analysis	SM 4500 SO4 E		10	752223	TR	EET CHI	01/31/24 16:47

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



ANALYTICAL REPORT

PREPARED FOR

Attn: James Thorne
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Generated 2/19/2024 8:47:34 AM

JOB DESCRIPTION

Joliet #29 CCR (RAD)

JOB NUMBER

500-245243-2

Eurofins Chicago

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization



Generated
2/19/2024 8:47:34 AM

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Case Narrative

Client: Midwest Generation EME LLC
Project: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Job ID: 500-245243-2

Eurofins Chicago

Job Narrative 500-245243-2

Receipt

The samples were received on 1/23/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.1° C and 2.4° C.

RAD

Methods 904.0, RA-06-RC: Radium-228 batch 645640

The sample duplicate (DUP) precision was outside control limits indicating a possible matrix interference. Due to the nature of the analysis the sample cannot be recounted and still achieve the detection goal. The client should take this into consideration when evaluating the data. (860-66116-B-7-B DU)

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

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Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-245243-1	MW-03	Water	01/23/24 12:14	01/23/24 16:20
500-245243-2	MW-04	Water	01/23/24 10:57	01/23/24 16:20
500-245243-3	MW-05	Water	01/23/24 13:14	01/23/24 16:20
500-245243-4	MW-10	Water	01/23/24 14:35	01/23/24 16:20
500-245243-5	Duplicate	Water	01/23/24 00:00	01/23/24 16:20

1

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Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: MW-03
Date Collected: 01/23/24 12:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-1
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0816	U	0.0778	0.0781	1.00	0.121	pCi/L	01/25/24 11:02	02/16/24 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		30 - 110					01/25/24 11:02	02/16/24 09:30	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.13		0.428	0.440	1.00	0.536	pCi/L	01/25/24 11:05	02/06/24 11:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		30 - 110					01/25/24 11:05	02/06/24 11:07	1
Y Carrier	84.9		30 - 110					01/25/24 11:05	02/06/24 11:07	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.21		0.435	0.447	5.00	0.536	pCi/L		02/16/24 17:32	1

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: MW-04
Date Collected: 01/23/24 10:57
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-2
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0852	U	0.0868	0.0872	1.00	0.138	pCi/L	01/25/24 11:02	02/16/24 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.7		30 - 110					01/25/24 11:02	02/16/24 09:30	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U	0.388	0.389	1.00	0.649	pCi/L	01/25/24 11:05	02/06/24 11:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.7		30 - 110					01/25/24 11:05	02/06/24 11:07	1
Y Carrier	88.2		30 - 110					01/25/24 11:05	02/06/24 11:07	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.372	U	0.398	0.399	5.00	0.649	pCi/L		02/16/24 17:32	1

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: MW-05
Date Collected: 01/23/24 13:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-3
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142		0.0861	0.0871	1.00	0.116	pCi/L	01/25/24 11:02	02/16/24 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		30 - 110					01/25/24 11:02	02/16/24 09:30	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.637		0.334	0.340	1.00	0.463	pCi/L	01/25/24 11:05	02/06/24 11:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		30 - 110					01/25/24 11:05	02/06/24 11:07	1
Y Carrier	88.2		30 - 110					01/25/24 11:05	02/06/24 11:07	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.779		0.345	0.351	5.00	0.463	pCi/L		02/16/24 17:32	1

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: MW-10
Date Collected: 01/23/24 14:35
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-4
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0657	U	0.0777	0.0779	1.00	0.127	pCi/L	01/25/24 11:02	02/16/24 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.1		30 - 110					01/25/24 11:02	02/16/24 09:30	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.654	U	0.436	0.440	1.00	0.667	pCi/L	01/25/24 11:05	02/06/24 11:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.1		30 - 110					01/25/24 11:05	02/06/24 11:07	1
Y Carrier	87.1		30 - 110					01/25/24 11:05	02/06/24 11:07	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.720		0.443	0.447	5.00	0.667	pCi/L		02/16/24 18:06	1

