



January 31, 2024

Ms. Karen Ortiz, Esq.
Puerto Rico Legal Counsel
PO Box 1890
Guayama, Puerto Rico 00785

**2023 Annual Groundwater Monitoring and Corrective Action Report
AES Puerto Rico LP, Guayama, Puerto Rico**

Dear Ms. Ortiz:

DNA-Environment, LLC (DNA) has prepared this 2023 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) for the temporary staging area of manufactured aggregate (AGREMAX™) at AES Puerto Rico LP (AES-PR) in Guayama, Puerto Rico. This report has been prepared to comply with the reporting requirements described in the United States Environmental Protection Agency (USEPA) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities, 40 CFR Part 257, Subpart D (CCR Rule), as required by §257.90(e)(1) through §257.90(e)(6).

Overview of Current Status of Groundwater Monitoring and Corrective Action Program [40 CFR 257.90(e)(6)]:

Groundwater sampling events were conducted in April and October 2023. The April 2023 sampling event was completed under the assessment monitoring program. The October 2023 sampling event was conducted under the corrective action monitoring program based on the progress of the composite liner installation in the Agremax Storage Area. AES-PR implemented the corrective action monitoring program on October 16, 2023, per 40 CFR §257.98.

Statistical evaluation of the constituents listed in Appendix IV to 40 CFR Part 257 was performed as required under assessment and corrective action monitoring programs, and evaluation of statistically significant increase over background levels for the constituents listed in Appendix III was not warranted pursuant to 40 CFR §257.93(h) and §257.94(e). At the end of the 2023 reporting period, the most current statistical evaluation of groundwater monitoring data, which was completed in August 2023, identified statistically significant levels above the associated groundwater protection standards (GWPS) of selenium and molybdenum in groundwater samples collected from Monitoring Well MW-3 and lithium and molybdenum from Monitoring Well MW-4.

The following key actions were completed in 2023 to comply with the CCR Rule:

- Groundwater sampling events were conducted in April and October 2023 under assessment monitoring and corrective action monitoring programs, respectively.
- Statistical evaluations were completed in February and August 2023 per 40 CFR §257.93(h) and §257.95(h).¹ These evaluations identified statistically significant levels above the groundwater protection standards (GWPS) of selenium and molybdenum in groundwater samples collected from Monitoring Well MW-3 and lithium and molybdenum from Monitoring Well MW-4.
- On October 16, 2023, a corrective action monitoring program was implemented per 40 CFR §257.98. The procedures for implementing the corrective action monitoring program are described in the document entitled *Federal CCR Corrective Action Monitoring Plan, AES Puerto Rico LP, Guayama, Puerto Rico* (DNA-Environment LLC, October 2023).²
- In 2023, the composite liner was installed in 97% of the Phase I portion of the Agremax Staging Area and 90% of the Phase II portion of the Agremax Staging Area.

Section 257.90(e) of the CCR Rule specifies the following:

For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by §257.105(h)(1).

To report on the activities conducted during the prior calendar year and document compliance with the CCR Rule, the specific requirements listed in §257.90(e)(1) through §257.90(e)(5) are provided below in bold/italic type, followed by a narrative addressing how that specific requirement has been met.

¹ The statistical analyses completed in February and August 2023 include the groundwater data collected through the sampling events conducted in October 2022 and April 2023, respectively.

² This document is available on the AES-PR's CCR Rule webpage.

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

§257.90(e)(1): A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

AES-PR is located in Guayama on the south coast of Puerto Rico (Site). The Site is bordered to the north and west by an inactive pharmaceutical facility (formerly TAPI Puerto Rico) and by an undeveloped parcel of land, to the south by land owned by the Puerto Rico Ports Authority and Las Mareas Harbor, to the east by an inactive petroleum refinery (formerly Chevron Phillips Chemical Puerto Rico Core), and to the west by AES Ilumina (solar energy farm). Figure 1 shows a Site Location Map. Figure 2 shows the manufactured aggregate (AGREMAX™) temporary staging area and associated upgradient and downgradient CCR monitoring wells (*i.e.*, MW-1 through MW-5). Figure 3 shows the locations of monitoring wells TW-101 through TW-109 installed during the 2019 nature and extent groundwater characterization study pursuant to §257.95(g)(1).

§257.90(e)(2): Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No permanent CCR monitoring wells were installed or decommissioned during this reporting period.

§257.90(e)(3): In addition to all the monitoring data obtained under §257.90 through §257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

Table 1 summarizes the number of samples collected at each monitoring well, sampling dates, and designation of whether the samples were required by assessment or corrective action monitoring programs.

Groundwater analytical results and field monitoring data for the samples collected during the 2023 CCR monitoring events are summarized in Table 2 and Tables 3A through 3C.

§257.90(e)(4): A narrative discussion of any transition between monitoring programs (*e.g.*, the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels);

Groundwater sampling events were conducted in April and October 2023. The April 2023 sampling event was completed under the assessment monitoring program in accordance with 40 CFR §257.95. AES-PR established the assessment monitoring program on July 16, 2018, pursuant to 40 CFR §257.94(e) and §257.95. The October 2023 sampling event was conducted under the

corrective action monitoring program based on the progress of the composite liner installation in the Agremax Storage Area. AES-PR established and implemented the corrective action monitoring program on October 16, 2023, per 40 CFR §257.98. Monitoring wells MW-1 through MW-5 and TW-101 through TW-109 were monitored during the October 2023 sampling event as the Site transitioned from assessment into corrective action monitoring.³

Statistical evaluations completed in February and August 2023 resulted in statistically significant levels above the groundwater protection standards (GWPS) of selenium and molybdenum in groundwater samples collected from Monitoring Well MW-3 and lithium and molybdenum from Monitoring Well MW-4. Tables 4A and 4B identify the statistically significant levels and summarize the statistical groundwater protection standards and site background levels established per §257.95(d)(2) and §257.95(h).

§257.90(e)(5): Other information required to be included in the annual report as specified in §257.90 through §257.98.

Projected key activities to be completed during the 2024 calendar year include the following:

- Statistical evaluation through the October 2023 and April 2024 sampling-event results.
- Annual and semiannual corrective action monitoring events per 40 CFR §257.98.
- Completion of the composite liner installation activities at the Phase I and Phase II portions of the Agremax Staging Area. However, the timing of these activities may vary depending on factors including, but not limited to, contractor availability, Agremax shipment schedules, and other logistical considerations.

Other information included in the 2023 Annual Report

Appendix A consists of a table summarizing the data and calculations used to determine groundwater flow rates and the groundwater contour maps for each sampling event with arrows to indicate the interpreted direction of groundwater flow.

Appendix B includes the laboratory analytical reports for the April 2023 and October 2023 sampling events. These reports include the laboratory data packages with supporting information, such as case narrative, sample and method summary, analytical results, quality control, and chain-of-custody documentation.

³ For wells TW-104 and TW-109, only geochemical field parameters were collected in accordance with the *Federal CCR Corrective Action Groundwater Monitoring Plan, AES Puerto Rico LP, Guayama, Puerto Rico* (DNA-Environment LLC, October 2023), available at the AES-PR's CCR Rule webpage.

Appendix C includes a discussion of statistical methods, statistical evaluation findings, and statistical software outputs for the statistical analyses completed in 2023 (*i.e.*, statistical evaluations through October 2022 and April 2023 sampling results, respectively).⁴

We appreciate the opportunity to assist with the CCR Rule groundwater monitoring program at AES-PR.

Sincerely,



Alberto Meléndez
Principal Environmental Consultant

Enclosures

cc: Ms. Pilar Cuadra, AES US Services, LLC – w/enclosures
Mr. Felipe Bruneau, AES Puerto Rico, LP - w/enclosures
Mr. Elías Sostre, AES Puerto Rico, LP - w/enclosures

⁴ Analytical reports for the October 2022 sampling event were included in the *2022 Annual Groundwater Monitoring and Corrective Action Report, AES Puerto Rico LP, Guayama, Puerto Rico* (DNA-Environment LLC, January 31, 2023), available at the AES-PR's CCR Rule webpage.

TABLES

Table 1. Summary of 2023 CCR Groundwater Sampling Program, AES Puerto Rico LP, Guayama, Puerto Rico

Monitoring Well ID	Upgradient or Downgradient Well	Number of Samples Collected in 2023 *	Sample Collection Date	Monitoring Phase
MW-1	Upgradient	2	10-Apr-23	Assessment
			16-Oct-23	Corrective Action
MW-2	Upgradient	2	10-Apr-23	Assessment
			16-Oct-23	Corrective Action
MW-3	Downgradient	2	10-Apr-23	Assessment
			16-Oct-23	Corrective Action
MW-4	Downgradient	4	10-Apr-23	Assessment
			16-Oct-23	Corrective Action
MW-5	Downgradient	2	10-Apr-23	Assessment
			16-Oct-23	Corrective Action
TW-101	Downgradient	1	17-Oct-23	Corrective Action
TW-102	Downgradient	1	17-Oct-23	Corrective Action
TW-103	Downgradient	1	17-Oct-23	Corrective Action
TW-105	Downgradient	1	17-Oct-23	Corrective Action
TW-106	Downgradient	1	17-Oct-23	Corrective Action
TW-107	Downgradient	1	17-Oct-23	Corrective Action
TW-108	Downgradient	1	17-Oct-23	Corrective Action

Notes:

* Groundwater sampling events were held in April and October 2023. One groundwater sample was collected per sampling event at Monitoring Wells MW-1, MW-2, MW-3, and MW-5, whereas two groundwater samples were collected per sampling event at MW-4 (these consisted of one sample and one field duplicate sample per event). For the corrective action monitoring wells (i.e., TW-101 through TW-103 and TW-105 through TW-108), one sample was collected per well during the corrective action groundwater monitoring program, which was initiated in October 2023.

Table 2. Analytical Results and Monitoring Data for Groundwater Samples Collected in April 2023
AES Puerto Rico, LP in Guayama, Puerto Rico

	Well ID	MW-1	MW-2	MW-3	MW-4	MW-4-Dup	MW-5
	Well Location	Upgradient	Upgradient	Downgradient	Downgradient	NA	Downgradient
	Sample ID	AES-MW1-041023	AES-MW2-041023	AES-MW3-041023	AES-MW4-041023	AES-MW4-DUP-041023	AES-MW5-041023
	Sampling Date	4/10/23	4/10/23	4/10/23	4/10/23	4/10/23	4/10/23
Static Water Elevation (ft MSL)		13.20	12.85	3.39	4.27	NA	3.55
Field Parameters	Units						
pH	SU	7.15	6.90	7.01	7.22	NA	6.88
Conductivity	mS/cm	1.87	1.90	12.31	30.85	NA	12.79
Redox Potential	mV	109.9	96.0	-4.3	-105.8	NA	-16.9
Dissolved Oxygen	mg/L	1.87	0.41	0.33	0.19	NA	0.41
Turbidity	NTU	8.11	10.98	7.04	3.02	NA	21.71
Temperature	°C	29.2	29.6	29.9	30.9	NA	30.2
Analytical Results	Units						
Antimony	mg/L	0.0013 U	0.0013 U				
Arsenic	mg/L	0.00036 J	0.00036 J	0.0010	0.0021	0.0022	0.0084
Barium	mg/L	0.029	0.22	0.079	0.038	0.040	0.037
Beryllium	mg/L	0.00053 U	0.00053 U				
Cadmium	mg/L	0.00017 U	0.00017 U	0.00018 J	0.00017 U	0.00017 U	0.00017 U
Chromium	mg/L	0.0011 U	0.0036 J				
Cobalt	mg/L	0.00047 J	0.00040 U	0.0022	0.0012	0.0012	0.0027
Fluoride	mg/L	0.68	0.48	1.8	0.81	0.81	0.42
Lead	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00032 J	0.00022 J
Lithium	mg/L	0.0025 U	0.0025 U	0.0028 J	0.37	0.40	0.0026 J
Mercury	mg/L	0.000079 U	0.000079 U				
Molybdenum	mg/L	0.0025 U	0.0025 U	0.12	1.4	1.4	0.0037 J
Selenium	mg/L	0.016	0.0014 J	0.047	0.010	0.012	0.0050
Thallium	mg/L	0.00057 U	0.00057 U				
Radium 226 and 228 combined	pCi/L	0.0662 U	0.438 U	0.214 U	0.457 U	0.356 U	0.0923 U
Boron	mg/L	0.24	0.19	0.97	1.8	1.8	0.40
Calcium	mg/L	110	170	300	370	380	620
Chloride	mg/L	240	220	4100	7400	7400	4300
pH (field)	SU	7.15	6.90	7.01	7.22	NA	6.88
Sulfate	mg/L	280	210	1300	4100	4100	2000
Total Dissolved Solids	mg/L	1200	1300	8400	27000	26000	9400

Notes:

mg/L - milligrams per Liter

SU - Standard Units

pCi/L - picocuries per Liter

ft MSL - Feet above Mean Sea Level

mS/cm - millisiemens per centimeter

mV - millivolts

NTU - Nephelometric Turbidity Units

°C - degrees Celsius

Analytical results of metal elements are "Total Recoverable".

Sample ID format is: "Site_Name-MW_ID-Sampling_Date" (Sampling Date format is mmddyy).

Sample AES-MW4-DUP-041023 is the field duplicate sample of AES-MW4-041023.

NA - Not Applicable to the field duplicate sample.

U - Not detected at the indicated Method Detection Limit (MDL). For Radium 226 and 228 combined, 'U' indicates that the result shown is below the Minimum Detectable Concentration (MDC).

J - Result is less than the Reporting Limit, but greater than or equal to the MDL; concentration is an approximate value.

Static water elevations were calculated from depth to water measurements conducted on 10-April-2023, using land survey data of September 2020.

Table 3A. Analytical Results and Monitoring Data for Groundwater Samples Collected from CCR Monitoring Wells in October 2023
AES Puerto Rico, LP in Guayama, Puerto Rico

	Well ID	MW-1	MW-2	MW-3	MW-4	MW-4-Dup	MW-5
	Well Location	Upgradient	Upgradient	Downgradient	Downgradient	NA	Downgradient
	Sample ID	AES-MW1-101623	AES-MW2-101623	AES-MW3-101623	AES-MW4-101623	AES-MW4-DUP-101623	AES-MW5-101623
	Sampling Date	10/16/23	10/16/23	10/16/23	10/16/23	10/16/23	10/16/23
Static Water Elevation (ft MSL)		11.65	11.57	2.19	3.76	NA	2.55
Field Parameters	Units						
pH	SU	6.93	6.69	6.82	7.20	NA	6.58
Conductivity	mS/cm	2.24	2.04	16.35	17.64	NA	13.09
Redox Potential	mV	48.6	21.6	-14.5	-147.6	NA	-50.9
Dissolved Oxygen	mg/L	0.92	0.22	0.66	1.74	NA	0.11
Turbidity	NTU	0.51	0.85	0.74	3.23	NA	8.74
Temperature	°C	30.0	31.8	31.5	32.6	NA	30.9
Analytical Results	Units						
Antimony	mg/L	0.0013 U	0.0013 U				
Arsenic	mg/L	0.00081 J	0.00089 J	0.0026	0.0032	0.0025	0.012
Barium	mg/L	0.039	0.23	0.068	0.036	0.037	0.032
Beryllium	mg/L	0.00053 U	0.00053 U				
Cadmium	mg/L	0.00017 U	0.00017 U	0.00022 J	0.00033 J	0.00022 J	0.00017 U
Chromium	mg/L	0.0011 U	0.0011 U	0.0031 J	0.0013 J	0.0014 J	0.0011 U
Cobalt	mg/L	0.00052 J	0.00052 J	0.0032	0.0037	0.0011	0.0032
Fluoride	mg/L	0.67	0.66	1.6	1.3	1.3	0.42
Lead	mg/L	0.00019 U	0.00019 U				
Lithium	mg/L	0.0025 U	0.0025 U	0.0038 J	0.25	0.29	0.0025 U
Mercury	mg/L	0.000079 U	0.000083 J	0.000079 U	0.000079 U	0.000079 U	0.000079 U
Molybdenum	mg/L	0.0025 U	0.0025 U	0.17	2.3	2.4	0.0025 U
Selenium	mg/L	0.018	0.0098 U	0.070	0.0022 J	0.0021 J	0.00098 U
Thallium	mg/L	0.00057 U	0.00057 U				
Radium 226 and 228 combined	pCi/L	0.00974 U	0.247 U	1.31	0.471 U	0.213 U	0.474 U
Boron	mg/L	0.24	0.19	1.0	1.8	1.8	0.32
Calcium	mg/L	140	160	310	120	120	520
Chloride	mg/L	270	240	4500	4000	4000	3600
pH (field)	SU	6.93	6.69	6.82	7.20	NA	6.58
Sulfate	mg/L	500	260	2500	4000	4000	2200
Total Dissolved Solids	mg/L	1700	1300	12000	14000	13000	9300

Notes:

mg/L - milligrams per Liter

SU - Standard Units

pCi/L - picocuries per Liter

ft MSL - Feet above Mean Sea Level

mS/cm - millisiemens per centimeter

mV - millivolts

NTU - Nephelometric Turbidity Units

°C - degrees Celsius

Analytical results of metal elements are "Total Recoverable".

Sample ID format is: "Site_Name-MW_ID-Sampling_Date" (Sampling Date format is mmddyy).

Sample AES-MW4-DUP-101623 is the field duplicate sample of AES-MW4-101623.

NA - Not Applicable to the field duplicate sample.

U - Not detected at the indicated Method Detection Limit (MDL). For Radium 226 and 228 combined, 'U' indicates that the result shown is below the Minimum Detectable Concentration (MDC).

J - Result is less than the Reporting Limit, but greater than or equal to the MDL; concentration is an approximate value.

Static water elevations were calculated from depth to water measurements conducted on 17-October-2023, using land survey data of September 2020.

Table 3B. Analytical Results and Monitoring Data for Groundwater Samples Collected from Corrective Action Monitoring Wells in October 2023
AES Puerto Rico, LP in Guayama, Puerto Rico

	Well ID	TW-101	TW-102	TW-103	TW-105	TW-106	TW-107	TW-108
	Well Location	Downgradient						
	Sample ID	AES-TW101-101723	AES-TW102-101723	AES-TW103-101723	AES-TW105-101723	AES-TW106-101723	AES-TW107-101723	AES-TW108-101723
	Sampling Date	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23
Static Water Elevation (ft MSL)		NC	2.48	NC	1.15	1.16	1.22	1.17
Field Parameters	Units							
pH	SU	6.64	6.76	6.77	6.66	6.71	6.71	6.50
Conductivity	mS/cm	13.08	18.79	31.68	20.96	30.87	27.29	26.97
Redox Potential	mV	-116.6	62.0	45.0	-23.2	-58.0	-84.4	-64.1
Dissolved Oxygen	mg/L	0.24	0.21	0.25	1.19	0.12	0.11	0.13
Turbidity	NTU	5.05	0.0	0.0	1.60	6.18	12.31	1.75
Temperature	°C	31.7	31.7	31.5	29.9	30.4	30.8	29.2
Analytical Results	Units							
Antimony	mg/L	0.0013 U	0.0048	0.0013 U				
Arsenic	mg/L	0.0055	0.0044	0.0028	0.0031	0.0059	0.0028	0.0050
Barium	mg/L	0.19	0.079	0.036	0.036	0.029	0.046	0.027
Beryllium	mg/L	0.00053 U						
Cadmium	mg/L	0.00017 U	0.0010	0.00059	0.00025 J	0.00020 J	0.00017 U	0.00017 U
Chromium	mg/L	0.0011 U	0.0011 J	0.0023 J	0.0013 J	0.0028 J	0.0022 J	0.0021 J
Cobalt	mg/L	0.0014	0.013	0.019	0.0081	0.0068	0.0035	0.0047
Fluoride	mg/L	1.1	1.5	0.87	1.3	1.6	0.55	0.88
Lead	mg/L	0.00019 U						
Lithium	mg/L	0.0025 U	0.14	0.19	0.0041 J	0.0068 J	0.018	0.0051 J
Mercury	mg/L	0.000097 J	0.000079 U					
Molybdenum	mg/L	0.0049 J	0.20	0.47	0.0052	0.015	0.0050	0.0027 J
Selenium	mg/L	0.00098 U	0.075	0.16	0.0015 J	0.0022 J	0.0017 J	0.0013 J
Thallium	mg/L	0.00057 U						
Radium 226 and 228 combined	pCi/L	0.750	0.326 U	0.293 U	0.194 U	0.694	-0.280 U	0.536 U
Boron	mg/L	0.57	0.90	1.5	0.79	0.90	0.77	0.54
Calcium	mg/L	500	690	490	580	530	480	570
Chloride	mg/L	4100	4800	7500	5200	7900	6400	7300
pH (field)	SU	6.64	6.76	6.77	6.66	6.71	6.71	6.50
Sulfate	mg/L	900	4900	8900	5100	8200	7600	6400
Total Dissolved Solids	mg/L	8500	16000	29000	19000	28000	23000	23000

Notes:

mg/L - milligrams per Liter

SU - Standard Units

pCi/L - picocuries per Liter

ft MSL - Feet above Mean Sea Level

mS/cm - millisiemens per centimeter

mV - millivolts

NTU - Nephelometric Turbidity Units

°C - degrees Celsius

Analytical results of metal elements are "Total Recoverable".

Sample ID format is: "Site_Name-MW_ID-Sampling_Date" (Sampling Date format is mmddyy).

NA - Not Applicable to the field duplicate sample.

U - Not detected at the indicated Method Detection Limit (MDL). For Radium 226 and 228 combined, 'U' indicates that the result shown is below the Minimum Detectable Concentration (MDC).

J - Result is less than the Reporting Limit, but greater than or equal to the MDL; concentration is an approximate value.

Static water elevations were calculated from depth to water measurements conducted on 17-October-2023, using land survey data of June 2019 and September 2020.

NC - Not Calculated due to bent riser pipe causing inaccurate determination of static water elevation.

Table 3C. Field Monitoring Data Collected from Monitoring Wells TW-104 and TW-109 in October 2023
 AES Puerto Rico, LP in Guayama, Puerto Rico

	Well ID	TW-104	TW-109
	Well Location	Downgradient	Downgradient
	Monitoring Date	10/17/23	10/17/23
Static Water Elevation (ft MSL)		1.07	1.22
Field Parameters	Units		
pH	SU	6.55	6.37
Conductivity	mS/cm	18.05	17.29
Redox Potential	mV	-25.1	-48.0
Dissolved Oxygen	mg/L	0.14	0.14
Turbidity	NTU	10.33	25.94
Temperature	°C	28.8	28.6

Notes:

mg/L - milligrams per Liter

SU - Standard Units

ft MSL - Feet above Mean Sea Level

mS/cm - millisiemens per centimeter

mV - millivolts

NTU - Nephelometric Turbidity Units

°C - degrees Celsius

Static water elevations were calculated from depth to water measurements conducted on 17-October-2023 using land survey data of June 2019.

DNA-Environment, LLC

**Table 4A. Statistical Evaluation through October 2022 Data: Comparison of Lower Confidence Limits to Groundwater Protection Standards
CCR Groundwater Monitoring Program, AES Puerto Rico LP, Guayama, Puerto Rico**

	Comparison Criteria	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium 226 + 228 Combined (pCi/L)
Monitoring Well ID ¹	GWPS (greater of MCL, USEPA Amendments Level, or Site Background)	0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.040	0.002	0.100	0.05	0.002	5
	MCL	0.006	0.010	2	0.004	0.005	0.1	-	4.0	-	-	0.002	-	0.05	0.002	5
	USEPA Amendments to the National Minimum Criteria*	-	-	-	-	-	-	0.006	-	0.015	0.040	-	0.100	-	-	-
	Site Background Level**	0.003	0.0018	0.1666	0.001	0.0005	0.005	0.0028	0.8497	0.0013	0.01	0.0002	0.015	0.01346	0.001	0.7892
	Through Monitoring Date ²	Lower Confidence Limit ³														
MW-3	11-Oct-2022	0.0017	0.002097	0.1792	0.001	0.00042	0.0024	0.002081	1.652	0.001	0.004477	0.0002	0.1577	0.1096	0.0005	0.18
MW-4	11-Oct-2022	0.0022	0.002814	0.04492	0.0017	0.00036	0.002	0.0013	0.63	0.0005	0.5894	0.0002	0.41	0.0048	0.0005	0.1899
MW-5	11-Oct-2022	0.0025	0.007148	0.03362	0.001	0.0005	0.0025	0.0029	0.42	0.001	0.0039	0.0002	0.0036	0.001678	0.0005	0.2264

Notes

mg/L = milligrams per Liter

pCi/L = picocuries per Liter

GWPS = Groundwater Protection Standard

MCL = USEPA Maximum Contaminant Level

*USEPA Amendments to the National Minimum Criteria (Phase One, Part One), Disposal of Coal Combustion Residuals from Electric Utilities; effective August 29, 2018

** Site background levels for each constituent were computed based on the Upper Tolerance Limit (UTL) of the pooled groundwater data from upgradient wells MW-1 and MW-2.

Parametric tolerance limits were constructed with a target of 95% confidence and 95% coverage. The confidence and coverage of nonparametric tolerance limits were dependent upon the number of available background observations.

¹Downgradient Monitoring Well Identification

²Statistical evaluation of groundwater analytical results from all groundwater monitoring events through October 11, 2022.

³ Lower Confidence Limit (LCL): the confidence interval was set at 95% for Parametric and Non-parametric distributions.

Values in bold font and gray shading indicate a Lower Confidence Limit exceeding the corresponding CWPS Lower Confidence Limit (LCL). The confidence interval was set at 95% for parametric and nonparametric analysis.

Table 4B. Statistical Evaluation through April 2023 Data: Comparison of Lower Confidence Limits to Groundwater Protection Standards
CCR Groundwater Monitoring Program, AES Puerto Rico LP, Guayama, Puerto Rico

	Comparison Criteria	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium 226 + 228 Combined (pCi/L)	
	GWPS (greater of MCL, USEPA Amendments Level, or Site Background)	0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.040	0.002	0.100	0.05	0.002	5	
	MCL	0.006	0.010	2	0.004	0.005	0.1	-	4.0	-	-	0.002	-	0.05	0.002	5	
	USEPA Amendments to the National Minimum Criteria*	-	-	-	-	-	-	0.006	-	0.015	0.040	-	0.100	-	-	-	
	Site Background Level**	0.003	0.0018	0.1666	0.001	0.0005	0.005	0.0028	0.8497	0.0013	0.01	0.0002	0.015	0.01346	0.001	0.7892	
Monitoring Well ID¹	Through Monitoring Date²	Lower Confidence Limit³															
	MW-3	10-Apr-2023	0.0017	0.002016	0.1705	0.001	0.00042	0.0024	0.002088	1.66	0.001	0.004114	0.0002	0.155	0.1045	0.0005	0.214
	MW-4	10-Apr-2023	0.0022	0.002716	0.04409	0.001	0.00036	0.002	0.0012	0.63	0.0005	0.5742	0.0002	0.41	0.0052	0.0005	0.204
	MW-5	10-Apr-2023	0.0025	0.007292	0.0338	0.001	0.0005	0.0025	0.0029	0.42	0.001	0.0038	0.0002	0.0037	0.001778	0.0005	0.2174

Notes:

mg/L = milligrams per Liter

pCi/L = picocuries per Liter

GWPS = Groundwater Protection Standard

MCL = USEPA Maximum Contaminant Level

*USEPA Amendments to the National Minimum Criteria (Phase One, Part One), Disposal of Coal Combustion Residuals from Electric Utilities; effective August 29, 2018.

** Site background levels for each constituent were last updated through October 2022 data, and computed based on the Upper Tolerance Limit (UTL) of the pooled groundwater data from upgradient wells MW-1 and MW-2.

Parametric tolerance limits were constructed with a target of 95% confidence and 95% coverage. The confidence and coverage of nonparametric tolerance limits were dependent upon the number of available background observations.

¹Downgradient Monitoring Well Identification

²Statistical evaluation of groundwater analytical results from all groundwater monitoring events through April 10, 2023.

³Lower Confidence Limit (LCL): the confidence interval was set at 95% for Parametric and Nonparametric distributions.

Values in bold font and gray shading indicate a Lower Confidence Limit exceeding the corresponding GWPS.

FIGURES



Figure 1
Site Location Map
AES Puerto Rico, LP
Guayama, Puerto Rico



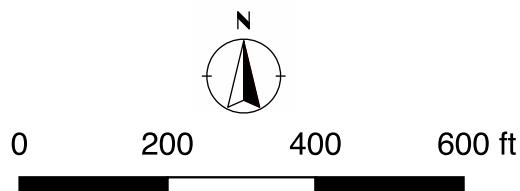
Legend

- CCR Upgradient Monitoring Well
- CCR Downgradient Monitoring Well
- Agremax Staging Area
(Approximate Limits)



Figure 2
CCR Groundwater Monitoring System

AES Puerto Rico, LP
Guayama, Puerto Rico



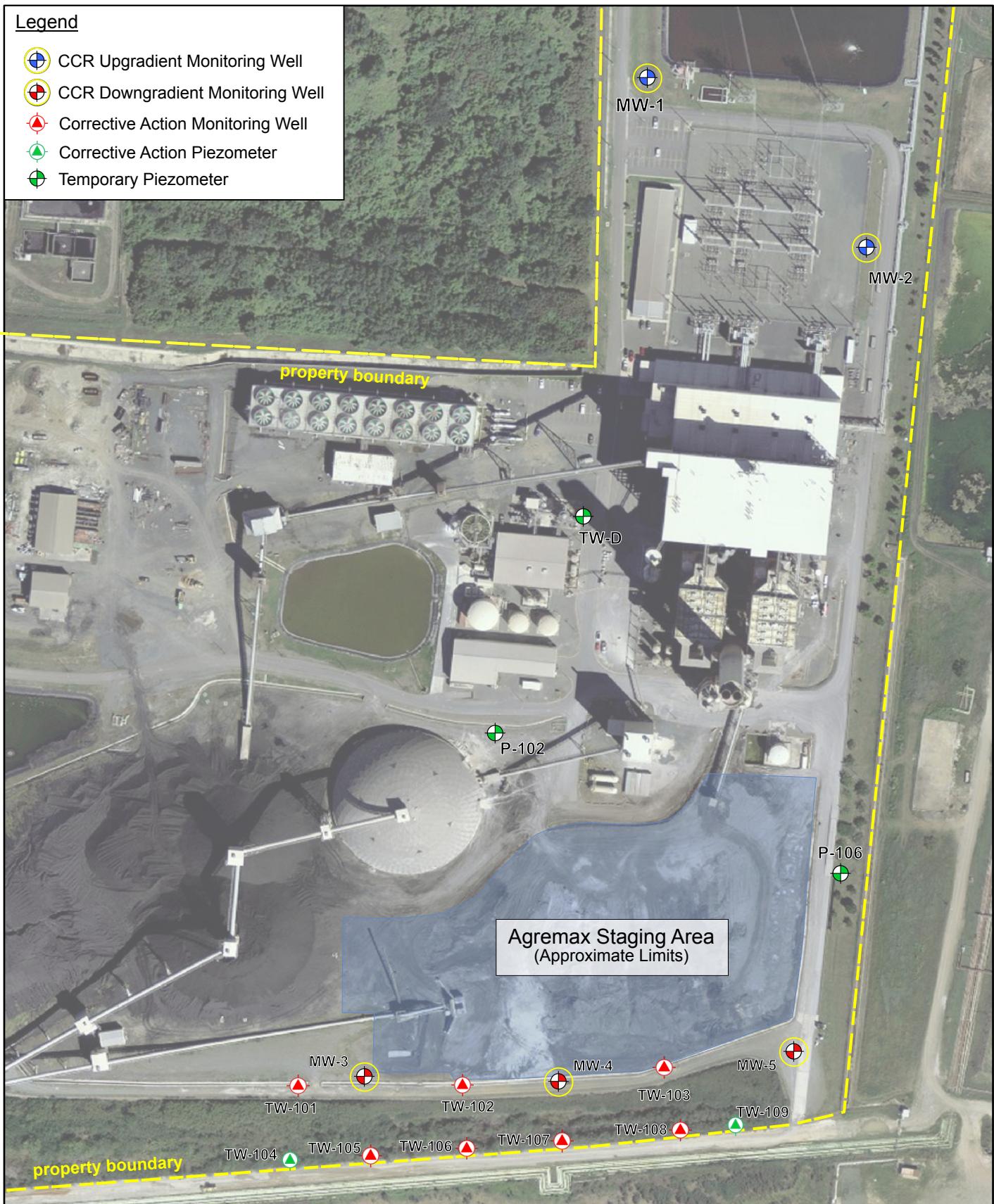
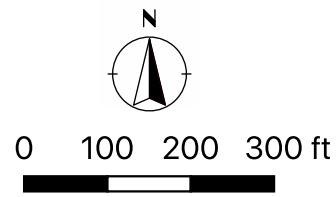


Figure 3
Corrective Action
Groundwater Monitoring Network
AES Puerto Rico, LP in Guayama, PR



DNA-ENVIRONMENT, LLC

APPENDIX A

GROUNDWATER FLOW DIRECTION AND RATE

Legend

- (CCR Upgradient Monitoring Well)
- (CCR Downgradient Monitoring Well)
- (Temporary Monitoring Well)
- (Temporary Piezometer)
- (Groundwater Elevation Contour Line)
- (Groundwater Elevation in Feet above MSL
(Measured on 10-Apr-2023))
- (Approximate Groundwater Flow Direction)
- 0.021 ft/d** Groundwater Flow Rate
(i.e., Velocity in feet per day)

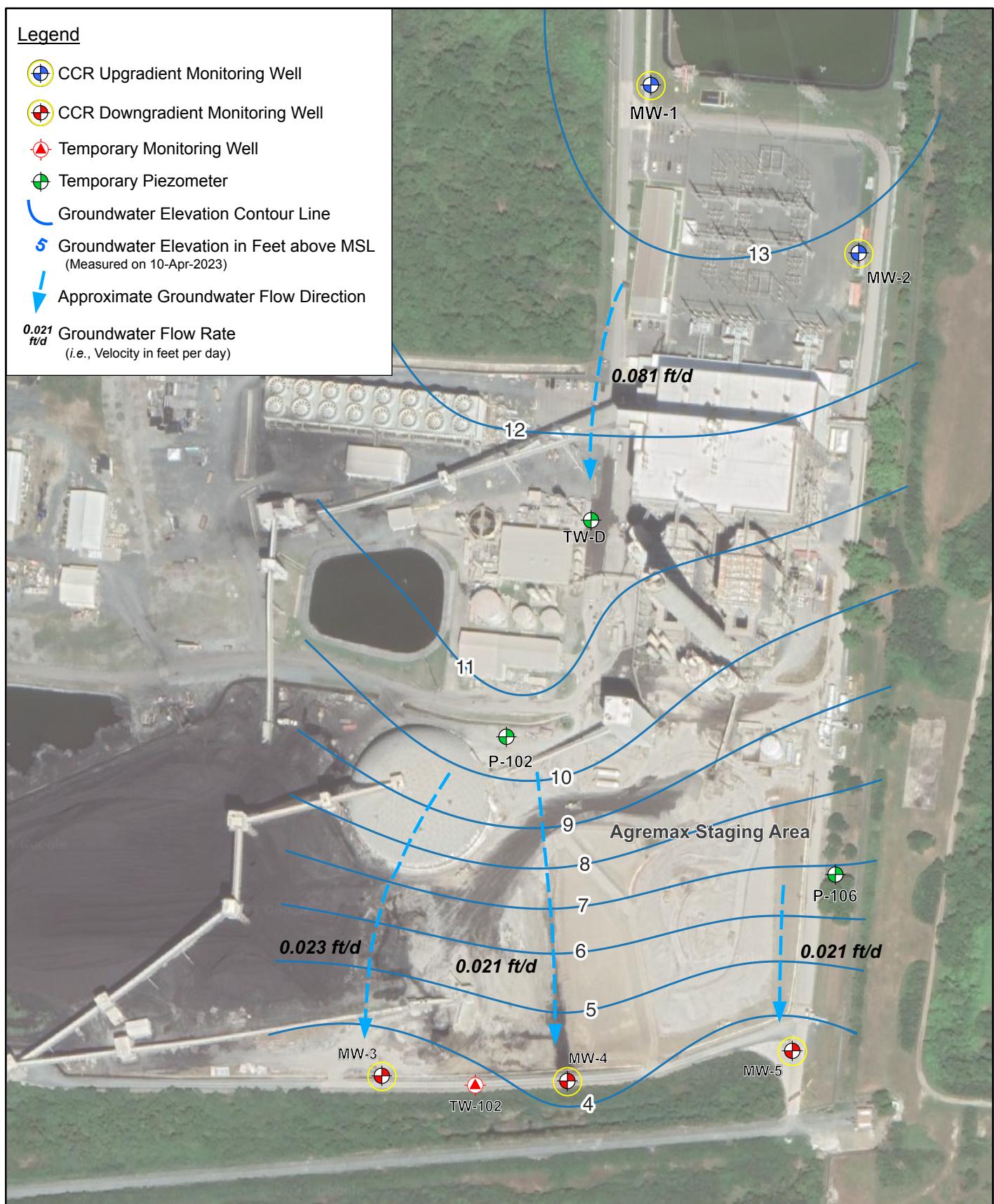
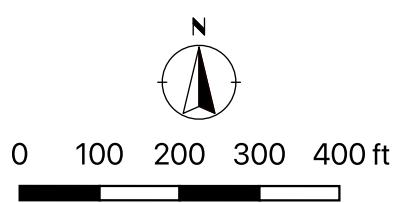


Figure A-1
April 2023 Groundwater Contour Map
AES Puerto Rico, LP
Guayama, Puerto Rico



Legend

- CCR Upgradient Monitoring Well
- CCR Downgradient Monitoring Well
- Corrective Action Monitoring Well
- Temporary Piezometer
- Groundwater Elevation Contour Line
- Groundwater Elevation in Feet above MSL
(Measured on 17-Oct-2023)
- Approximate Groundwater Flow Direction
- 0.018 ft/d Groundwater Flow Rate
(i.e., Velocity in feet per day)