Client Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: Duplicate

Lab Sample ID: 500-245243-5

Date Collected: 01/23/24 00:00

Matrix: Water

Date Received: 01/23/24 16:20

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.197		0.0961	0.0978	1.00	0.119	pCi/L	01/25/24 11:02	02/16/24 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		30 - 110					01/25/24 11:02	02/16/24 09:30	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.638		0.375	0.380	1.00	0.547	pCi/L	01/25/24 11:05	02/06/24 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		30 - 110					01/25/24 11:05	02/06/24 11:01	1
Y Carrier	82.2		30 - 110					01/25/24 11:05	02/06/24 11:01	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.834		0.387	0.392	5.00	0.547	pCi/L		02/16/24 18:06	1

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

QC Association Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Rad

Prep Batch: 645639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	PrecSep-21	
500-245243-2	MW-04	Total/NA	Water	PrecSep-21	
500-245243-3	MW-05	Total/NA	Water	PrecSep-21	
500-245243-4	MW-10	Total/NA	Water	PrecSep-21	
500-245243-5	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-645639/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-645639/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 645640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245243-1	MW-03	Total/NA	Water	PrecSep_0	
500-245243-2	MW-04	Total/NA	Water	PrecSep_0	
500-245243-3	MW-05	Total/NA	Water	PrecSep_0	
500-245243-4	MW-10	Total/NA	Water	PrecSep_0	
500-245243-5	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-645640/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-645640/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-645639/1-A
Matrix: Water
Analysis Batch: 648592

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 645639

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04555	U	0.0644	0.0645	1.00	0.109	pCi/L	01/25/24 11:02	02/16/24 07:32	1
Carrier	MB %Yield	MB Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	88.3		30 - 110				01/25/24 11:02		02/16/24 07:32	1

Lab Sample ID: LCS 160-645639/2-A
Matrix: Water
Analysis Batch: 648592

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 645639

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-226	11.3	11.52		1.18	1.00	0.0954	pCi/L	102	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.7		30 - 110						

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-645640/1-A
Matrix: Water
Analysis Batch: 647093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 645640

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1839	U	0.304	0.305	1.00	0.519	pCi/L	01/25/24 11:05	02/06/24 15:06	1
Carrier	MB %Yield	MB Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	88.3		30 - 110				01/25/24 11:05		02/06/24 15:06	1
Y Carrier	84.5		30 - 110				01/25/24 11:05		02/06/24 15:06	1

Lab Sample ID: LCS 160-645640/2-A
Matrix: Water
Analysis Batch: 647093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 645640

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	9.24	10.43		1.33	1.00	0.413	pCi/L	113	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.7		30 - 110						
Y Carrier	84.9		30 - 110						

Eurofins Chicago

2417 Bond Street
University Park, IL 60484
Phone 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information		Sampler: <i>John Hawke</i>		Lab PM: Mockler, Diana J		COC No: 500-120311-45941 1					
Client Contact: Patrick Allenstein		Phone: <i>630 290 6850</i>		E-Mail: Diana.Mockler@et.eurofins.com		Page 1 of 1					
Company: KPRG and Associates, Inc.		PWSID:		Analysis Ref: 500-245243 COC		Job #: <i>500-195193</i>					
Address: 14665 West Lisbon Road, Suite 1A		Due Date Requested:		Total Number of Containers: 6010C, 6020A, 7470A 2540C, 4500_F_C, SM4500_C1_E, SM4500_S04_E 903.0, 904.0		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - H2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)					
City: Brookfield		TAT Requested (days):									
State, Zip: WI, 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Phone:		PO #: 4502085968									
Email: patricka@kprginc.com		WO #:									
Project Name: Joliet #29 CCR/ Event Desc: Quarterly MWG Joliet #29 CCR		Project #: 50011568		Special Instructions/Note:							
Site: Illinois		SSOW#:									
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)					Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Field Filtered Sample (Yes or No)	Field Filtered Sample (Yes or No)
1 MW-03	1-23-24	12:14	G	Water	N	N	X X X				
2 MW-04	1-23-24	10:57	G	Water	N	N	X X X				
3 MW-05	1-23-24	13:14	G	Water	N	N	X X X				
4 MW-10	1-23-24	14:35	G	Water	N	N	X X X				
5 Duplicate	1-23-24	-	G	Water	N	N	X X X				
				Water							
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested I, II, III, IV, Other (specify)				Special Instructions/QC Requirements							
Empty Kit Relinquished by:		Date		Time		Method of Shipment:					
Relinquished by: <i>[Signature]</i>		Date/Time: 1-23-24 16:20		Company: KPRG		Received by: <i>[Signature]</i> Date/Time: 1/23/24 1020 Company: BETA					
Relinquished by:		Date/Time:		Company:		Received by: Date/Time: Company:					
Relinquished by:		Date/Time:		Company:		Received by: Date/Time: Company:					
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks. <i>2.9+2.4, 1.6+2.1</i>							