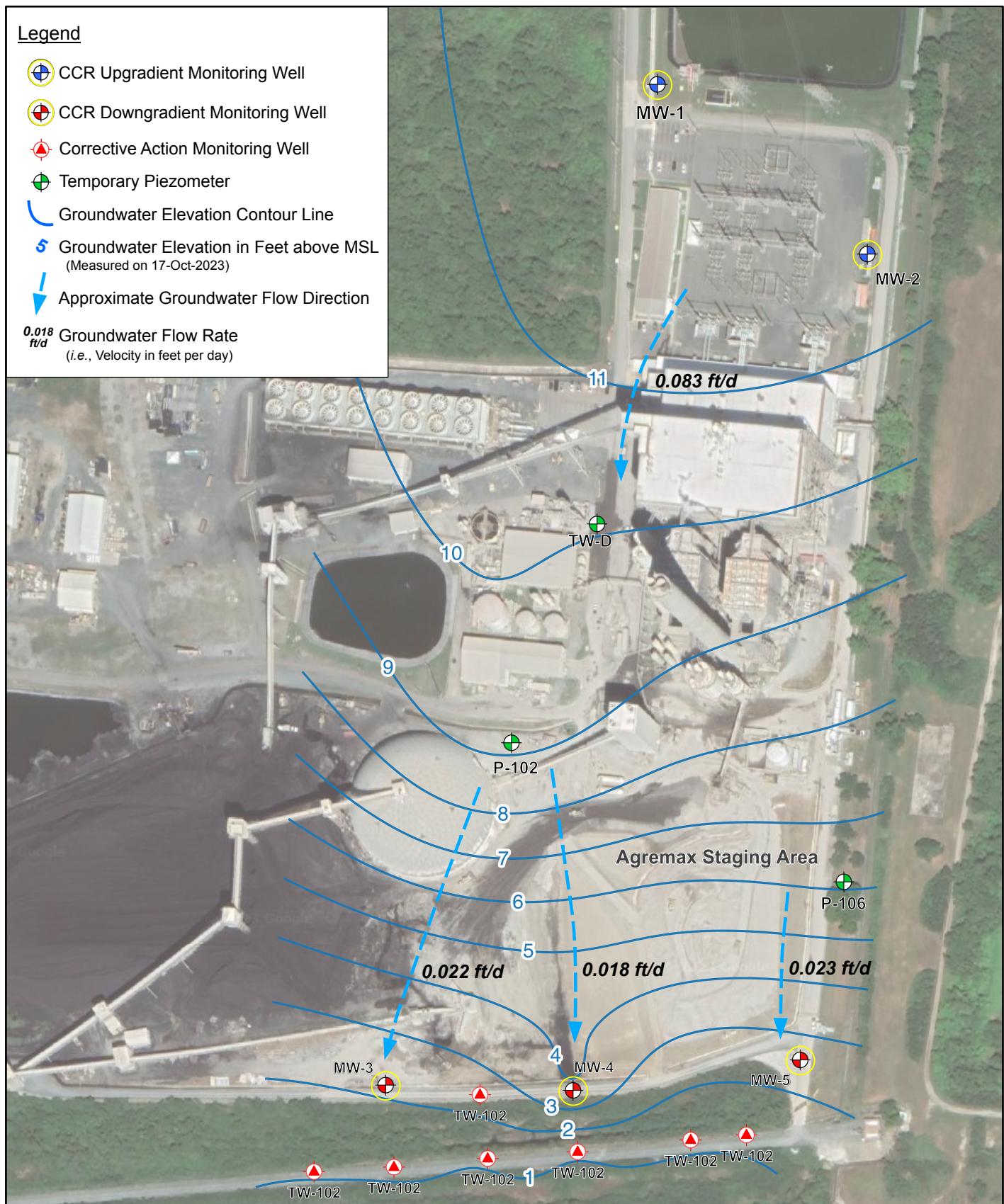
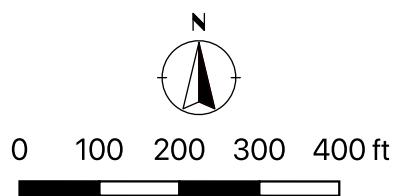


Figure A-2
October 2023 Groundwater Contour Map
AES Puerto Rico, LP
Guayama, Puerto Rico



Determination of Groundwater Velocity (Flow Rate)
AES Puerto Rico LP, Guayama, Puerto Rico

April 2023 Sampling Event

		Calculations						
Uppermost Aquifer	Flow Path Direction	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	K_h	n_e	V (ft/d)
North	Southwest (MW-2 to TW-D)	12.85	11.39	681.24	0.00214	9.45	0.25	0.081
South	South (P-102 to MW-3)	10.64	3.39	651.03	0.0111	0.56	0.27	0.023
	South (P-102 to MW-4)	10.64	4.27	628.89	0.0101	0.56	0.27	0.021
	South (P-106 to MW-5)	6.85	3.55	326.83	0.0101	0.56	0.27	0.021

October 2023 Sampling Event

		Calculations						
Uppermost Aquifer	Flow Path Direction	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	K_h	n_e	V (ft/d)
North	Southwest (MW-2 to TW-D)	11.57	10.07	681.24	0.00220	9.45	0.25	0.083
South	South (P-102 to MW-3)	9.17	2.19	651.03	0.0107	0.56	0.27	0.022
	South (P-102 to MW-4)	9.17	3.76	628.89	0.0086	0.56	0.27	0.018
	South (P-106 to MW-5)	6.13	2.55	326.83	0.0110	0.56	0.27	0.023

Notes:

ft = feet

ft/ft = feet per foot

ft/d = feet per day

h_1, h_2 = point of interpreted groundwater elevation

Δh = difference in groundwater elevation between points

Δl = distance between location 1 and 2

$\Delta h/\Delta l$ = hydraulic gradient

K_h = horizontal hydraulic conductivity estimated from slug tests in selected well points in 2017 and 2020.

n_e = effective porosity

V = groundwater flow velocity

Groundwater flow velocity equation: $V = [K_h * (\Delta h / \Delta l)] / n$

Flow path direction: include general flow direction and well point used in the calculations.

APPENDIX B

LABORATORY ANALYTICAL REPORTS

(SAMPLING EVENTS: APRIL 2023 AND OCTOBER 2023)

LABORATORY ANALYTICAL REPORTS: APRIL 2023 SAMPLING EVENT

ANALYTICAL REPORT

PREPARED FOR

Attn: Alberto Melendez
DNA-Environment LLC
35 Calle Juan C Borbon
Guaynabo, Puerto Rico 00969-5735

Generated 5/2/2023 11:42:32 PM Revision 1

JOB DESCRIPTION

CCR GW Monitoring, AES Puerto Rico, LP

JOB NUMBER

500-232058-1

Eurofins Chicago

Job Notes

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Authorization



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Revision 1

Authorized for release by
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(708)325-6562

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Case Narrative

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232058-1

Job ID: 500-232058-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-232058-1

REVISED Report(5/2/23)

This report has been revised to include additional case narrative comments.

Comments

No additional comments.

Receipt

The samples were received on 4/12/2023 8:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7° C.

Metals

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

General Chemistry

Method SM 4500 CI- E: The matrix spike (MS) recovery for analytical batch 500-708374 was outside control limits. The chloride concentration present in the original sample is greater than four times the matrix spike concentration; therefore, control limits are not applicable for the MS/MSD. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Detection Summary

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041023

Lab Sample ID: 500-232058-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00036	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.029		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.24		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	110		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.00047	J	0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Selenium	0.016		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	280		20	4.1	mg/L	20		9056A	Total/NA
Total Dissolved Solids	1200		10	4.3	mg/L	1		SM 2540C	Total/NA
Chloride	240		40	20	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.68		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	7.15				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW2-041023

Lab Sample ID: 500-232058-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00036	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.22		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.19		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	170		0.20	0.044	mg/L	1		6020B	Total Recoverable
Selenium	0.0014	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	210		10	2.1	mg/L	10		9056A	Total/NA
Total Dissolved Solids	1300		10	4.3	mg/L	1		SM 2540C	Total/NA
Chloride	220		40	20	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.48		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.90				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232058-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0010		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.079		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.97		0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00018	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	300		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0022		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0028	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.12		0.0050	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Detection Summary

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041023 (Continued)

Lab Sample ID: 500-232058-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.047		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	1300		100	21	mg/L	100		9056A	Total/NA
Total Dissolved Solids	8400		50	22	mg/L	1		SM 2540C	Total/NA
Chloride	4100		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.8		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	7.01				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-041023

Lab Sample ID: 500-232058-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0021		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.038		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.8		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	370		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0012		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.37		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	1.4		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.010		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	4100		500	100	mg/L	500		9056A	Total/NA
Total Dissolved Solids	27000		170	72	mg/L	1		SM 2540C	Total/NA
Chloride	7400		600	300	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.81		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	7.22				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-DUP-041023

Lab Sample ID: 500-232058-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0022		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.040		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.8		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	380		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0012		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00032 J		0.00050	0.00019	mg/L	1		6020B	Total Recoverable
Lithium	0.40		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	1.4		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.012		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	4100		500	100	mg/L	500		9056A	Total/NA
Total Dissolved Solids	26000		170	72	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Detection Summary

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041023 (Continued)

Lab Sample ID: 500-232058-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7400		600	300	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.81		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232058-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0084		0.0010	0.00023	mg/L	1		6020B	Total
Barium	0.037		0.0025	0.00073	mg/L	1		6020B	Recoverable
Boron	0.40		0.050	0.013	mg/L	1		6020B	Total
Calcium	620		0.20	0.044	mg/L	1		6020B	Recoverable
Chromium	0.0036 J		0.0050	0.0011	mg/L	1		6020B	Total
Cobalt	0.0027		0.0010	0.00040	mg/L	1		6020B	Recoverable
Lead	0.00022 J		0.00050	0.00019	mg/L	1		6020B	Total
Lithium	0.0026 J		0.010	0.0025	mg/L	1		6020B	Recoverable
Molybdenum	0.0037 J		0.0050	0.0025	mg/L	1		6020B	Total
Selenium	0.0050		0.0025	0.00098	mg/L	1		6020B	Recoverable
Sulfate	2000		100	21	mg/L	100		9056A	Total/NA
Total Dissolved Solids	9400		50	22	mg/L	1		SM 2540C	Total/NA
Chloride	4300		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.42		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.88			SU		1		Field Sampling	Total/NA

Client Sample ID: AES-FB-041023

Lab Sample ID: 500-232058-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.23		0.20	0.044	mg/L	1		6020B	Total
Lead	0.00019 J		0.00050	0.00019	mg/L	1		6020B	Recoverable
Selenium	0.0023 J		0.0025	0.00098	mg/L	1		6020B	Total
Sulfate	0.83 J		1.0	0.21	mg/L	1		9056A	Recoverable
									Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232058-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
9056A	Anions, Ion Chromatography	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
Field Sampling	Field Sampling	EPA	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

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: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-232058-1	AES-MW1-041023	Water	04/10/23 09:41	04/12/23 08:15
500-232058-2	AES-MW2-041023	Water	04/10/23 10:36	04/12/23 08:15
500-232058-3	AES-MW3-041023	Water	04/10/23 12:01	04/12/23 08:15
500-232058-4	AES-MW4-041023	Water	04/10/23 14:01	04/12/23 08:15
500-232058-5	AES-MW4-DUP-041023	Water	04/10/23 14:32	04/12/23 08:15
500-232058-6	AES-MW5-041023	Water	04/10/23 15:56	04/12/23 08:15
500-232058-7	AES-FB-041023	Water	04/10/23 15:58	04/12/23 08:15

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041023

Lab Sample ID: 500-232058-1

Matrix: Water

Date Collected: 04/10/23 09:41

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 14:21	1
Arsenic	0.00036	J		0.0010	mg/L		04/14/23 09:02	04/24/23 12:59	1
Barium	0.029			0.0025	mg/L		04/14/23 09:02	04/21/23 14:21	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 14:21	1
Boron	0.24			0.050	mg/L		04/14/23 09:02	04/21/23 14:21	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 14:21	1
Calcium	110			0.20	mg/L		04/14/23 09:02	04/21/23 14:21	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 14:21	1
Cobalt	0.00047	J		0.0010	mg/L		04/14/23 09:02	04/21/23 14:21	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 14:21	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 14:21	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 14:21	1
Selenium	0.016			0.0025	mg/L		04/14/23 09:02	04/21/23 14:21	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 14:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.00020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	280		20	4.1	mg/L			04/22/23 12:33	20
Total Dissolved Solids (SM 2540C)	1200		10	4.3	mg/L			04/17/23 02:30	1
Chloride (SM 4500 Cl- E)	240		40	20	mg/L			04/18/23 15:35	20
Fluoride (SM 4500 F C)	0.68		0.10	0.056	mg/L			04/24/23 08:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.15				SU			04/10/23 09:41	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW2-041023

Lab Sample ID: 500-232058-2

Matrix: Water

Date Collected: 04/10/23 10:36

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 14:25	1
Arsenic	0.00036	J		0.0010	mg/L		04/14/23 09:02	04/24/23 13:02	1
Barium	0.22			0.0025	mg/L		04/14/23 09:02	04/21/23 14:25	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 14:25	1
Boron	0.19			0.050	mg/L		04/14/23 09:02	04/21/23 14:25	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 14:25	1
Calcium	170			0.20	mg/L		04/14/23 09:02	04/21/23 14:25	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 14:25	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 14:25	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 14:25	1
Lithium	0.0025	U		0.010	mg/L		04/14/23 09:02	04/21/23 14:25	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 14:25	1
Selenium	0.0014	J		0.0025	mg/L		04/14/23 09:02	04/21/23 14:25	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 14:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.00020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	210		10	2.1	mg/L			04/22/23 13:19	10
Total Dissolved Solids (SM 2540C)	1300		10	4.3	mg/L			04/17/23 02:35	1
Chloride (SM 4500 Cl- E)	220		40	20	mg/L			04/18/23 15:36	20
Fluoride (SM 4500 F C)	0.48		0.10	0.056	mg/L			04/24/23 08:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.90				SU			04/10/23 10:36	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232058-3

Matrix: Water

Date Collected: 04/10/23 12:01

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 14:55	1
Arsenic	0.0010		0.0010	0.00023	mg/L		04/14/23 09:02	04/24/23 13:26	1
Barium	0.079		0.0025	0.00073	mg/L		04/14/23 09:02	04/21/23 14:55	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 14:55	1
Boron	0.97		0.050	0.013	mg/L		04/14/23 09:02	04/21/23 14:55	1
Cadmium	0.00018	J	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 14:55	1
Calcium	300		0.20	0.044	mg/L		04/14/23 09:02	04/21/23 14:55	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 14:55	1
Cobalt	0.0022		0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 14:55	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 14:55	1
Lithium	0.0028	J	0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 14:55	1
Molybdenum	0.12		0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 14:55	1
Selenium	0.047		0.0025	0.00098	mg/L		04/14/23 09:02	04/21/23 14:55	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 14:55	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.00020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	1300		100	21	mg/L			04/22/23 14:05	100
Total Dissolved Solids (SM 2540C)	8400		50	22	mg/L			04/17/23 02:43	1
Chloride (SM 4500 Cl- E)	4100		200	100	mg/L			04/18/23 15:37	100
Fluoride (SM 4500 F C)	1.8		0.10	0.056	mg/L			04/24/23 08:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.01				SU			04/10/23 12:01	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-041023

Lab Sample ID: 500-232058-4

Matrix: Water

Date Collected: 04/10/23 14:01

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 14:59	1
Arsenic	0.0021		0.0010	0.00023	mg/L		04/14/23 09:02	04/24/23 13:30	1
Barium	0.038		0.0025	0.00073	mg/L		04/14/23 09:02	04/21/23 14:59	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 14:59	1
Boron	1.8		0.050	0.013	mg/L		04/14/23 09:02	04/21/23 14:59	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 14:59	1
Calcium	370		0.20	0.044	mg/L		04/14/23 09:02	04/21/23 14:59	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 14:59	1
Cobalt	0.0012		0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 14:59	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 14:59	1
Lithium	0.37		0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 14:59	1
Molybdenum	1.4		0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 14:59	1
Selenium	0.010		0.0025	0.00098	mg/L		04/14/23 09:02	04/21/23 14:59	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 14:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.00020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	4100		500	100	mg/L			04/22/23 14:20	500
Total Dissolved Solids (SM 2540C)	27000		170	72	mg/L			04/17/23 02:45	1
Chloride (SM 4500 Cl- E)	7400		600	300	mg/L			04/18/23 16:12	300
Fluoride (SM 4500 F C)	0.81		0.10	0.056	mg/L			04/24/23 08:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.22				SU			04/10/23 14:01	1

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Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041023

Lab Sample ID: 500-232058-5

Matrix: Water

Date Collected: 04/10/23 14:32

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 15:03	1
Arsenic	0.0022		0.0010	0.00023	mg/L		04/14/23 09:02	04/24/23 13:33	1
Barium	0.040		0.0025	0.00073	mg/L		04/14/23 09:02	04/21/23 15:03	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 15:03	1
Boron	1.8		0.050	0.013	mg/L		04/14/23 09:02	04/21/23 15:03	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 15:03	1
Calcium	380		0.20	0.044	mg/L		04/14/23 09:02	04/21/23 15:03	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 15:03	1
Cobalt	0.0012		0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 15:03	1
Lead	0.00032	J	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 15:03	1
Lithium	0.40		0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 15:03	1
Molybdenum	1.4		0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 15:03	1
Selenium	0.012		0.0025	0.00098	mg/L		04/14/23 09:02	04/21/23 15:03	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 15:03	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.00020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	4100		500	100	mg/L			04/22/23 15:06	500
Total Dissolved Solids (SM 2540C)	26000		170	72	mg/L			04/17/23 02:48	1
Chloride (SM 4500 Cl- E)	7400		600	300	mg/L			04/18/23 16:13	300
Fluoride (SM 4500 F C)	0.81		0.10	0.056	mg/L			04/24/23 08:36	1

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Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232058-6

Matrix: Water

Date Collected: 04/10/23 15:56

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 15:07	1
Arsenic	0.0084		0.0010	0.00023	mg/L		04/14/23 09:02	04/24/23 13:36	1
Barium	0.037		0.0025	0.00073	mg/L		04/14/23 09:02	04/21/23 15:07	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 15:07	1
Boron	0.40		0.050	0.013	mg/L		04/14/23 09:02	04/21/23 15:07	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 15:07	1
Calcium	620		0.20	0.044	mg/L		04/14/23 09:02	04/21/23 15:07	1
Chromium	0.0036	J	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 15:07	1
Cobalt	0.0027		0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 15:07	1
Lead	0.00022	J	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 15:07	1
Lithium	0.0026	J	0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 15:07	1
Molybdenum	0.0037	J	0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 15:07	1
Selenium	0.0050		0.0025	0.00098	mg/L		04/14/23 09:02	04/21/23 15:07	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 15:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	2000		100	21	mg/L			04/22/23 15:21	100
Total Dissolved Solids (SM 2540C)	9400		50	22	mg/L			04/17/23 02:50	1
Chloride (SM 4500 Cl- E)	4300		200	100	mg/L			04/18/23 15:38	100
Fluoride (SM 4500 F C)	0.42		0.10	0.056	mg/L			04/24/23 08:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.88				SU			04/10/23 15:56	1

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Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-041023

Lab Sample ID: 500-232058-7

Matrix: Water

Date Collected: 04/10/23 15:58

Date Received: 04/12/23 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 15:11	1
Arsenic	0.00023	U	0.0010	0.00023	mg/L		04/14/23 09:02	04/24/23 13:40	1
Barium	0.00073	U	0.0025	0.00073	mg/L		04/14/23 09:02	04/21/23 15:11	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 15:11	1
Boron	0.013	U	0.050	0.013	mg/L		04/14/23 09:02	04/21/23 15:11	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 15:11	1
Calcium	0.23		0.20	0.044	mg/L		04/14/23 09:02	04/21/23 15:11	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 15:11	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 15:11	1
Lead	0.00019	J	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 15:11	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 15:11	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 15:11	1
Selenium	0.0023	J	0.0025	0.00098	mg/L		04/14/23 09:02	04/21/23 15:11	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 15:11	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		04/24/23 10:20	04/25/23 10:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (SW846 9056A)	0.83	J	1.0	0.21	mg/L			04/21/23 16:27	1
Total Dissolved Solids (SM 2540C)	4.3	U	10	4.3	mg/L			04/17/23 02:53	1
Chloride (SM 4500 Cl- E)	1.0	U	2.0	1.0	mg/L			04/18/23 13:12	1
Fluoride (SM 4500 F C)	0.056	U	0.10	0.056	mg/L			04/24/23 08:36	1

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Definitions/Glossary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232058-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

☒	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: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Metals

Prep Batch: 707777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total Recoverable	Water	3005A	
500-232058-2	AES-MW2-041023	Total Recoverable	Water	3005A	
500-232058-3	AES-MW3-041023	Total Recoverable	Water	3005A	
500-232058-4	AES-MW4-041023	Total Recoverable	Water	3005A	
500-232058-5	AES-MW4-DUP-041023	Total Recoverable	Water	3005A	
500-232058-6	AES-MW5-041023	Total Recoverable	Water	3005A	
500-232058-7	AES-FB-041023	Total Recoverable	Water	3005A	
MB 500-707777/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-707777/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-232058-2 MS	AES-MW2-041023	Total Recoverable	Water	3005A	
500-232058-2 MSD	AES-MW2-041023	Total Recoverable	Water	3005A	
500-232058-2 DU	AES-MW2-041023	Total Recoverable	Water	3005A	