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Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-245243-2

Login Number: 245243

List Source: Eurofins Chicago

List Number: 1

Creator: Hernandez, Stephanie

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4,2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-245243-2

Login Number: 245243

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 01/24/24 01:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Lab Chronicle

Client: Midwest Generation EME LLC
 Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: MW-03
Date Collected: 01/23/24 12:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			645639	KAC	EET SL	01/25/24 11:02
Total/NA	Analysis	903.0		1	648469	EMH	EET SL	02/16/24 09:30
Total/NA	Prep	PrecSep_0			645640	KAC	EET SL	01/25/24 11:05
Total/NA	Analysis	904.0		1	647093	FLC	EET SL	02/06/24 11:07
Total/NA	Analysis	Ra226_Ra228		1	648594	EMH	EET SL	02/16/24 17:32

Client Sample ID: MW-04
Date Collected: 01/23/24 10:57
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			645639	KAC	EET SL	01/25/24 11:02
Total/NA	Analysis	903.0		1	648469	EMH	EET SL	02/16/24 09:30
Total/NA	Prep	PrecSep_0			645640	KAC	EET SL	01/25/24 11:05
Total/NA	Analysis	904.0		1	647093	FLC	EET SL	02/06/24 11:07
Total/NA	Analysis	Ra226_Ra228		1	648594	EMH	EET SL	02/16/24 17:32

Client Sample ID: MW-05
Date Collected: 01/23/24 13:14
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			645639	KAC	EET SL	01/25/24 11:02
Total/NA	Analysis	903.0		1	648469	EMH	EET SL	02/16/24 09:30
Total/NA	Prep	PrecSep_0			645640	KAC	EET SL	01/25/24 11:05
Total/NA	Analysis	904.0		1	647093	FLC	EET SL	02/06/24 11:07
Total/NA	Analysis	Ra226_Ra228		1	648594	EMH	EET SL	02/16/24 17:32

Client Sample ID: MW-10
Date Collected: 01/23/24 14:35
Date Received: 01/23/24 16:20

Lab Sample ID: 500-245243-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			645639	KAC	EET SL	01/25/24 11:02
Total/NA	Analysis	903.0		1	648469	EMH	EET SL	02/16/24 09:30
Total/NA	Prep	PrecSep_0			645640	KAC	EET SL	01/25/24 11:05
Total/NA	Analysis	904.0		1	647093	FLC	EET SL	02/06/24 11:07
Total/NA	Analysis	Ra226_Ra228		1	648594	EMH	EET SL	02/16/24 18:06

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Client Sample ID: Duplicate

Lab Sample ID: 500-245243-5

Date Collected: 01/23/24 00:00

Matrix: Water

Date Received: 01/23/24 16:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	PrecSep-21			645639	KAC	EET SL	01/25/24 11:02
Total/NA	Analysis	903.0		1	648469	EMH	EET SL	02/16/24 09:30
Total/NA	Prep	PrecSep_0			645640	KAC	EET SL	01/25/24 11:05
Total/NA	Analysis	904.0		1	647092	FLC	EET SL	02/06/24 11:01
Total/NA	Analysis	Ra226_Ra228		1	648594	EMH	EET SL	02/16/24 18:06

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Tracer/Carrier Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR (RAD)

Job ID: 500-245243-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)
500-245243-1	MW-03	90.6
500-245243-2	MW-04	81.7
500-245243-3	MW-05	94.7
500-245243-4	MW-10	91.1
500-245243-5	Duplicate	93.4
LCS 160-645639/2-A	Lab Control Sample	96.7
MB 160-645639/1-A	Method Blank	88.3