Analysis Batch: 709290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total Recoverable	Water	6020B	707777
500-232058-2	AES-MW2-041023	Total Recoverable	Water	6020B	707777
500-232058-3	AES-MW3-041023	Total Recoverable	Water	6020B	707777
500-232058-4	AES-MW4-041023	Total Recoverable	Water	6020B	707777
500-232058-5	AES-MW4-DUP-041023	Total Recoverable	Water	6020B	707777
500-232058-6	AES-MW5-041023	Total Recoverable	Water	6020B	707777
500-232058-7	AES-FB-041023	Total Recoverable	Water	6020B	707777
MB 500-707777/1-A	Method Blank	Total Recoverable	Water	6020B	707777
LCS 500-707777/2-A	Lab Control Sample	Total Recoverable	Water	6020B	707777
500-232058-2 MS	AES-MW2-041023	Total Recoverable	Water	6020B	707777
500-232058-2 MSD	AES-MW2-041023	Total Recoverable	Water	6020B	707777
500-232058-2 DU	AES-MW2-041023	Total Recoverable	Water	6020B	707777

Prep Batch: 709310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	7470A	
500-232058-2	AES-MW2-041023	Total/NA	Water	7470A	
500-232058-3	AES-MW3-041023	Total/NA	Water	7470A	
500-232058-4	AES-MW4-041023	Total/NA	Water	7470A	
500-232058-5	AES-MW4-DUP-041023	Total/NA	Water	7470A	
500-232058-6	AES-MW5-041023	Total/NA	Water	7470A	
500-232058-7	AES-FB-041023	Total/NA	Water	7470A	
MB 500-709310/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-709310/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-232058-2 MS	AES-MW2-041023	Total/NA	Water	7470A	
500-232058-2 MSD	AES-MW2-041023	Total/NA	Water	7470A	
500-232058-2 DU	AES-MW2-041023	Total/NA	Water	7470A	

Analysis Batch: 709386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total Recoverable	Water	6020B	707777
500-232058-2	AES-MW2-041023	Total Recoverable	Water	6020B	707777
500-232058-3	AES-MW3-041023	Total Recoverable	Water	6020B	707777
500-232058-4	AES-MW4-041023	Total Recoverable	Water	6020B	707777
500-232058-5	AES-MW4-DUP-041023	Total Recoverable	Water	6020B	707777
500-232058-6	AES-MW5-041023	Total Recoverable	Water	6020B	707777

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QC Association Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232058-1

Metals (Continued)

Analysis Batch: 709386 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-7	AES-FB-041023	Total Recoverable	Water	6020B	707777
MB 500-707777/1-A	Method Blank	Total Recoverable	Water	6020B	707777
LCS 500-707777/2-A	Lab Control Sample	Total Recoverable	Water	6020B	707777
500-232058-2 MS	AES-MW2-041023	Total Recoverable	Water	6020B	707777
500-232058-2 MSD	AES-MW2-041023	Total Recoverable	Water	6020B	707777
500-232058-2 DU	AES-MW2-041023	Total Recoverable	Water	6020B	707777

Analysis Batch: 709615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	7470A	709310
500-232058-2	AES-MW2-041023	Total/NA	Water	7470A	709310
500-232058-3	AES-MW3-041023	Total/NA	Water	7470A	709310
500-232058-4	AES-MW4-041023	Total/NA	Water	7470A	709310
500-232058-5	AES-MW4-DUP-041023	Total/NA	Water	7470A	709310
500-232058-6	AES-MW5-041023	Total/NA	Water	7470A	709310
500-232058-7	AES-FB-041023	Total/NA	Water	7470A	709310
MB 500-709310/12-A	Method Blank	Total/NA	Water	7470A	709310
LCS 500-709310/13-A	Lab Control Sample	Total/NA	Water	7470A	709310
500-232058-2 MS	AES-MW2-041023	Total/NA	Water	7470A	709310
500-232058-2 MSD	AES-MW2-041023	Total/NA	Water	7470A	709310
500-232058-2 DU	AES-MW2-041023	Total/NA	Water	7470A	709310

General Chemistry

Analysis Batch: 707966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	SM 2540C	
500-232058-2	AES-MW2-041023	Total/NA	Water	SM 2540C	
500-232058-3	AES-MW3-041023	Total/NA	Water	SM 2540C	
500-232058-4	AES-MW4-041023	Total/NA	Water	SM 2540C	
500-232058-5	AES-MW4-DUP-041023	Total/NA	Water	SM 2540C	
500-232058-6	AES-MW5-041023	Total/NA	Water	SM 2540C	
500-232058-7	AES-FB-041023	Total/NA	Water	SM 2540C	
MB 500-707966/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-707966/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-232058-2 MS	AES-MW2-041023	Total/NA	Water	SM 2540C	
500-232058-2 MSD	AES-MW2-041023	Total/NA	Water	SM 2540C	
500-232058-1 DU	AES-MW1-041023	Total/NA	Water	SM 2540C	

Analysis Batch: 708374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	SM 4500 Cl- E	
500-232058-2	AES-MW2-041023	Total/NA	Water	SM 4500 Cl- E	
500-232058-3	AES-MW3-041023	Total/NA	Water	SM 4500 Cl- E	
500-232058-4	AES-MW4-041023	Total/NA	Water	SM 4500 Cl- E	
500-232058-5	AES-MW4-DUP-041023	Total/NA	Water	SM 4500 Cl- E	
500-232058-6	AES-MW5-041023	Total/NA	Water	SM 4500 Cl- E	
500-232058-7	AES-FB-041023	Total/NA	Water	SM 4500 Cl- E	
MB 500-708374/67	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-708374/68	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-232058-2 MS	AES-MW2-041023	Total/NA	Water	SM 4500 Cl- E	

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QC Association Summary

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

General Chemistry (Continued)

Analysis Batch: 708374 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-2 MSD	AES-MW2-041023	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 709078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-7	AES-FB-041023	Total/NA	Water	9056A	
MB 500-709078/3	Method Blank	Total/NA	Water	9056A	
LCS 500-709078/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 709126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	9056A	
500-232058-2	AES-MW2-041023	Total/NA	Water	9056A	
500-232058-3	AES-MW3-041023	Total/NA	Water	9056A	
500-232058-4	AES-MW4-041023	Total/NA	Water	9056A	
500-232058-5	AES-MW4-DUP-041023	Total/NA	Water	9056A	
500-232058-6	AES-MW5-041023	Total/NA	Water	9056A	
MB 500-709126/3	Method Blank	Total/NA	Water	9056A	
LCS 500-709126/4	Lab Control Sample	Total/NA	Water	9056A	
500-232058-1 MS	AES-MW1-041023	Total/NA	Water	9056A	
500-232058-1 MSD	AES-MW1-041023	Total/NA	Water	9056A	
500-232058-2 MS	AES-MW2-041023	Total/NA	Water	9056A	
500-232058-2 MSD	AES-MW2-041023	Total/NA	Water	9056A	

Analysis Batch: 709377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	SM 4500 F C	
500-232058-2	AES-MW2-041023	Total/NA	Water	SM 4500 F C	
500-232058-3	AES-MW3-041023	Total/NA	Water	SM 4500 F C	
500-232058-4	AES-MW4-041023	Total/NA	Water	SM 4500 F C	
500-232058-5	AES-MW4-DUP-041023	Total/NA	Water	SM 4500 F C	
500-232058-6	AES-MW5-041023	Total/NA	Water	SM 4500 F C	
500-232058-7	AES-FB-041023	Total/NA	Water	SM 4500 F C	
MB 500-709377/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-709377/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-232058-2 MS	AES-MW2-041023	Total/NA	Water	SM 4500 F C	
500-232058-2 MSD	AES-MW2-041023	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 707532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232058-1	AES-MW1-041023	Total/NA	Water	Field Sampling	
500-232058-2	AES-MW2-041023	Total/NA	Water	Field Sampling	
500-232058-3	AES-MW3-041023	Total/NA	Water	Field Sampling	
500-232058-4	AES-MW4-041023	Total/NA	Water	Field Sampling	
500-232058-6	AES-MW5-041023	Total/NA	Water	Field Sampling	

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QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-707777/1-A

Matrix: Water

Analysis Batch: 709290

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/14/23 09:02	04/21/23 14:13	1
Barium	0.00073	U	0.0025	0.00073	mg/L		04/14/23 09:02	04/21/23 14:13	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/14/23 09:02	04/21/23 14:13	1
Boron	0.013	U	0.050	0.013	mg/L		04/14/23 09:02	04/21/23 14:13	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/14/23 09:02	04/21/23 14:13	1
Calcium	0.044	U	0.20	0.044	mg/L		04/14/23 09:02	04/21/23 14:13	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/14/23 09:02	04/21/23 14:13	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		04/14/23 09:02	04/21/23 14:13	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/14/23 09:02	04/21/23 14:13	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/14/23 09:02	04/21/23 14:13	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/14/23 09:02	04/21/23 14:13	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		04/14/23 09:02	04/21/23 14:13	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/14/23 09:02	04/21/23 14:13	1

Lab Sample ID: MB 500-707777/1-A

Matrix: Water

Analysis Batch: 709386

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00023	U	0.0010	0.00023	mg/L		04/14/23 09:02	04/24/23 12:51	1

Lab Sample ID: LCS 500-707777/2-A

Matrix: Water

Analysis Batch: 709290

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.500	0.505		mg/L		101	80 - 120
Barium	0.500	0.519		mg/L		104	80 - 120
Beryllium	0.0500	0.0494		mg/L		99	80 - 120
Boron	1.00	0.978		mg/L		98	80 - 120
Cadmium	0.0500	0.0496		mg/L		99	80 - 120
Calcium	10.0	9.73		mg/L		97	80 - 120
Chromium	0.200	0.197		mg/L		99	80 - 120
Cobalt	0.500	0.491		mg/L		98	80 - 120
Lead	0.100	0.102		mg/L		102	80 - 120
Lithium	0.100	0.101		mg/L		101	80 - 120
Molybdenum	1.00	0.932		mg/L		93	80 - 120
Selenium	0.100	0.0978		mg/L		98	80 - 120
Thallium	0.100	0.101		mg/L		101	80 - 120

Lab Sample ID: LCS 500-707777/2-A

Matrix: Water

Analysis Batch: 709386

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.100	0.0952		mg/L		95	80 - 120

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QC Sample Results

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232058-1

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

Lab Sample ID: 500-232058-2 MS

Matrix: Water

Analysis Batch: 709290

Client Sample ID: AES-MW2-041023

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	0.0013	U	0.500	0.525		mg/L		105	75 - 125		
Barium	0.22		0.500	0.741		mg/L		104	75 - 125		
Beryllium	0.00053	U	0.0500	0.0493		mg/L		99	75 - 125		
Boron	0.19		1.00	1.18		mg/L		99	75 - 125		
Cadmium	0.00017	U	0.0500	0.0497		mg/L		99	75 - 125		
Calcium	170		10.0	184	4	mg/L		96	75 - 125		
Chromium	0.0011	U	0.200	0.198		mg/L		99	75 - 125		
Cobalt	0.00040	U	0.500	0.481		mg/L		96	75 - 125		
Lead	0.00019	U	0.100	0.104		mg/L		104	75 - 125		
Lithium	0.0025	U	0.100	0.0988		mg/L		99	75 - 125		
Molybdenum	0.0025	U	1.00	0.984		mg/L		98	75 - 125		
Selenium	0.0014	J	0.100	0.102		mg/L		100	75 - 125		
Thallium	0.00057	U	0.100	0.106		mg/L		106	75 - 125		

Lab Sample ID: 500-232058-2 MS

Matrix: Water

Analysis Batch: 709386

Client Sample ID: AES-MW2-041023

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	0.00036	J	0.100	0.102		mg/L		102	75 - 125		

Lab Sample ID: 500-232058-2 MSD

Matrix: Water

Analysis Batch: 709290

Client Sample ID: AES-MW2-041023

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	0.0013	U	0.500	0.519		mg/L		104	75 - 125	1	20
Barium	0.22		0.500	0.728		mg/L		101	75 - 125	2	20
Beryllium	0.00053	U	0.0500	0.0491		mg/L		98	75 - 125	0	20
Boron	0.19		1.00	1.18		mg/L		99	75 - 125	0	20
Cadmium	0.00017	U	0.0500	0.0498		mg/L		100	75 - 125	0	20
Calcium	170		10.0	185	4	mg/L		106	75 - 125	1	20
Chromium	0.0011	U	0.200	0.197		mg/L		99	75 - 125	0	20
Cobalt	0.00040	U	0.500	0.480		mg/L		96	75 - 125	0	20
Lead	0.00019	U	0.100	0.104		mg/L		104	75 - 125	0	20
Lithium	0.0025	U	0.100	0.103		mg/L		103	75 - 125	4	20
Molybdenum	0.0025	U	1.00	0.975		mg/L		98	75 - 125	1	20
Selenium	0.0014	J	0.100	0.102		mg/L		101	75 - 125	0	20
Thallium	0.00057	U	0.100	0.105		mg/L		105	75 - 125	1	20

Lab Sample ID: 500-232058-2 MSD

Matrix: Water

Analysis Batch: 709386

Client Sample ID: AES-MW2-041023

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.00036	J	0.100	0.101		mg/L		101	75 - 125	1	20

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QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

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

Lab Sample ID: 500-232058-2 DU

Matrix: Water

Analysis Batch: 709290

Client Sample ID: AES-MW2-041023

Prep Type: Total Recoverable

Prep Batch: 707777

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.0013	U	0.0013	U	mg/L		NC	20
Barium	0.22		0.221		mg/L		0.7	20
Beryllium	0.00053	U	0.00053	U	mg/L		NC	20
Boron	0.19		0.188		mg/L		0.5	20
Cadmium	0.00017	U	0.00017	U	mg/L		NC	20
Calcium	170		176		mg/L		0.7	20
Chromium	0.0011	U	0.0011	U	mg/L		NC	20
Cobalt	0.00040	U	0.00040	U	mg/L		NC	20
Lead	0.00019	U	0.00019	U	mg/L		NC	20
Lithium	0.0025	U	0.0025	U	mg/L		NC	20
Molybdenum	0.0025	U	0.0025	U	mg/L		NC	20
Selenium	0.0014	J	0.00098	U	mg/L		NC	20
Thallium	0.00057	U	0.00057	U	mg/L		NC	20

Lab Sample ID: 500-232058-2 DU

Matrix: Water

Analysis Batch: 709386

Client Sample ID: AES-MW2-041023

Prep Type: Total Recoverable

Prep Batch: 707777

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-709310/12-A

Matrix: Water

Analysis Batch: 709615

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 709310

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.00020	0.000079	mg/L		04/24/23 10:20	04/25/23 09:55	1

Lab Sample ID: LCS 500-709310/13-A

Matrix: Water

Analysis Batch: 709615

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 709310

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00198	0.00195		mg/L		98	80 - 120

Lab Sample ID: 500-232058-2 MS

Matrix: Water

Analysis Batch: 709615

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Prep Batch: 709310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000079	U	0.00100	0.00108		mg/L		108	75 - 125

Lab Sample ID: 500-232058-2 MSD

Matrix: Water

Analysis Batch: 709615

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Prep Batch: 709310

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.000079	U	0.00100	0.00107		mg/L		107	75 - 125	1	20

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QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 500-232058-2 DU

Matrix: Water

Analysis Batch: 709615

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Prep Batch: 709310

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.000079	U	0.000079	U	mg/L		NC	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 500-709078/3

Matrix: Water

Analysis Batch: 709078

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.21	U	1.0	0.21	mg/L			04/21/23 13:25	1

Lab Sample ID: LCS 500-709078/4

Client Sample ID: Lab Control Sample

Matrix: Water

Analysis Batch: 709078

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	18.4		mg/L		92	80 - 120

Lab Sample ID: MB 500-709126/3

Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 709126

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.21	U	1.0	0.21	mg/L			04/22/23 12:03	1

Lab Sample ID: LCS 500-709126/4

Client Sample ID: Lab Control Sample

Matrix: Water

Analysis Batch: 709126

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	18.4		mg/L		92	80 - 120

Lab Sample ID: 500-232058-1 MS

Client Sample ID: AES-MW1-041023

Matrix: Water

Analysis Batch: 709126

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	280		200	507		mg/L		112	80 - 120

Lab Sample ID: 500-232058-1 MSD

Client Sample ID: AES-MW1-041023

Matrix: Water

Analysis Batch: 709126

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	280		200	505		mg/L		111	80 - 120	0	15

Eurofins Chicago

QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-232058-2 MS

Matrix: Water

Analysis Batch: 709126

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	210		100	311		mg/L	99	80 - 120			

Lab Sample ID: 500-232058-2 MSD

Matrix: Water

Analysis Batch: 709126

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	210		100	309		mg/L	97	80 - 120		0	15

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

Lab Sample ID: MB 500-707966/1

Matrix: Water

Analysis Batch: 707966

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	4.3	U	10	4.3	mg/L			04/17/23 02:07	1

Lab Sample ID: LCS 500-707966/2

Matrix: Water

Analysis Batch: 707966

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	236		mg/L	94	80 - 120	

Lab Sample ID: 500-232058-2 MS

Matrix: Water

Analysis Batch: 707966

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1300		250	1570	4	mg/L	105	75 - 125	

Lab Sample ID: 500-232058-2 MSD

Matrix: Water

Analysis Batch: 707966

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1300		250	1620	4	mg/L	124	75 - 125		3	20

Lab Sample ID: 500-232058-1 DU

Matrix: Water

Analysis Batch: 707966

Client Sample ID: AES-MW1-041023

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1200		1250		mg/L		5	5

Eurofins Chicago

QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: SM 4500 CI- E - Chloride, Total

Lab Sample ID: MB 500-708374/67

Matrix: Water

Analysis Batch: 708374

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	2.0	1.0	mg/L			04/18/23 13:07	1

Lab Sample ID: LCS 500-708374/68

Matrix: Water

Analysis Batch: 708374

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	20.0	20.1		mg/L		101	85 - 115

Lab Sample ID: 500-232058-2 MS

Matrix: Water

Analysis Batch: 708374

Client Sample ID: AES-MW2-041023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Chloride	220		20.0	232	4	mg/L		74	75 - 125

Lab Sample ID: 500-232058-2 MSD

Matrix: Water

Analysis Batch: 708374

Client Sample ID: AES-MW2-041023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	220		20.0	234	4	mg/L		81	75 - 125	1	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-709377/3

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

Analysis Batch: 709377

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.056	U	0.10	0.056	mg/L			04/24/23 08:36	1

Lab Sample ID: LCS 500-709377/4

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

Analysis Batch: 709377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoride	10.0	9.62		mg/L		96	90 - 119

Lab Sample ID: 500-232058-2 MS

Client Sample ID: AES-MW2-041023
Prep Type: Total/NA

Analysis Batch: 709377

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Fluoride	0.48		5.00	5.35		mg/L		97	75 - 125

Eurofins Chicago

QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 500-232058-2 MSD

Client Sample ID: AES-MW2-041023

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 709377

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.48		5.00	5.29		mg/L	96	75 - 125	1	20	

Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041023

Lab Sample ID: 500-232058-1

Matrix: Water

Date Collected: 04/10/23 09:41

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 14:21
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 12:59
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 ¹
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:10
Total/NA	Analysis	9056A		20	709126	EH	EET CHI	04/22/23 12:33
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:30
Total/NA	Analysis	SM 4500 Cl- E		20	708374	MM	EET CHI	04/18/23 15:35
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36
Total/NA	Analysis	Field Sampling		1	707532	JMH	EET CHI	04/10/23 09:41

Client Sample ID: AES-MW2-041023

Lab Sample ID: 500-232058-2

Matrix: Water

Date Collected: 04/10/23 10:36

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 14:25
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 13:02
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 ¹
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:12
Total/NA	Analysis	9056A		10	709126	EH	EET CHI	04/22/23 13:19
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:35
Total/NA	Analysis	SM 4500 Cl- E		20	708374	MM	EET CHI	04/18/23 15:36
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36
Total/NA	Analysis	Field Sampling		1	707532	JMH	EET CHI	04/10/23 10:36

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232058-3

Matrix: Water

Date Collected: 04/10/23 12:01

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 14:55
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 13:26
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 ¹
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:20
Total/NA	Analysis	9056A		100	709126	EH	EET CHI	04/22/23 14:05
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:43
Total/NA	Analysis	SM 4500 Cl- E		100	708374	MM	EET CHI	04/18/23 15:37

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232058-3

Matrix: Water

Date Collected: 04/10/23 12:01

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36
Total/NA	Analysis	Field Sampling		1	707532	JMH	EET CHI	04/10/23 12:01

Client Sample ID: AES-MW4-041023

Lab Sample ID: 500-232058-4

Matrix: Water

Date Collected: 04/10/23 14:01

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 1
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 14:59
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 1
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 13:30
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 1
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:26
Total/NA	Analysis	9056A		500	709126	EH	EET CHI	04/22/23 14:20
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:45
Total/NA	Analysis	SM 4500 Cl- E		300	708374	MM	EET CHI	04/18/23 16:12
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36
Total/NA	Analysis	Field Sampling		1	707532	JMH	EET CHI	04/10/23 14:01

Client Sample ID: AES-MW4-DUP-041023

Lab Sample ID: 500-232058-5

Matrix: Water

Date Collected: 04/10/23 14:32

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 1
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 15:03
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 1
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 13:33
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 1
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:29
Total/NA	Analysis	9056A		500	709126	EH	EET CHI	04/22/23 15:06
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:48
Total/NA	Analysis	SM 4500 Cl- E		300	708374	MM	EET CHI	04/18/23 16:13
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232058-6

Matrix: Water

Date Collected: 04/10/23 15:56

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 1
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 15:07

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232058-6

Matrix: Water

Date Collected: 04/10/23 15:56

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 13:36
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 ¹
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:31
Total/NA	Analysis	9056A		100	709126	EH	EET CHI	04/22/23 15:21
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:50
Total/NA	Analysis	SM 4500 Cl- E		100	708374	MM	EET CHI	04/18/23 15:38
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36
Total/NA	Analysis	Field Sampling		1	707532	JMH	EET CHI	04/10/23 15:56

Client Sample ID: AES-FB-041023

Lab Sample ID: 500-232058-7

Matrix: Water

Date Collected: 04/10/23 15:58

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709290	FXG	EET CHI	04/21/23 15:11
Total Recoverable	Prep	3005A			707777	BDE	EET CHI	04/14/23 09:02 - 04/14/23 09:32 ¹
Total Recoverable	Analysis	6020B		1	709386	FXG	EET CHI	04/24/23 13:40
Total/NA	Prep	7470A			709310	MJG	EET CHI	04/24/23 10:20 - 04/24/23 12:20 ¹
Total/NA	Analysis	7470A		1	709615	MJG	EET CHI	04/25/23 10:33
Total/NA	Analysis	9056A		1	709078	W1T	EET CHI	04/21/23 16:27
Total/NA	Analysis	SM 2540C		1	707966	CLB	EET CHI	04/17/23 02:53
Total/NA	Analysis	SM 4500 Cl- E		1	708374	MM	EET CHI	04/18/23 13:12
Total/NA	Analysis	SM 4500 F C		1	709377	EH	EET CHI	04/24/23 08:36

¹Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

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

Eurofins Chicago

Accreditation/Certification Summary

Client: DNA-Environment LLC

Job ID: 500-232058-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2903	04-29-23
Georgia	State	N/A	04-30-23
Georgia (DW)	State	939	04-30-23
Hawaii	State	NA	04-29-23
Illinois	NELAP	IL00035	04-29-23
Indiana	State	C-IL-02	04-29-23
Iowa	State	082	05-01-24
Kansas	NELAP	E-10161	10-31-23
Kentucky (UST)	State	AI # 108083	04-29-23
Kentucky (WW)	State	KY90023	12-31-22 *
Louisiana (All)	NELAP	02046	06-30-23
Mississippi	State	NA	04-30-23
North Carolina (WW/SW)	State	291	12-31-23
North Dakota	State	R-194	04-30-23
Oklahoma	State	8908	08-31-23
South Carolina	State	77001003	04-29-23
USDA	US Federal Programs	P330-18-00018	02-11-24
Wisconsin	State	999580010	08-31-23
Wyoming	State	8TMS-Q	04-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago

Chain of Custody Record

Client Information		Sampler Vicente Perez / Rafael Diaz		Lab PM McCutcheon, Carlene		Carrier Tracking No(s)		COC No: 500-111606-46349 1	
Client Contact: Alberto Melendez		Phone: (787) 209-6386		E-Mail Carlene McCutcheon@et eurofinsus com		State of Origin: Puerto Rico		Page: Page 1 of 1	
Company: DNA-Environment LLC		PWSID				Analysis Requested		Job #: 500-232058	
Address: 35 Calle Juan C Borbon STE 67-227 City: Guaynabo State, Zip: PR, 00969-5375 Phone: 787 209-6386 Email: alberto.melendez@dnainv.com Project Name: CCR Groundwater Monitoring Site: AES Puerto Rico LP Guayama Puerto Rico		Due Date Requested		TAT Requested (days) 10 Days (Regular TAT)		Compliance Project <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Preservation Codes	
500-232058 COC		PO #:		WO #:		Field Filtered Sample (Yes or No)		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 Na2SO3 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 Z other (specify) Other:	
Project #: 50021397		SSOW#:				Perform NS/NSD (Yes or No)			
		Sample Date		Sample Time		Sample Type (C=comp G=grab) BT=Tissue, A=Air)		SM4500_C_E-Chloride, Field pH, 9056A-Sulfate, SM4500_F_C-Fluoride, SM2540C-TDS 6020B - Total Metals, 7470A-Total Mercury	
Sample Identification						Preservation Code: <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D		Total Number of containers	
AES-MW1-041023		4/10/23		09 41		G Water N X X		2 pH = 7.15	
AES-MW2-041023		4/10/23		10 36		G Water N X X		2 pH = 6.90	
AES-MW2-041023 MS		4/10/23		11 02		G Water N Y X X		2 ---	
AES-MW2-041023 MSD		4/10/23		11 28		G Water N Y X X		2 ---	
AES-MW3-041023		4/10/23		12 01		G Water N X X		2 pH = 7.01	
AES-MW4-041023		4/10/23		14 01		G Water N X X		2 pH = 7.22	
AES-MW4-DUP-041023		4/10/23		14 32		G Water N X X		2 ---	
AES-MW5-041023		4/10/23		15 56		G Water N X X		2 pH = 6.88	
AES-FB-041023		4/10/23		15.58		G Water N X X		2 ---	
Note pH = Field pH Measurement									
Possible Hazard Identification <input checked="" 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						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			
Deliverable Requested I, II, III, IV Other (specify): Level IV						Special Instructions/QC Requirements			
Empty Kit Relinquished by		Date		Time		Method of Shipment:			
Relinquished by		Date/Time: 04/11/23 12:30		Company DNA		Received by <i>John Scott</i>		Date/Time: 4/11/23 08:15	
Relinquished by		Date/Time:		Company		Received by:		Date/Time:	
Relinquished by		Date/Time:		Company		Received by:		Date/Time:	
Custody Seals Intact. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No				Cooler Temperature(s) °C and Other Remarks. 13 > 17.4			

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Part # 156247344589PRTBSEXP 09/23



500-232058 Waybill

FZ
HELENDEZ ROMENTI JUAN I
PR 00969
UNITED STATES US
BILL CREDIT CARD
NO EEI 30.37(6)
SSFE24U1

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

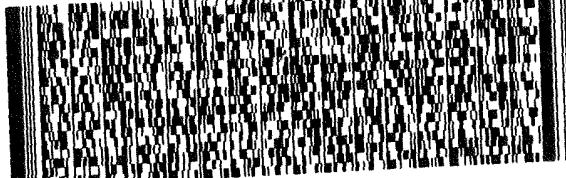
(708) 534-5200

REF

DEPT:

INN

PO#



1 of 2
TRK# 3968 8585 9320
0430

MASTER

X1 JOTA

WED - 12 APR 8:30A
INTL FIRST

60484
IL-US ORD



FO

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ
DNA ENVIRONMENT LLC
35 CALLE JUAN C BORBON
STE 67-227
GUAYNABO, PR 00969
UNITED STATES US

SHIP DATE: 11APR23
ACTWT: 55.00 LB
CAD: 006998633/SSFE2401
DIMS: 23x13x13 IN
BILL CREDIT CARD

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

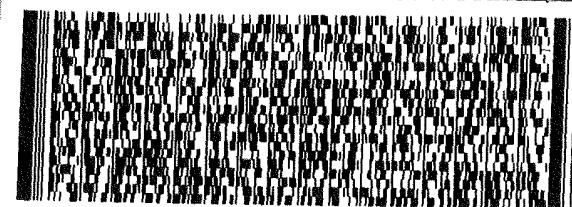
(708) 534-5200

INN

PO#

REF

DEPT



2 of 2
MPS# 3968 8585 9330
0441

Mstr# 3968 8585 9320

0430

X1 JOTA

60484
IL-US ORD



RT FO
08:30
9330
04.12

O

FedEx First Overnight®

151969 REV 3/21

Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-232058-1

Login Number: 232058

List Source: Eurofins Chicago

List Number: 1

Creator: Scott, Sherri L

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	1.7
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	

ANALYTICAL REPORT

PREPARED FOR

Attn: Alberto Melendez
DNA-Environment LLC
35 Calle Juan C Borbon
Guaynabo, Puerto Rico 00969-5735

Generated 5/17/2023 11:02:25 PM

JOB DESCRIPTION

CCR GW Monitoring, AES Puerto Rico, LP

JOB NUMBER

500-232060-1

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: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232060-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-232060-1

Receipt

The samples were received on 4/12/2023 8:15 AM. Unless otherwise noted below, the samples arrived in good condition.

RAD

Methods 903.0, 9315: Radium-226 batch 608680:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

AES-MW1-041023 (500-232060-1), AES-MW2-041023 (500-232060-2), AES-MW2-041023 (500-232060-2[MS]), AES-MW2-041023 (500-232060-2[MSD]), AES-MW3-041023 (500-232060-3), AES-MW4-041023 (500-232060-4), AES-MW4-DUP-041023 (500-232060-5), AES-MW5-041023 (500-232060-6), AES-FB-041023 (500-232060-7), (LCS 160-608680/2-A) and (MB 160-608680/1-A).

Methods 904.0, 9320: Radium-228 batch 608686:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

AES-MW1-041023 (500-232060-1), AES-MW2-041023 (500-232060-2), AES-MW2-041023 (500-232060-2[MS]), AES-MW2-041023 (500-232060-2[MSD]), AES-MW3-041023 (500-232060-3), AES-MW4-041023 (500-232060-4), AES-MW4-DUP-041023 (500-232060-5), AES-MW5-041023 (500-232060-6), AES-FB-041023 (500-232060-7), (LCS 160-608686/2-A) and (MB 160-608686/1-A).

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

Detection Summary

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041023

Lab Sample ID: 500-232060-1

No Detections.

Client Sample ID: AES-MW2-041023

Lab Sample ID: 500-232060-2

No Detections.

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232060-3

No Detections.

Client Sample ID: AES-MW4-041023

Lab Sample ID: 500-232060-4

No Detections.

Client Sample ID: AES-MW4-DUP-041023

Lab Sample ID: 500-232060-5

No Detections.

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232060-6

No Detections.

Client Sample ID: AES-FB-041023

Lab Sample ID: 500-232060-7

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232060-1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	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:

None = None

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

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

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Sample Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232060-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
500-232060-1	AES-MW1-041023	Water	04/10/23 09:41	04/12/23 08:15	1
500-232060-2	AES-MW2-041023	Water	04/10/23 10:36	04/12/23 08:15	2
500-232060-3	AES-MW3-041023	Water	04/10/23 12:01	04/12/23 08:15	3
500-232060-4	AES-MW4-041023	Water	04/10/23 14:01	04/12/23 08:15	4
500-232060-5	AES-MW4-DUP-041023	Water	04/10/23 14:32	04/12/23 08:15	5
500-232060-6	AES-MW5-041023	Water	04/10/23 15:56	04/12/23 08:15	6
500-232060-7	AES-FB-041023	Water	04/10/23 15:58	04/12/23 08:15	7

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041023

Lab Sample ID: 500-232060-1

Date Collected: 04/10/23 09:41

Matrix: Water

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0260	U	0.140	0.140	1.00	0.266	pCi/L	04/25/23 10:46	05/17/23 07:37	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		30 - 110					04/25/23 10:46	05/17/23 07:37	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.0401	U	0.212	0.212	1.00	0.393	pCi/L	04/25/23 11:07	05/15/23 16:24	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		30 - 110					04/25/23 11:07	05/15/23 16:24	1
Y Carrier	94.2		30 - 110					04/25/23 11:07	05/15/23 16:24	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.0662	U	0.254	0.254	5.00	0.393	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW2-041023

Lab Sample ID: 500-232060-2

Matrix: Water

Date Collected: 04/10/23 10:36

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	-0.00691	U	0.0919	0.0919	1.00	0.196	pCi/L	04/25/23 10:46	05/17/23 07:37	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		30 - 110					04/25/23 10:46	05/17/23 07:37	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.444	U	0.316	0.318	1.00	0.476	pCi/L	04/25/23 11:07	05/15/23 16:24	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		30 - 110					04/25/23 11:07	05/15/23 16:24	1
Y Carrier	86.4		30 - 110					04/25/23 11:07	05/15/23 16:24	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.438	U	0.329	0.331	5.00	0.476	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232060-3

Date Collected: 04/10/23 12:01

Matrix: Water

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0739	U	0.151	0.151	1.00	0.266	pCi/L	04/25/23 10:46	05/17/23 07:38	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	99.0		30 - 110					04/25/23 10:46	05/17/23 07:38	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.141	U	0.271	0.271	1.00	0.469	pCi/L	04/25/23 11:07	05/15/23 16:25	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	99.0		30 - 110					04/25/23 11:07	05/15/23 16:25	1
Y Carrier	85.2		30 - 110					04/25/23 11:07	05/15/23 16:25	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.214	U	0.310	0.310	5.00	0.469	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-041023

Lab Sample ID: 500-232060-4

Date Collected: 04/10/23 14:01

Matrix: Water

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.0585	U	0.186	0.186	1.00	0.344	pCi/L	04/25/23 10:46	05/17/23 07:39	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.8		30 - 110					04/25/23 10:46	05/17/23 07:39	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.398	U	0.378	0.380	1.00	0.602	pCi/L	04/25/23 11:07	05/15/23 16:25	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.8		30 - 110					04/25/23 11:07	05/15/23 16:25	1
Y Carrier	85.2		30 - 110					04/25/23 11:07	05/15/23 16:25	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.457	U	0.421	0.423	5.00	0.602	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041023

Lab Sample ID: 500-232060-5

Matrix: Water

Date Collected: 04/10/23 14:32

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.0707	U	0.156	0.156	1.00	0.281	pCi/L	04/25/23 10:46	05/17/23 07:43	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.8		30 - 110					04/25/23 10:46	05/17/23 07:43	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.286	U	0.353	0.354	1.00	0.585	pCi/L	04/25/23 11:07	05/15/23 16:25	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.8		30 - 110					04/25/23 11:07	05/15/23 16:25	1
Y Carrier	87.9		30 - 110					04/25/23 11:07	05/15/23 16:25	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.356	U	0.386	0.387	5.00	0.585	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232060-6

Matrix: Water

Date Collected: 04/10/23 15:56

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.0633	U	0.129	0.129	1.00	0.228	pCi/L	04/25/23 10:46	05/17/23 07:44	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	97.5		30 - 110					04/25/23 10:46	05/17/23 07:44	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.0290	U	0.239	0.239	1.00	0.443	pCi/L	04/25/23 11:07	05/15/23 16:25	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	97.5		30 - 110					04/25/23 11:07	05/15/23 16:25	1
Y Carrier	86.0		30 - 110					04/25/23 11:07	05/15/23 16:25	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.0923	U	0.272	0.272	5.00	0.443	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-041023

Lab Sample ID: 500-232060-7

Matrix: Water

Date Collected: 04/10/23 15:58

Date Received: 04/12/23 08:15

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.108	U	0.0966	0.0971	1.00	0.247	pCi/L	04/25/23 10:46	05/17/23 07:44	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	91.9		30 - 110					04/25/23 10:46	05/17/23 07:44	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.00401	U	0.246	0.246	1.00	0.465	pCi/L	04/25/23 11:07	05/15/23 16:25	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	91.9		30 - 110					04/25/23 11:07	05/15/23 16:25	1
Y Carrier	87.9		30 - 110					04/25/23 11:07	05/15/23 16:25	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	-0.112	U	0.264	0.264	5.00	0.465	pCi/L		05/17/23 16:24	1

Eurofins Chicago

Definitions/Glossary

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

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.

¤	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: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Rad

Prep Batch: 608680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232060-1	AES-MW1-041023	Total/NA	Water	PrecSep-21	
500-232060-2	AES-MW2-041023	Total/NA	Water	PrecSep-21	
500-232060-3	AES-MW3-041023	Total/NA	Water	PrecSep-21	
500-232060-4	AES-MW4-041023	Total/NA	Water	PrecSep-21	
500-232060-5	AES-MW4-DUP-041023	Total/NA	Water	PrecSep-21	
500-232060-6	AES-MW5-041023	Total/NA	Water	PrecSep-21	
500-232060-7	AES-FB-041023	Total/NA	Water	PrecSep-21	
MB 160-608680/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-608680/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-232060-2 MS	AES-MW2-041023	Total/NA	Water	PrecSep-21	
500-232060-2 MSD	AES-MW2-041023	Total/NA	Water	PrecSep-21	

Prep Batch: 608686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-232060-1	AES-MW1-041023	Total/NA	Water	PrecSep_0	
500-232060-2	AES-MW2-041023	Total/NA	Water	PrecSep_0	
500-232060-3	AES-MW3-041023	Total/NA	Water	PrecSep_0	
500-232060-4	AES-MW4-041023	Total/NA	Water	PrecSep_0	
500-232060-5	AES-MW4-DUP-041023	Total/NA	Water	PrecSep_0	
500-232060-6	AES-MW5-041023	Total/NA	Water	PrecSep_0	
500-232060-7	AES-FB-041023	Total/NA	Water	PrecSep_0	
MB 160-608686/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-608686/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-232060-2 MS	AES-MW2-041023	Total/NA	Water	PrecSep_0	
500-232060-2 MSD	AES-MW2-041023	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9320 - Radium-228 (GFPC) (Continued)

<i>Carrier</i>	<i>MB %Yield</i>	<i>MB Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.3		30 - 110	04/25/23 11:07	05/15/23 16:24	1
Y Carrier	84.1		30 - 110	04/25/23 11:07	05/15/23 16:24	1

Lab Sample ID: LCS 160-608686/2-A

Matrix: Water

Analysis Batch: 611525

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 608686

<i>Analyte</i>			<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qual</i>	<i>Total</i>		<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec Limits</i>
	<i>Sample Result</i>	<i>Sample Qual</i>				<i>Uncert. (2σ+/-)</i>	<i>RL</i>				
Radium-228	0.444	U	7.95	7.764		1.08	1.00	0.447	pCi/L	98	75 - 125

LCS LCS

<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
Ba Carrier	96.6		30 - 110
Y Carrier	88.6		30 - 110

Lab Sample ID: 500-232060-2 MS

Matrix: Water

Analysis Batch: 611525

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Prep Batch: 608686

<i>Analyte</i>			<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qual</i>	<i>Total</i>		<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec Limits</i>
	<i>Sample Result</i>	<i>Sample Qual</i>				<i>Uncert. (2σ+/-)</i>	<i>RL</i>				
Radium-228	0.444	U	7.89	8.558		1.19	1.00	0.480	pCi/L	103	60 - 140

MS MS

<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
Ba Carrier	87.0		30 - 110
Y Carrier	84.9		30 - 110