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
500-245243-1	MW-03	90.6	84.9
500-245243-2	MW-04	81.7	88.2
500-245243-3	MW-05	94.7	88.2
500-245243-4	MW-10	91.1	87.1
500-245243-5	Duplicate	93.4	82.2
LCS 160-645640/2-A	Lab Control Sample	96.7	84.9
MB 160-645640/1-A	Method Blank	88.3	84.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	1-23-24
Sample Name	MW-03	Start Time	11:53	
Condition of Well	Good			
Water Level	32.84	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	APPEARS CLEAR TRACE TURB	
Volume Removed	3.000	W L at Sample Time	32.85	
Method of Sample	Low-Flow	Sample Characteristics	CLEAR WHEN FILTERED	
Sample Analysis	CCA + CCR	Sample Time	12:14	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
11:56	32.84	7.40	6.3	1.630	9.34	198.2	80.3
11:59	32.85	7.21	9.0	1.746	9.37	200.6	65.2
12:02	32.85	7.08	9.8	1.732	7.82	201.7	108.6
12:05	32.85	7.05	9.8	1.727	7.00	201.4	105.2
12:08	—	7.03	9.6	1.721	6.59	201.9	95.4
12:11	32.85	7.01	9.6	1.720	6.44	202.8	101.2
12:14	32.85	7.01	9.3	1.722	6.38	203.3	90.7

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates



PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	1-23-24
Sample Name	MW-04	Start Time	10:30	
Condition of Well	GOOD			
Water Level	33.13	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	CLOUDY / OPALES TAN COLOR	
Volume Removed	4.0 GALS	W L at Sample Time	33.14	
Method of Sample	Low-Flow	Sample Characteristics	CLEAR WHEN FILTERED TRACE MPB	
Sample Analysis	CCA + CLR	Sample Time	10:57	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
10:33	33.14	6.74	11.0	1.748	7.64	215.6	650.2
10:36	33.14	6.80	9.4	1.715	5.21	211.8	—
FLUSH CELL 10:39	33.14	6.84	9.3	1.703	4.99	210.1	—
10:42	33.14	6.92	11.0	1.694	5.53	208.4	477.3
10:45	33.14	6.91	10.3	1.700	5.26	208.2	425.2
10:48	33.14	6.93	9.5	1.690	5.22	207.8	329.7
10:51	—	6.93	9.2	1.683	5.27	207.7	250.3
10:54	33.14	6.93	9.2	1.681	5.28	207.8	132.4
10:57	33.14	6.93	9.2	1.678	5.30	206.8	80.1

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates



PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	1-23-24
Sample Name	MW-05	Start Time	12:59	
Condition of Well	GOOD			
Water Level	33.78	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	APPEARS CLEAR, ODRLESS	
Volume Removed	2.75 QRS,	W L at Sample Time	33.78	
Method of Sample	Low-Flow	Sample Characteristics	APPEARS CLEAR	
Sample Analysis	CCA + CCR + DURS	Sample Time	13:14	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
13:02	33.78	7.32	9.3	1.533	9.03	189.4	50.3
13:05	33.78	7.01	11.5	1.623	6.40	194.9	15.9
13:08	—	6.94	11.9	1.644	5.10	197.3	9.05
13:11	33.77	6.93	12.0	1.649	4.65	198.2	8.82
13:14	33.78	6.93	12.2	1.649	4.47	199.1	7.12
—							

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates



PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	1-23-24
Sample Name	MW-10	Start Time	14:17	
Condition of Well	GOOD			
Water Level	33.98	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	CLOUDY MOD ODORLESS TURB	
Volume Removed	3.0 QRS	W L at Sample Time	34.0	
Method of Sample	Low-Flow	Sample Characteristics	CLEAR WITHIN FILTERED TRACE TURB	
Sample Analysis	CLA + CLR	Sample Time	14:35	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
14:20	34.0	7.08	8.2	1.871	8.74	183.4	80.4
14:23	34.0	6.99	9.9	1.847	8.33	187.7	136.3
14:26	—	6.97	10.2	1.798	6.55	191.3	196.2
14:29	34.0	6.93	10.3	1.794	6.11	192.6	159.9
14:32	—	6.93	9.9	1.792	6.03	193.3	88.3
14:35	34.0	6.96	10.1	1.798	6.01	193.7	82.7

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