Lab Sample ID: 500-232060-2 MSD

Matrix: Water

Analysis Batch: 611525

Client Sample ID: AES-MW2-041023

Prep Type: Total/NA

Prep Batch: 608686

<i>Analyte</i>			<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qual</i>	<i>Total</i>		<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RER</i>	<i>RER Limit</i>
	<i>Sample Result</i>	<i>Sample Qual</i>				<i>Uncert. (2σ+/-)</i>	<i>RL</i>						
Radium-228	0.444	U	7.96	7.949		1.13	1.00	0.505	pCi/L	94	60 - 140	0.26	1

MSD MSD

<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
Ba Carrier	91.6		30 - 110
Y Carrier	84.9		30 - 110

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041023

Lab Sample ID: 500-232060-1

Matrix: Water

Date Collected: 04/10/23 09:41

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611881	FLC	EET SL	05/17/23 07:37
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:24
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Client Sample ID: AES-MW2-041023

Lab Sample ID: 500-232060-2

Matrix: Water

Date Collected: 04/10/23 10:36

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611881	FLC	EET SL	05/17/23 07:37
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:24
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Client Sample ID: AES-MW3-041023

Lab Sample ID: 500-232060-3

Matrix: Water

Date Collected: 04/10/23 12:01

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611881	FLC	EET SL	05/17/23 07:38
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:25
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Client Sample ID: AES-MW4-041023

Lab Sample ID: 500-232060-4

Matrix: Water

Date Collected: 04/10/23 14:01

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611881	FLC	EET SL	05/17/23 07:39
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:25
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041023

Lab Sample ID: 500-232060-5

Matrix: Water

Date Collected: 04/10/23 14:32

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611926	FLC	EET SL	05/17/23 07:43
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:25
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Client Sample ID: AES-MW5-041023

Lab Sample ID: 500-232060-6

Matrix: Water

Date Collected: 04/10/23 15:56

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611926	FLC	EET SL	05/17/23 07:44
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:25
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Client Sample ID: AES-FB-041023

Lab Sample ID: 500-232060-7

Matrix: Water

Date Collected: 04/10/23 15:58

Date Received: 04/12/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			608680	KAC	EET SL	04/25/23 10:46
Total/NA	Analysis	9315		1	611926	FLC	EET SL	05/17/23 07:44
Total/NA	Prep	PrecSep_0			608686	KAC	EET SL	04/25/23 11:07
Total/NA	Analysis	9320		1	611525	FLC	EET SL	05/15/23 16:25
Total/NA	Analysis	Ra226_Ra228		1	611950	EMH	EET SL	05/17/23 16:24

Laboratory References:

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

Eurofins Chicago

Accreditation/Certification Summary

Client: DNA-Environment LLC

Job ID: 500-232060-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	06-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago

Chain of Custody Record

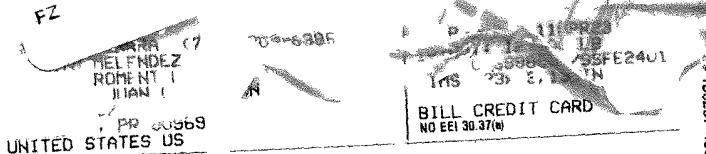
Client Information		Sampler: Vicente Perez / Rafael Diaz		Lab PM McCutcheon Carlene		Carrier Tracking No(s)		COC No: 500-111620-46354 1			
Client Contact: Alberto Melendez		Phone: (787) 209-6386		E-Mail Carlene.McCutcheon@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1 <i>60</i>			
Company: DNA-Environment LLC		PWSID		Analysis Requested						Job # <i>500-232058</i>	
Address: 35 Calle Juan C Borbon STE 67-227		Due Date Requested								Preservation Codes	
City: Guaynabo		TAT Requested (days)		Regular TAT						A HCL M Hexane <i>SS</i> B NaOH N None <i>7/12/23</i> C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 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 Z other (specify) Other:	
State, Zip: PR, 00969-5375		Compliance Project <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Phone: 787-209-6386		PO #:									
Email: alberto.melendez@dnaenv.com		WO #:									
Project Name: CCR Groundwater Monitoring		Project #: 50021397									
Site: AES Puerto Rico LP Guayama Puerto Rico		SSOW#:									
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp G=grab)	Matrix (W=water, S=solid, O=waste/oil BT=tissue, A=Air)	Field Filtered Sample (Yes or No)	MS/MSD (Yes or No)	93/5_Ra226, 93/20_Ra228, Radium-226 & Radium-228	Total Number of containers	Special Instructions/Note	
						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>D</i>			
AES-MW1-041023		4/10/23	09 41	G	Water	N	X			2	
AES-MW2-041023		4/10/23	10 36	G	Water	N	X			2	
AES-MW2-041023 MS		4/10/23	11 02	G	Water	N	Y	X		2	
AES-MW2-041023 MSD		4/10/23	11 28	G	Water	N	Y	X		2	
AES-MW3-041023		4/10/23	12 01	G	Water	N	X			2	
AES-MW4-041023		4/10/23	14 01	G	Water	N	X			2	
AES-MW4-DUP-041023		4/10/23	14 32	G	Water	N	X			2	
AES-MW5-041023		4/10/23	15 56	G	Water	N	X			2	
AES-FB-041023		4/10/23	15 58	G	Water	N	X			2	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
<input checked="" 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 checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months									
Deliverable Requested I, II, III, IV Other (specify) Level IV								Special Instructions/QC Requirements			
Empty Kit Relinquished by: <i>Julie R.</i>		Date: <i>04/11/23 12:30</i>		Time: <i>12:30</i>		Method of Shipment:					
Relinquished by: <i>Julie R.</i>		Date/Time: <i>04/11/23 12:30</i>		Company: DNA		Received by: <i>John Shook</i>		Date/Time: <i>04/12/23 08:15</i>	Company: <i>BEP/21</i>		
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	Company:		
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	Company:		
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No						Cooler Temperature(s) °C and Other Remarks: <i>Unchilled</i>			

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5
6
7
8
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Part # 156255734509898535 EXP 09/23



500-232060 Waybill



TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

(708) 534-5200

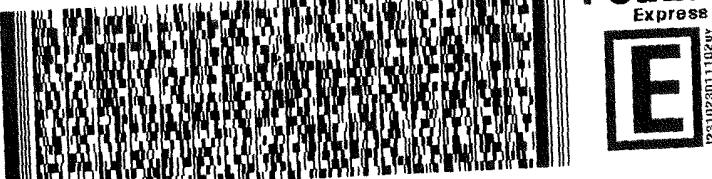
REF:

INU:

P01

DEPT:

(US)



1 of 2
TRK# 3968 8585 9320
0430

MASTER

X1 JOTA

WED - 12 APR 8:30A
INTL FIRST

60484
IL-US ORD



FO

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ
DNA ENVIRONMENT LLC
35 CALLE JUAN C. BORBON
STE 67-227
GUAYNABO, PR 00969
UNITED STATES US

SHIP DATE: 11APR23
ACTWTG: 55.00 LB
CAD: 006998633/SSFE2401
DIMS: 23x13x13 IN
BILL CREDIT CARD

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

(708) 534-5200

REF:

INU:

P01

DEPT:



WED - 12 APR 8:30A
INTL FIRST

2 of 2
MPS# 3968 8585 9330
0441
Mstr# 3968 8585 9320

0430

X1 JOTA

60484
IL-US ORD



RT FO
08:30
9330
04 12

151969 REV 3/21

FedEx First Overnight®

5/17/2023



Chain of Custody Record

Environment Testing

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analytic & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

Possible Hazard Identification

Unconfirmed Deliverables Received: I ||| IV Other (specify)

Special Instructions/QC Requirements:

Method of Shipment:

卷之三

Received by: _____
Date/Time: _____
Company: _____

卷之三

Received by _____ Date/time: _____ Company: _____

Ergonomics in Design 3/2

Date/Time: _____
Received by: _____
Company: _____

卷之三

Cooler Temperature(s) °C and Other Remarks

1 1 1 1 1 1 1

Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-232060-1

Login Number: 232060

List Source: Eurofins Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		1
The cooler's custody seal, if present, is intact.	True		2
Sample custody seals, if present, are intact.	True		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	N/A		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True	Unchilled	7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
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: DNA-Environment LLC

Job Number: 500-232060-1

Login Number: 232060

List Source: Eurofins St. Louis

List Number: 2

List Creation: 04/13/23 11:36 AM

Creator: Worthington, Sierra M

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		1
The cooler's custody seal, if present, is intact.	True		2
Sample custody seals, if present, are intact.	True		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	N/A		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True		7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
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").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

Tracer/Carrier Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-232060-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	
500-232060-1	AES-MW1-041023	94.1	
500-232060-2	AES-MW2-041023	93.1	
500-232060-2 MS	AES-MW2-041023	87.0	
500-232060-2 MSD	AES-MW2-041023	91.6	
500-232060-3	AES-MW3-041023	99.0	
500-232060-4	AES-MW4-041023	97.8	
500-232060-5	AES-MW4-DUP-041023	97.8	
500-232060-6	AES-MW5-041023	97.5	
500-232060-7	AES-FB-041023	91.9	
LCS 160-608680/2-A	Lab Control Sample	96.6	
MB 160-608680/1-A	Method Blank	97.3	

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	Y (30-110)
500-232060-1	AES-MW1-041023	94.1	94.2
500-232060-2	AES-MW2-041023	93.1	86.4
500-232060-2 MS	AES-MW2-041023	87.0	84.9
500-232060-2 MSD	AES-MW2-041023	91.6	84.9
500-232060-3	AES-MW3-041023	99.0	85.2
500-232060-4	AES-MW4-041023	97.8	85.2
500-232060-5	AES-MW4-DUP-041023	97.8	87.9
500-232060-6	AES-MW5-041023	97.5	86.0
500-232060-7	AES-FB-041023	91.9	87.9
LCS 160-608686/2-A	Lab Control Sample	96.6	88.6
MB 160-608686/1-A	Method Blank	97.3	84.1

Tracer/Carrier Legend

Ba = Ba Carrier

$Y = Y_{\text{Carrier}}$

LABORATORY ANALYTICAL REPORTS: OCTOBER 2023 SAMPLING EVENT

ANALYTICAL REPORT

PREPARED FOR

Attn: Alberto Melendez
DNA-Environment LLC
35 Calle Juan C Borbon
Guaynabo, Puerto Rico 00969-5735

Generated 11/29/2023 12:38:04 PM Revision 1

JOB DESCRIPTION

CCR GW Monitoring
AES Puerto Rico, LP

JOB NUMBER

500-241251-1

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



Authorized for release by
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Revision 1

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Case Narrative

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Job ID: 500-241251-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-241251-1

Revision

The report being provided is a revision of the original report sent on 11/26/2023. The report (revision 1) is being revised to correct CCV flagging on SM 4500 F C Fluoride data associated with batch 500-739993.

Receipt

The samples were received on 10/19/2023 8:10 AM. 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 2.4° C and 2.6° C.

HPLC/IC

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

Metals

Method 6020B: The continuing calibration verification (CCV) associated with batch 738917 recovered above the upper control limit for Be (line 96 only) and Li (line 96 and 105). The samples associated with these CCV were below the reporting limit for the affected analytes; therefore, the data have been reported.

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

General Chemistry

Method SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 500-738855 were outside control limits for Chloride. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Detection Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW1-101623

Lab Sample ID: 500-241251-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	500		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.00081	J B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.039		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.24	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	140		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.00052	J	0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Selenium	0.018		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	1700		10	4.3	mg/L	1		SM 2540C	Total/NA
Chloride	270		40	20	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.67		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.93				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW2-101623

Lab Sample ID: 500-241251-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	260		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.00089	J B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.23		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.19	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	160		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.00052	J	0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Mercury	0.000083	J F1	0.00020	0.000079	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1300		10	4.3	mg/L	1		SM 2540C	Total/NA
Chloride	240	F1	40	20	mg/L	20		SM 4500 Cl- E	Total/NA
Fluoride	0.66		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.69				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW3-101623

Lab Sample ID: 500-241251-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2500		50	21	mg/L	50		9056A	Total/NA
Arsenic	0.0026	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.068		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.0	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00022	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	310		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0031	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0032		0.0010	0.00040	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW3-101623 (Continued)

Lab Sample ID: 500-241251-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0038	J ^+	0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.17		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.070		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	12000		170	72	mg/L	1		SM 2540C	Total/NA
Chloride	4500		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.6		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.82				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-101623

Lab Sample ID: 500-241251-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4000		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0032	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.036		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.8	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00033	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	120		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0013	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0037		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.25		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	2.3		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0022	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	14000		170	72	mg/L	1		SM 2540C	Total/NA
Chloride	4000		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.3		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	7.20				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-DUP-101623

Lab Sample ID: 500-241251-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4000		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0025	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.037		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.8	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00022	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	120		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0014	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101623 (Continued)

Lab Sample ID: 500-241251-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0011		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.29		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	2.4		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0021	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	13000		170	72	mg/L	1		SM 2540C	Total/NA
Chloride	4000		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.3		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA

Client Sample ID: AES-MW5-101623

Lab Sample ID: 500-241251-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2200		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.012	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.032		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.32	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	520		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0032		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	9300		100	43	mg/L	1		SM 2540C	Total/NA
Chloride	3600		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.42		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.58				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-FB-101623

Lab Sample ID: 500-241251-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00028	J B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Calcium	0.058	J	0.20	0.044	mg/L	1		6020B	Total Recoverable

Client Sample ID: AES-TW101-101723

Lab Sample ID: 500-241251-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	900		50	21	mg/L	50		9056A	Total/NA
Arsenic	0.0055	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.19		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.57	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	500		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0014		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0049	J	0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Mercury	0.000097	J	0.00020	0.000079	mg/L	1		7470A	Total/NA
Total Dissolved Solids	8500		100	43	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW101-101723 (Continued)

Lab Sample ID: 500-241251-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4100		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.64				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-TW102-101723

Lab Sample ID: 500-241251-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4900		100	42	mg/L	100		9056A	Total/NA
Antimony	0.0048		0.0030	0.0013	mg/L	1		6020B	Total Recoverable
Arsenic	0.0044	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.079		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.90	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.0010		0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	690		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0011	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.013		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.14		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.20		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.075		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	16000		170	72	mg/L	1		SM 2540C	Total/NA
Chloride	4800		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.5		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.76				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-TW103-101723

Lab Sample ID: 500-241251-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	8900		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0028	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.036		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.5	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00059		0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	490		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0023	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.019		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.19		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.47		0.0050	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW103-101723 (Continued)

Lab Sample ID: 500-241251-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.16		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	29000		250	110	mg/L	1		SM 2540C	Total/NA
Chloride	7500		800	400	mg/L	400		SM 4500 Cl- E	Total/NA
Fluoride	0.87		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.77				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-TW105-101723

Lab Sample ID: 500-241251-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	5100		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0031	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.036		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.79	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00025	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	580		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0013	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0081		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0041	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0052		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0015	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	19000		250	110	mg/L	1		SM 2540C	Total/NA
Chloride	5200		600	300	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	1.3		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.66				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-TW106-101723

Lab Sample ID: 500-241251-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	8200		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0059	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.029		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.90	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00020	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	530		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0028	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0068		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0068	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Detection Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW106-101723 (Continued)

Lab Sample ID: 500-241251-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.015		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0022	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	28000		250	110	mg/L	1		SM 2540C	Total/NA
Chloride	7900		800	400	mg/L	400		SM 4500 Cl- E	Total/NA
Fluoride	1.6		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.71				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-TW107-101723

Lab Sample ID: 500-241251-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	7600		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0028	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.046		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.77	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	480		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0022	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0035		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.018		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0050		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0017	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	23000		250	110	mg/L	1		SM 2540C	Total/NA
Chloride	6400		600	300	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.55		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.71				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-TW108-101723

Lab Sample ID: 500-241251-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	6400		100	42	mg/L	100		9056A	Total/NA
Arsenic	0.0050	B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.027		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.54	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	570		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0021	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0047		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0051	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0027	J	0.0050	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Detection Summary

Client: DNA-Environment LLC
 Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
 SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW108-101723 (Continued)

Lab Sample ID: 500-241251-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.0013	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Total Dissolved Solids	23000		250	110	mg/L	1		SM 2540C	Total/NA
Chloride	7300		800	400	mg/L	400		SM 4500 Cl- E	Total/NA
Fluoride	0.88		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.50				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-FB-101723

Lab Sample ID: 500-241251-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00023	J B	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Calcium	0.083	J	0.20	0.044	mg/L	1		6020B	Total Recoverable
Chloride	1.1	J	2.0	1.0	mg/L	1		SM 4500 Cl- E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
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
Field Sampling	Field Sampling	EPA	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

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 CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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

Sample Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
500-241251-1	AES-MW1-101623	Water	10/16/23 09:55	10/19/23 08:10	1
500-241251-2	AES-MW2-101623	Water	10/16/23 10:57	10/19/23 08:10	2
500-241251-3	AES-MW3-101623	Water	10/16/23 12:20	10/19/23 08:10	3
500-241251-4	AES-MW4-101623	Water	10/16/23 14:25	10/19/23 08:10	4
500-241251-5	AES-MW4-DUP-101623	Water	10/16/23 14:58	10/19/23 08:10	5
500-241251-6	AES-MW5-101623	Water	10/16/23 15:32	10/19/23 08:10	6
500-241251-7	AES-FB-101623	Water	10/16/23 15:35	10/19/23 08:10	7
500-241251-8	AES-TW101-101723	Water	10/17/23 10:01	10/19/23 08:10	8
500-241251-9	AES-TW102-101723	Water	10/17/23 10:50	10/19/23 08:10	9
500-241251-10	AES-TW103-101723	Water	10/17/23 11:42	10/19/23 08:10	10
500-241251-11	AES-TW105-101723	Water	10/17/23 12:58	10/19/23 08:10	11
500-241251-12	AES-TW106-101723	Water	10/17/23 14:40	10/19/23 08:10	12
500-241251-13	AES-TW107-101723	Water	10/17/23 15:58	10/19/23 08:10	13
500-241251-14	AES-TW108-101723	Water	10/17/23 16:49	10/19/23 08:10	14
500-241251-15	AES-FB-101723	Water	10/17/23 17:00	10/19/23 08:10	

Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW1-101623

Lab Sample ID: 500-241251-1

Matrix: Water

Date Collected: 10/16/23 09:55
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	500		5.0	2.1	mg/L			10/30/23 20:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 18:25	1
Arsenic	0.00081	J B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 18:25	1
Barium	0.039		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 18:25	1
Beryllium	0.00053	U ^+	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 18:25	1
Boron	0.24	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 18:25	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 18:25	1
Calcium	140		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 18:25	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 18:25	1
Cobalt	0.00052	J	0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 18:25	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 18:25	1
Lithium	0.0025	U ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 18:25	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 18:25	1
Selenium	0.018		0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:19	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 18:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1700		10	4.3	mg/L			10/19/23 17:25	1
Chloride (SM 4500 Cl-E)	270		40	20	mg/L			10/25/23 11:29	20
Fluoride (SM 4500 F C)	0.67		0.10	0.056	mg/L			11/01/23 14:32	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.93				SU			10/16/23 09:55	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW2-101623

Lab Sample ID: 500-241251-2

Matrix: Water

Date Collected: 10/16/23 10:57
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	260		5.0	2.1	mg/L			10/30/23 20:55	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 18:29	1
Arsenic	0.00089	J B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 18:29	1
Barium	0.23		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 18:29	1
Beryllium	0.00053	U ^+	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 18:29	1
Boron	0.19	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 18:29	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 18:29	1
Calcium	160		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 18:29	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 18:29	1
Cobalt	0.00052	J	0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 18:29	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 18:29	1
Lithium	0.0025	U ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 18:29	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 18:29	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:22	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 18:29	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000083	J F1	0.000020	0.0000079	mg/L		10/26/23 11:10	11/01/23 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1300		10	4.3	mg/L			10/19/23 17:30	1
Chloride (SM 4500 Cl-E)	240	F1	40	20	mg/L			10/25/23 12:44	20
Fluoride (SM 4500 F C)	0.66		0.10	0.056	mg/L			11/02/23 10:24	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.69				SU			10/16/23 10:57	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW3-101623

Lab Sample ID: 500-241251-3

Matrix: Water

Date Collected: 10/16/23 12:20
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2500		50	21	mg/L			10/30/23 21:32	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 18:58	1
Arsenic	0.0026	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 18:58	1
Barium	0.068		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 18:58	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 18:58	1
Boron	1.0	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 18:58	1
Cadmium	0.00022	J	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 18:58	1
Calcium	310		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 18:58	1
Chromium	0.0031	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 18:58	1
Cobalt	0.0032		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 18:58	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 18:58	1
Lithium	0.0038	J ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 18:58	1
Molybdenum	0.17		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 18:58	1
Selenium	0.070		0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:40	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 18:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	12000		170	72	mg/L			10/19/23 17:38	1
Chloride (SM 4500 Cl-E)	4500		200	100	mg/L			10/25/23 12:38	100
Fluoride (SM 4500 F C)	1.6		0.10	0.056	mg/L			11/01/23 14:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.82				SU			10/16/23 12:20	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW4-101623

Lab Sample ID: 500-241251-4

Matrix: Water

Date Collected: 10/16/23 14:25
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4000		100	42	mg/L			10/30/23 21:45	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:02	1
Arsenic	0.0032	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:02	1
Barium	0.036		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:02	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:02	1
Boron	1.8	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:02	1
Cadmium	0.00033	J	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:02	1
Calcium	120		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:02	1
Chromium	0.0013	J	0.0050	0.0011	mg/L		11/14/23 18:46	11/15/23 12:14	1
Cobalt	0.0037		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:02	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:02	1
Lithium	0.25		0.010	0.0025	mg/L		10/23/23 08:57	11/01/23 20:04	1
Molybdenum	2.3		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:02	1
Selenium	0.0022	J	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:43	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:02	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	14000		170	72	mg/L			10/19/23 17:41	1
Chloride (SM 4500 Cl-E)	4000		200	100	mg/L			10/25/23 12:38	100
Fluoride (SM 4500 F C)	1.3		0.10	0.056	mg/L			11/01/23 14:40	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.20				SU			10/16/23 14:25	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101623

Lab Sample ID: 500-241251-5

Matrix: Water

Date Collected: 10/16/23 14:58
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4000		100	42	mg/L			10/30/23 21:58	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:06	1
Arsenic	0.0025	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:06	1
Barium	0.037		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:06	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:06	1
Boron	1.8	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:06	1
Cadmium	0.00022	J	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:06	1
Calcium	120		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:06	1
Chromium	0.0014	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:06	1
Cobalt	0.0011		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:06	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:06	1
Lithium	0.29		0.010	0.0025	mg/L		10/23/23 08:57	11/01/23 20:09	1
Molybdenum	2.4		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:06	1
Selenium	0.0021	J	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:47	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:06	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	13000		170	72	mg/L			10/19/23 17:43	1
Chloride (SM 4500 Cl-E)	4000		200	100	mg/L			10/25/23 12:39	100
Fluoride (SM 4500 F C)	1.3		0.10	0.056	mg/L			11/01/23 14:45	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW5-101623

Lab Sample ID: 500-241251-6

Matrix: Water

Date Collected: 10/16/23 15:32
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2200		100	42	mg/L			10/30/23 22:10	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:11	1
Arsenic	0.012	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:11	1
Barium	0.032		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:11	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:11	1
Boron	0.32	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:11	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:11	1
Calcium	520		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:11	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:11	1
Cobalt	0.0032		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:11	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:11	1
Lithium	0.0025	U ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:11	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:11	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:50	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:11	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	9300		100	43	mg/L			10/19/23 17:46	1
Chloride (SM 4500 Cl-E)	3600		200	100	mg/L			10/25/23 12:39	100
Fluoride (SM 4500 F C)	0.42		0.10	0.056	mg/L			11/01/23 14:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.58				SU			10/16/23 15:32	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-FB-101623

Lab Sample ID: 500-241251-7

Matrix: Water

Date Collected: 10/16/23 15:35
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.42	U	1.0	0.42	mg/L			10/30/23 22:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:15	1
Arsenic	0.00028	J B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:15	1
Barium	0.00073	U	0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:15	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:15	1
Boron	0.013	U	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:15	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:15	1
Calcium	0.058	J	0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:15	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:15	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:15	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:15	1
Lithium	0.0025	U ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:15	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:15	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:01	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:15	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4.3	U	10	4.3	mg/L			10/19/23 18:26	1
Chloride (SM 4500 Cl- E)	1.0	U	2.0	1.0	mg/L			10/25/23 11:44	1
Fluoride (SM 4500 F C)	0.056	U	0.10	0.056	mg/L			11/01/23 15:04	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW101-101723

Lab Sample ID: 500-241251-8

Matrix: Water

Date Collected: 10/17/23 10:01
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	900		50	21	mg/L			11/02/23 09:44	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:19	1
Arsenic	0.0055	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:19	1
Barium	0.19		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:19	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:19	1
Boron	0.57	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:19	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:19	1
Calcium	500		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:19	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:19	1
Cobalt	0.0014		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:19	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:19	1
Lithium	0.0025	U ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:19	1
Molybdenum	0.0049	J	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:19	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:04	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000097	J	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	8500		100	43	mg/L			10/19/23 18:28	1
Chloride (SM 4500 Cl-E)	4100		200	100	mg/L			10/25/23 12:39	100
Fluoride (SM 4500 F C)	1.1		0.10	0.056	mg/L			11/01/23 15:10	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.64				SU			10/17/23 10:01	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW102-101723

Lab Sample ID: 500-241251-9

Matrix: Water

Date Collected: 10/17/23 10:50
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4900		100	42	mg/L			11/02/23 09:57	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0048		0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:23	1
Arsenic	0.0044	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:23	1
Barium	0.079		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:23	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:23	1
Boron	0.90	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:23	1
Cadmium	0.0010		0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:23	1
Calcium	690		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:23	1
Chromium	0.0011	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:23	1
Cobalt	0.013		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:23	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:23	1
Lithium	0.14		0.010	0.0025	mg/L		10/23/23 08:57	11/01/23 20:12	1
Molybdenum	0.20		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:23	1
Selenium	0.075		0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:08	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:23	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	16000		170	72	mg/L			10/19/23 18:31	1
Chloride (SM 4500 Cl-E)	4800		200	100	mg/L			10/25/23 12:40	100
Fluoride (SM 4500 F C)	1.5		0.10	0.056	mg/L			11/01/23 15:14	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.76				SU			10/17/23 10:50	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW103-101723

Lab Sample ID: 500-241251-10

Matrix: Water

Date Collected: 10/17/23 11:42
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	8900		100	42	mg/L			11/02/23 10:09	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:35	1
Arsenic	0.0028	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:35	1
Barium	0.036		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:35	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:35	1
Boron	1.5	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:35	1
Cadmium	0.00059		0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:35	1
Calcium	490		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:35	1
Chromium	0.0023	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:35	1
Cobalt	0.019		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:35	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:35	1
Lithium	0.19		0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:35	1
Molybdenum	0.47		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:35	1
Selenium	0.16		0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:11	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	29000		250	110	mg/L			10/19/23 18:33	1
Chloride (SM 4500 Cl-E)	7500		800	400	mg/L			10/25/23 13:06	400
Fluoride (SM 4500 F C)	0.87		0.10	0.056	mg/L			11/02/23 10:37	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.77				SU			10/17/23 11:42	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW105-101723

Lab Sample ID: 500-241251-11

Matrix: Water

Date Collected: 10/17/23 12:58
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5100		100	42	mg/L			11/02/23 10:22	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:39	1
Arsenic	0.0031	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:39	1
Barium	0.036		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:39	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:39	1
Boron	0.79	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:39	1
Cadmium	0.00025	J	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:39	1
Calcium	580		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:39	1
Chromium	0.0013	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:39	1
Cobalt	0.0081		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:39	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:39	1
Lithium	0.0041	J	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:39	1
Molybdenum	0.0052		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:39	1
Selenium	0.0015	J	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:14	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:39	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	19000		250	110	mg/L			10/19/23 18:36	1
Chloride (SM 4500 Cl-E)	5200		600	300	mg/L			10/25/23 13:06	300
Fluoride (SM 4500 F C)	1.3		0.10	0.056	mg/L			11/02/23 10:41	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.66				SU			10/17/23 12:58	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW106-101723

Lab Sample ID: 500-241251-12

Matrix: Water

Date Collected: 10/17/23 14:40
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	8200		100	42	mg/L			11/02/23 10:34	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:44	1
Arsenic	0.0059	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:44	1
Barium	0.029		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:44	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:44	1
Boron	0.90	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:44	1
Cadmium	0.00020	J	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:44	1
Calcium	530		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:44	1
Chromium	0.0028	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:44	1
Cobalt	0.0068		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:44	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:44	1
Lithium	0.0068	J	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:44	1
Molybdenum	0.015		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:44	1
Selenium	0.0022	J	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:18	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:44	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	28000		250	110	mg/L			10/19/23 18:39	1
Chloride (SM 4500 Cl-E)	7900		800	400	mg/L			10/25/23 13:05	400
Fluoride (SM 4500 F C)	1.6		0.10	0.056	mg/L			11/02/23 10:45	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.71				SU			10/17/23 14:40	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW107-101723

Lab Sample ID: 500-241251-13

Matrix: Water

Date Collected: 10/17/23 15:58
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	7600		100	42	mg/L			11/02/23 10:47	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:48	1
Arsenic	0.0028	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:48	1
Barium	0.046		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:48	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:48	1
Boron	0.77	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:48	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:48	1
Calcium	480		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:48	1
Chromium	0.0022	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:48	1
Cobalt	0.0035		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:48	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:48	1
Lithium	0.018		0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:48	1
Molybdenum	0.0050		0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:48	1
Selenium	0.0017	J	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:21	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:48	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	23000		250	110	mg/L			10/19/23 18:41	1
Chloride (SM 4500 Cl-E)	6400		600	300	mg/L			10/25/23 13:05	300
Fluoride (SM 4500 F C)	0.55		0.10	0.056	mg/L			11/02/23 10:50	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.71				SU			10/17/23 15:58	1

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Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW108-101723

Lab Sample ID: 500-241251-14

Matrix: Water

Date Collected: 10/17/23 16:49
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	6400		100	42	mg/L			11/02/23 11:00	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:52	1
Arsenic	0.0050	B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:52	1
Barium	0.027		0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:52	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:52	1
Boron	0.54	B	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:52	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:52	1
Calcium	570		0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:52	1
Chromium	0.0021	J	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:52	1
Cobalt	0.0047		0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:52	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:52	1
Lithium	0.0051	J	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:52	1
Molybdenum	0.0027	J	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:52	1
Selenium	0.0013	J	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:25	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:52	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	23000		250	110	mg/L			10/19/23 18:44	1
Chloride (SM 4500 Cl-E)	7300		800	400	mg/L			10/25/23 13:04	400
Fluoride (SM 4500 F C)	0.88		0.10	0.056	mg/L			11/02/23 10:54	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.50				SU			10/17/23 16:49	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-FB-101723

Lab Sample ID: 500-241251-15

Matrix: Water

Date Collected: 10/17/23 17:00
Date Received: 10/19/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.42	U	1.0	0.42	mg/L			11/02/23 11:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 19:56	1
Arsenic	0.00023	J B	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 19:56	1
Barium	0.00073	U	0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 19:56	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 19:56	1
Boron	0.013	U	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 19:56	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 19:56	1
Calcium	0.083	J	0.20	0.044	mg/L		10/23/23 08:57	10/25/23 19:56	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 19:56	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 19:56	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 19:56	1
Lithium	0.0025	U	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 19:56	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 19:56	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 17:28	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 19:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4.3	U	10	4.3	mg/L			10/19/23 18:46	1
Chloride (SM 4500 Cl-E)	1.1	J	2.0	1.0	mg/L			10/25/23 11:45	1
Fluoride (SM 4500 F C)	0.056	U	0.10	0.056	mg/L			11/02/23 11:09	1

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Definitions/Glossary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
^-1	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

☒	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)

Definitions/Glossary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

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QC Association Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

HPLC/IC

Analysis Batch: 404386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	9056A	
500-241251-2	AES-MW2-101623	Total/NA	Water	9056A	
500-241251-3	AES-MW3-101623	Total/NA	Water	9056A	
500-241251-4	AES-MW4-101623	Total/NA	Water	9056A	
500-241251-5	AES-MW4-DUP-101623	Total/NA	Water	9056A	
500-241251-6	AES-MW5-101623	Total/NA	Water	9056A	
500-241251-7	AES-FB-101623	Total/NA	Water	9056A	
MB 310-404386/3	Method Blank	Total/NA	Water	9056A	
LCS 310-404386/4	Lab Control Sample	Total/NA	Water	9056A	
500-241251-2 MS	AES-MW2-101623	Total/NA	Water	9056A	
500-241251-2 MSD	AES-MW2-101623	Total/NA	Water	9056A	

Analysis Batch: 404667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-8	AES-TW101-101723	Total/NA	Water	9056A	
500-241251-9	AES-TW102-101723	Total/NA	Water	9056A	
500-241251-10	AES-TW103-101723	Total/NA	Water	9056A	
500-241251-11	AES-TW105-101723	Total/NA	Water	9056A	
500-241251-12	AES-TW106-101723	Total/NA	Water	9056A	
500-241251-13	AES-TW107-101723	Total/NA	Water	9056A	
500-241251-14	AES-TW108-101723	Total/NA	Water	9056A	
500-241251-15	AES-FB-101723	Total/NA	Water	9056A	
MB 310-404667/3	Method Blank	Total/NA	Water	9056A	
LCS 310-404667/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 738370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total Recoverable	Water	3005A	
500-241251-2	AES-MW2-101623	Total Recoverable	Water	3005A	
500-241251-3	AES-MW3-101623	Total Recoverable	Water	3005A	
500-241251-4	AES-MW4-101623	Total Recoverable	Water	3005A	
500-241251-5	AES-MW4-DUP-101623	Total Recoverable	Water	3005A	
500-241251-6	AES-MW5-101623	Total Recoverable	Water	3005A	
500-241251-7	AES-FB-101623	Total Recoverable	Water	3005A	
500-241251-8	AES-TW101-101723	Total Recoverable	Water	3005A	
500-241251-9	AES-TW102-101723	Total Recoverable	Water	3005A	
500-241251-10	AES-TW103-101723	Total Recoverable	Water	3005A	
500-241251-11	AES-TW105-101723	Total Recoverable	Water	3005A	
500-241251-12	AES-TW106-101723	Total Recoverable	Water	3005A	
500-241251-13	AES-TW107-101723	Total Recoverable	Water	3005A	
500-241251-14	AES-TW108-101723	Total Recoverable	Water	3005A	
500-241251-15	AES-FB-101723	Total Recoverable	Water	3005A	
MB 500-738370/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-738370/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-241251-2 MS	AES-MW2-101623	Total Recoverable	Water	3005A	
500-241251-2 MSD	AES-MW2-101623	Total Recoverable	Water	3005A	
500-241251-2 DU	AES-MW2-101623	Total Recoverable	Water	3005A	

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QC Association Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Metals

Analysis Batch: 738917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total Recoverable	Water	6020B	738370
500-241251-2	AES-MW2-101623	Total Recoverable	Water	6020B	738370
500-241251-3	AES-MW3-101623	Total Recoverable	Water	6020B	738370
500-241251-4	AES-MW4-101623	Total Recoverable	Water	6020B	738370
500-241251-5	AES-MW4-DUP-101623	Total Recoverable	Water	6020B	738370
500-241251-6	AES-MW5-101623	Total Recoverable	Water	6020B	738370
500-241251-7	AES-FB-101623	Total Recoverable	Water	6020B	738370
500-241251-8	AES-TW101-101723	Total Recoverable	Water	6020B	738370
500-241251-9	AES-TW102-101723	Total Recoverable	Water	6020B	738370
500-241251-10	AES-TW103-101723	Total Recoverable	Water	6020B	738370
500-241251-11	AES-TW105-101723	Total Recoverable	Water	6020B	738370
500-241251-12	AES-TW106-101723	Total Recoverable	Water	6020B	738370
500-241251-13	AES-TW107-101723	Total Recoverable	Water	6020B	738370
500-241251-14	AES-TW108-101723	Total Recoverable	Water	6020B	738370
500-241251-15	AES-FB-101723	Total Recoverable	Water	6020B	738370
MB 500-738370/1-A	Method Blank	Total Recoverable	Water	6020B	738370
LCS 500-738370/2-A	Lab Control Sample	Total Recoverable	Water	6020B	738370
500-241251-2 MS	AES-MW2-101623	Total Recoverable	Water	6020B	738370
500-241251-2 MSD	AES-MW2-101623	Total Recoverable	Water	6020B	738370
500-241251-2 DU	AES-MW2-101623	Total Recoverable	Water	6020B	738370

Prep Batch: 738974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	7470A	
500-241251-2	AES-MW2-101623	Total/NA	Water	7470A	
500-241251-3	AES-MW3-101623	Total/NA	Water	7470A	
500-241251-4	AES-MW4-101623	Total/NA	Water	7470A	
500-241251-5	AES-MW4-DUP-101623	Total/NA	Water	7470A	
500-241251-6	AES-MW5-101623	Total/NA	Water	7470A	
500-241251-7	AES-FB-101623	Total/NA	Water	7470A	
500-241251-8	AES-TW101-101723	Total/NA	Water	7470A	
500-241251-9	AES-TW102-101723	Total/NA	Water	7470A	
500-241251-10	AES-TW103-101723	Total/NA	Water	7470A	
500-241251-11	AES-TW105-101723	Total/NA	Water	7470A	
500-241251-12	AES-TW106-101723	Total/NA	Water	7470A	
500-241251-13	AES-TW107-101723	Total/NA	Water	7470A	
500-241251-14	AES-TW108-101723	Total/NA	Water	7470A	
500-241251-15	AES-FB-101723	Total/NA	Water	7470A	
MB 500-738974/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-738974/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-241251-2 MS	AES-MW2-101623	Total/NA	Water	7470A	
500-241251-2 MSD	AES-MW2-101623	Total/NA	Water	7470A	
500-241251-2 DU	AES-MW2-101623	Total/NA	Water	7470A	

Analysis Batch: 739233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total Recoverable	Water	6020B	738370
500-241251-2	AES-MW2-101623	Total Recoverable	Water	6020B	738370
500-241251-3	AES-MW3-101623	Total Recoverable	Water	6020B	738370
500-241251-4	AES-MW4-101623	Total Recoverable	Water	6020B	738370
500-241251-5	AES-MW4-DUP-101623	Total Recoverable	Water	6020B	738370

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QC Association Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Metals (Continued)

Analysis Batch: 739233 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-6	AES-MW5-101623	Total Recoverable	Water	6020B	738370
500-241251-7	AES-FB-101623	Total Recoverable	Water	6020B	738370
500-241251-8	AES-TW101-101723	Total Recoverable	Water	6020B	738370
500-241251-9	AES-TW102-101723	Total Recoverable	Water	6020B	738370
500-241251-10	AES-TW103-101723	Total Recoverable	Water	6020B	738370
500-241251-11	AES-TW105-101723	Total Recoverable	Water	6020B	738370
500-241251-12	AES-TW106-101723	Total Recoverable	Water	6020B	738370
500-241251-13	AES-TW107-101723	Total Recoverable	Water	6020B	738370
500-241251-14	AES-TW108-101723	Total Recoverable	Water	6020B	738370
500-241251-15	AES-FB-101723	Total Recoverable	Water	6020B	738370
MB 500-738370/1-A	Method Blank	Total Recoverable	Water	6020B	738370
LCS 500-738370/2-A	Lab Control Sample	Total Recoverable	Water	6020B	738370
500-241251-2 MS	AES-MW2-101623	Total Recoverable	Water	6020B	738370
500-241251-2 MSD	AES-MW2-101623	Total Recoverable	Water	6020B	738370
500-241251-2 DU	AES-MW2-101623	Total Recoverable	Water	6020B	738370

Analysis Batch: 739992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	7470A	738974
500-241251-2	AES-MW2-101623	Total/NA	Water	7470A	738974
500-241251-3	AES-MW3-101623	Total/NA	Water	7470A	738974
500-241251-4	AES-MW4-101623	Total/NA	Water	7470A	738974
500-241251-5	AES-MW4-DUP-101623	Total/NA	Water	7470A	738974
500-241251-6	AES-MW5-101623	Total/NA	Water	7470A	738974
500-241251-7	AES-FB-101623	Total/NA	Water	7470A	738974
500-241251-8	AES-TW101-101723	Total/NA	Water	7470A	738974
500-241251-9	AES-TW102-101723	Total/NA	Water	7470A	738974
500-241251-10	AES-TW103-101723	Total/NA	Water	7470A	738974
500-241251-11	AES-TW105-101723	Total/NA	Water	7470A	738974
500-241251-12	AES-TW106-101723	Total/NA	Water	7470A	738974
500-241251-13	AES-TW107-101723	Total/NA	Water	7470A	738974
500-241251-14	AES-TW108-101723	Total/NA	Water	7470A	738974
500-241251-15	AES-FB-101723	Total/NA	Water	7470A	738974
MB 500-738974/12-A	Method Blank	Total/NA	Water	7470A	738974
LCS 500-738974/13-A	Lab Control Sample	Total/NA	Water	7470A	738974
500-241251-2 MS	AES-MW2-101623	Total/NA	Water	7470A	738974
500-241251-2 MSD	AES-MW2-101623	Total/NA	Water	7470A	738974
500-241251-2 DU	AES-MW2-101623	Total/NA	Water	7470A	738974

Analysis Batch: 740085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-4	AES-MW4-101623	Total Recoverable	Water	6020B	738370
500-241251-5	AES-MW4-DUP-101623	Total Recoverable	Water	6020B	738370
500-241251-9	AES-TW102-101723	Total Recoverable	Water	6020B	738370
MB 500-738370/1-A	Method Blank	Total Recoverable	Water	6020B	738370
LCS 500-738370/2-A	Lab Control Sample	Total Recoverable	Water	6020B	738370

Prep Batch: 742180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-4	AES-MW4-101623	Total Recoverable	Water	3005A	
MB 500-742180/1-A	Method Blank	Total Recoverable	Water	3005A	

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QC Association Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Metals (Continued)

Prep Batch: 742180 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-742180/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 742360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-4	AES-MW4-101623	Total Recoverable	Water	6020B	742180
MB 500-742180/1-A	Method Blank	Total Recoverable	Water	6020B	742180
LCS 500-742180/2-A	Lab Control Sample	Total Recoverable	Water	6020B	742180

General Chemistry

Analysis Batch: 737973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	SM 2540C	
500-241251-2	AES-MW2-101623	Total/NA	Water	SM 2540C	
500-241251-3	AES-MW3-101623	Total/NA	Water	SM 2540C	
500-241251-4	AES-MW4-101623	Total/NA	Water	SM 2540C	
500-241251-5	AES-MW4-DUP-101623	Total/NA	Water	SM 2540C	
500-241251-6	AES-MW5-101623	Total/NA	Water	SM 2540C	
MB 500-737973/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-737973/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-241251-2 MS	AES-MW2-101623	Total/NA	Water	SM 2540C	
500-241251-2 MSD	AES-MW2-101623	Total/NA	Water	SM 2540C	
500-241251-1 DU	AES-MW1-101623	Total/NA	Water	SM 2540C	

Analysis Batch: 737992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-7	AES-FB-101623	Total/NA	Water	SM 2540C	
500-241251-8	AES-TW101-101723	Total/NA	Water	SM 2540C	
500-241251-9	AES-TW102-101723	Total/NA	Water	SM 2540C	
500-241251-10	AES-TW103-101723	Total/NA	Water	SM 2540C	
500-241251-11	AES-TW105-101723	Total/NA	Water	SM 2540C	
500-241251-12	AES-TW106-101723	Total/NA	Water	SM 2540C	
500-241251-13	AES-TW107-101723	Total/NA	Water	SM 2540C	
500-241251-14	AES-TW108-101723	Total/NA	Water	SM 2540C	
500-241251-15	AES-FB-101723	Total/NA	Water	SM 2540C	
MB 500-737992/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-737992/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 738855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-2	AES-MW2-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-3	AES-MW3-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-4	AES-MW4-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-5	AES-MW4-DUP-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-6	AES-MW5-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-7	AES-FB-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-8	AES-TW101-101723	Total/NA	Water	SM 4500 Cl- E	
500-241251-9	AES-TW102-101723	Total/NA	Water	SM 4500 Cl- E	
500-241251-10	AES-TW103-101723	Total/NA	Water	SM 4500 Cl- E	
500-241251-11	AES-TW105-101723	Total/NA	Water	SM 4500 Cl- E	

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QC Association Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

General Chemistry (Continued)

Analysis Batch: 738855 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-12	AES-TW106-101723	Total/NA	Water	SM 4500 Cl- E	
500-241251-13	AES-TW107-101723	Total/NA	Water	SM 4500 Cl- E	
500-241251-14	AES-TW108-101723	Total/NA	Water	SM 4500 Cl- E	
500-241251-15	AES-FB-101723	Total/NA	Water	SM 4500 Cl- E	
MB 500-738855/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
MB 500-738855/58	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-738855/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
LCS 500-738855/59	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-241251-2 MS	AES-MW2-101623	Total/NA	Water	SM 4500 Cl- E	
500-241251-2 MSD	AES-MW2-101623	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 739993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	SM 4500 F C	
500-241251-3	AES-MW3-101623	Total/NA	Water	SM 4500 F C	
500-241251-4	AES-MW4-101623	Total/NA	Water	SM 4500 F C	
500-241251-5	AES-MW4-DUP-101623	Total/NA	Water	SM 4500 F C	
500-241251-6	AES-MW5-101623	Total/NA	Water	SM 4500 F C	
500-241251-7	AES-FB-101623	Total/NA	Water	SM 4500 F C	
500-241251-8	AES-TW101-101723	Total/NA	Water	SM 4500 F C	
500-241251-9	AES-TW102-101723	Total/NA	Water	SM 4500 F C	
MB 500-739993/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-739993/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 740227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-2	AES-MW2-101623	Total/NA	Water	SM 4500 F C	
500-241251-10	AES-TW103-101723	Total/NA	Water	SM 4500 F C	
500-241251-11	AES-TW105-101723	Total/NA	Water	SM 4500 F C	
500-241251-12	AES-TW106-101723	Total/NA	Water	SM 4500 F C	
500-241251-13	AES-TW107-101723	Total/NA	Water	SM 4500 F C	
500-241251-14	AES-TW108-101723	Total/NA	Water	SM 4500 F C	
500-241251-15	AES-FB-101723	Total/NA	Water	SM 4500 F C	
MB 500-740227/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-740227/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-241251-2 MS	AES-MW2-101623	Total/NA	Water	SM 4500 F C	
500-241251-2 MSD	AES-MW2-101623	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 739924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-1	AES-MW1-101623	Total/NA	Water	Field Sampling	
500-241251-2	AES-MW2-101623	Total/NA	Water	Field Sampling	
500-241251-3	AES-MW3-101623	Total/NA	Water	Field Sampling	
500-241251-4	AES-MW4-101623	Total/NA	Water	Field Sampling	
500-241251-6	AES-MW5-101623	Total/NA	Water	Field Sampling	
500-241251-8	AES-TW101-101723	Total/NA	Water	Field Sampling	
500-241251-9	AES-TW102-101723	Total/NA	Water	Field Sampling	
500-241251-10	AES-TW103-101723	Total/NA	Water	Field Sampling	
500-241251-11	AES-TW105-101723	Total/NA	Water	Field Sampling	

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QC Association Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Field Service / Mobile Lab (Continued)

Analysis Batch: 739924 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241251-12	AES-TW106-101723	Total/NA	Water	Field Sampling	
500-241251-13	AES-TW107-101723	Total/NA	Water	Field Sampling	
500-241251-14	AES-TW108-101723	Total/NA	Water	Field Sampling	

QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-404386/3

Matrix: Water

Analysis Batch: 404386

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.42	U	1.0	0.42	mg/L			10/30/23 16:43	1

Lab Sample ID: LCS 310-404386/4

Matrix: Water

Analysis Batch: 404386

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

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	
Sulfate			10.0	10.2	mg/L	102	90 - 110	

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 404386

Client Sample ID: AES-MW2-101623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	
Sulfate	260		25.0	278	4	mg/L	84	80 - 120	

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 404386

Client Sample ID: AES-MW2-101623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	
Sulfate	260		25.0	277	4	mg/L	81	80 - 120	0 15

Lab Sample ID: MB 310-404667/3

Matrix: Water

Analysis Batch: 404667

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.42	U	1.0	0.42	mg/L			11/01/23 18:16	1

Lab Sample ID: LCS 310-404667/4

Matrix: Water

Analysis Batch: 404667

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

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	
Sulfate			10.0	10.4	mg/L	104	90 - 110	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-738370/1-A

Matrix: Water

Analysis Batch: 738917

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 738370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/23/23 08:57	10/25/23 18:17	1
Arsenic	0.000241	J	0.0010	0.00023	mg/L		10/23/23 08:57	10/25/23 18:17	1
Barium	0.00073	U	0.0025	0.00073	mg/L		10/23/23 08:57	10/25/23 18:17	1
Beryllium	0.00053	U ^+	0.0010	0.00053	mg/L		10/23/23 08:57	10/25/23 18:17	1
Boron	0.0396	J	0.050	0.013	mg/L		10/23/23 08:57	10/25/23 18:17	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/23/23 08:57	10/25/23 18:17	1

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QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

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

Lab Sample ID: MB 500-738370/1-A

Matrix: Water

Analysis Batch: 738917

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.044	U	0.20	0.044	mg/L		10/23/23 08:57	10/25/23 18:17	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/23/23 08:57	10/25/23 18:17	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		10/23/23 08:57	10/25/23 18:17	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/23/23 08:57	10/25/23 18:17	1
Lithium	0.0025	U ^+	0.010	0.0025	mg/L		10/23/23 08:57	10/25/23 18:17	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/23/23 08:57	10/25/23 18:17	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/23/23 08:57	10/25/23 18:17	1

Lab Sample ID: MB 500-738370/1-A

Matrix: Water

Analysis Batch: 739233

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/23/23 08:57	10/26/23 16:05	1

Lab Sample ID: MB 500-738370/1-A

Matrix: Water

Analysis Batch: 740085

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0025	U	0.010	0.0025	mg/L		10/23/23 08:57	11/01/23 19:57	1

Lab Sample ID: LCS 500-738370/2-A

Matrix: Water

Analysis Batch: 738917

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Spike Added	LCS			Unit	D	%Rec	
		Result	Qualifier	%Rec			Limits	
Antimony	0.500	0.514		103	mg/L		80 - 120	
Arsenic	0.100	0.0964		96	mg/L		80 - 120	
Barium	0.500	0.531		106	mg/L		80 - 120	
Beryllium	0.0500	0.0501	^+	100	mg/L		80 - 120	
Boron	1.00	1.07		107	mg/L		80 - 120	
Cadmium	0.0500	0.0516		103	mg/L		80 - 120	
Calcium	10.0	9.97		100	mg/L		80 - 120	
Chromium	0.200	0.211		105	mg/L		80 - 120	
Cobalt	0.500	0.518		104	mg/L		80 - 120	
Lead	0.100	0.105		105	mg/L		80 - 120	
Molybdenum	1.00	0.995		99	mg/L		80 - 120	
Selenium	0.100	0.103	^1-	103	mg/L		80 - 120	
Thallium	0.100	0.107		107	mg/L		80 - 120	

Lab Sample ID: LCS 500-738370/2-A

Matrix: Water

Analysis Batch: 739233

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Spike Added	LCS			Unit	D	%Rec	
		Result	Qualifier	%Rec			Limits	
Selenium	0.100	0.111		111	mg/L		80 - 120	

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QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

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

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 738917

Client Sample ID: AES-MW2-101623

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0013	U	0.500	0.526		mg/L		105	75 - 125
Arsenic	0.00089	J B	0.100	0.0990		mg/L		98	75 - 125
Barium	0.23		0.500	0.761		mg/L		106	75 - 125
Beryllium	0.00053	U ^+	0.0500	0.0444		mg/L		89	75 - 125
Boron	0.19	B	1.00	1.09		mg/L		90	75 - 125
Cadmium	0.00017	U	0.0500	0.0507		mg/L		101	75 - 125
Calcium	160		10.0	161	4	mg/L		-9	75 - 125
Chromium	0.0011	U	0.200	0.184		mg/L		92	75 - 125
Cobalt	0.00052	J	0.500	0.439		mg/L		88	75 - 125
Lead	0.00019	U	0.100	0.102		mg/L		102	75 - 125
Molybdenum	0.0025	U	1.00	1.02		mg/L		102	75 - 125
Thallium	0.00057	U	0.100	0.106		mg/L		106	75 - 125

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 739233

Client Sample ID: AES-MW2-101623

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Selenium	0.00098	U	0.100	0.113		mg/L		113	75 - 125

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 738917

Client Sample ID: AES-MW2-101623

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.0013	U	0.500	0.533		mg/L		107	75 - 125	1	20
Arsenic	0.00089	J B	0.100	0.101		mg/L		100	75 - 125	2	20
Barium	0.23		0.500	0.763		mg/L		106	75 - 125	0	20
Beryllium	0.00053	U ^+	0.0500	0.0477		mg/L		95	75 - 125	7	20
Boron	0.19	B	1.00	1.12		mg/L		93	75 - 125	3	20
Cadmium	0.00017	U	0.0500	0.0521		mg/L		104	75 - 125	3	20
Calcium	160		10.0	163	4	mg/L		10	75 - 125	1	20
Chromium	0.0011	U	0.200	0.182		mg/L		91	75 - 125	1	20
Cobalt	0.00052	J	0.500	0.439		mg/L		88	75 - 125	0	20
Lead	0.00019	U	0.100	0.103		mg/L		103	75 - 125	2	20
Molybdenum	0.0025	U	1.00	1.03		mg/L		103	75 - 125	2	20
Thallium	0.00057	U	0.100	0.104		mg/L		104	75 - 125	2	20

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 739233

Client Sample ID: AES-MW2-101623

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Selenium	0.00098	U	0.100	0.114		mg/L		114	75 - 125	1	20

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QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

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

Lab Sample ID: 500-241251-2 DU

Matrix: Water

Analysis Batch: 738917

Client Sample ID: AES-MW2-101623

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.0013	U	0.0013	U	mg/L		NC	20
Arsenic	0.00089	J B	0.000833	J	mg/L		7	20
Barium	0.23		0.229		mg/L		2	20
Beryllium	0.00053	U ^+	0.00053	U	mg/L		NC	20
Boron	0.19	B	0.192		mg/L		0.07	20
Cadmium	0.00017	U	0.00017	U	mg/L		NC	20
Calcium	160		162		mg/L		0	20
Chromium	0.0011	U	0.0011	U	mg/L		NC	20
Cobalt	0.00052	J	0.000523	J	mg/L		1	20
Lead	0.00019	U	0.00019	U	mg/L		NC	20
Lithium	0.0025	U ^+	0.0025	U ^+	mg/L		NC	20
Molybdenum	0.0025	U	0.0025	U	mg/L		NC	20
Thallium	0.00057	U	0.00057	U	mg/L		NC	20

Lab Sample ID: 500-241251-2 DU

Matrix: Water

Analysis Batch: 739233

Client Sample ID: AES-MW2-101623

Prep Type: Total Recoverable

Prep Batch: 738370

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Selenium	0.00098	U	0.00098	U	mg/L		NC	20

Lab Sample ID: MB 500-742180/1-A

Matrix: Water

Analysis Batch: 742360

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 742180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0011	U	0.0050	0.0011	mg/L		11/14/23 18:46	11/15/23 12:07	1

Lab Sample ID: LCS 500-742180/2-A

Matrix: Water

Analysis Batch: 742360

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 742180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chromium	0.200	0.192		mg/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-738974/12-A

Matrix: Water

Analysis Batch: 739992

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 738974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	U	0.000020	0.000079	mg/L		10/26/23 11:10	11/01/23 11:55	1

Lab Sample ID: LCS 500-738974/13-A

Matrix: Water

Analysis Batch: 739992

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 738974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00201	0.00184		mg/L		92	80 - 120

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QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 739992

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 738974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.000083	J F1	0.00100	0.000904		mg/L	82	75 - 125			

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 739992

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 738974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.000083	J F1	0.00100	0.000824	F1	mg/L	74	75 - 125		9	20

Lab Sample ID: 500-241251-2 DU

Matrix: Water

Analysis Batch: 739992

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 738974

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D		RPD	Limit
Mercury	0.000083	J F1		0.000079	U	mg/L			NC	20

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

Lab Sample ID: MB 500-737973/1

Matrix: Water

Analysis Batch: 737973

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	4.3	U		10	4.3	mg/L			10/19/23 16:47	1

Lab Sample ID: LCS 500-737973/2

Matrix: Water

Analysis Batch: 737973

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	244		mg/L	98	80 - 120	

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 737973

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1300		250	1600	4	mg/L	114	75 - 125	

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 737973

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Total Dissolved Solids	1300		250	1590	4	mg/L	110	75 - 125		1	20

Eurofins Chicago

QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

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

Lab Sample ID: 500-241251-1 DU

Matrix: Water

Analysis Batch: 737973

Client Sample ID: AES-MW1-101623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1700		1620		mg/L		3	5

Lab Sample ID: MB 500-737992/1

Matrix: Water

Analysis Batch: 737992

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	4.3	U	10	4.3	mg/L			10/19/23 18:21	1

Lab Sample ID: LCS 500-737992/2

Matrix: Water

Analysis Batch: 737992

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	250	248		mg/L		99	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-738855/16

Matrix: Water

Analysis Batch: 738855

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	2.0	1.0	mg/L			10/25/23 11:07	1

Lab Sample ID: MB 500-738855/58

Matrix: Water

Analysis Batch: 738855

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	2.0	1.0	mg/L			10/25/23 11:43	1

Lab Sample ID: LCS 500-738855/17

Matrix: Water

Analysis Batch: 738855

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	20.0	21.1		mg/L		106	85 - 115

Lab Sample ID: LCS 500-738855/59

Matrix: Water

Analysis Batch: 738855

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	20.0	20.5		mg/L		103	85 - 115

Eurofins Chicago

QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

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

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 738855

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Chloride	240	F1	400	244	F1	mg/L	2	75 - 125	

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 738855

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Chloride	240	F1	400	242	F1	mg/L	2	75 - 125		1	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-739993/3

Matrix: Water

Analysis Batch: 739993

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	0.056	U	0.10	0.056	mg/L			11/01/23 13:00	1

Lab Sample ID: LCS 500-739993/4

Matrix: Water

Analysis Batch: 739993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				
Fluoride	10.0	9.94		mg/L	99	90 - 119	

Lab Sample ID: MB 500-740227/3

Matrix: Water

Analysis Batch: 740227

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Fluoride	0.056	U	0.10	0.056	mg/L			11/02/23 10:13	1

Lab Sample ID: LCS 500-740227/4

Matrix: Water

Analysis Batch: 740227

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				
Fluoride	10.0	10.0		mg/L	100	90 - 119	

Lab Sample ID: 500-241251-2 MS

Matrix: Water

Analysis Batch: 740227

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Fluoride	0.66		5.00	5.54		mg/L	98	75 - 125	

Eurofins Chicago

QC Sample Results

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 500-241251-2 MSD

Matrix: Water

Analysis Batch: 740227

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.66		5.00	5.52		mg/L	97	75 - 125	0	20	

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW1-101623

Date Collected: 10/16/23 09:55

Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	404386	QTZ5	EET CF	10/30/23 20:17
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 18:25
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 16:19
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 11:58
Total/NA	Analysis	SM 2540C		1	737973	CLB	EET CHI	10/19/23 17:25
Total/NA	Analysis	SM 4500 Cl- E		20	738855	TR	EET CHI	10/25/23 11:29
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 14:32
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/16/23 09:55

Client Sample ID: AES-MW2-101623

Date Collected: 10/16/23 10:57

Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	404386	QTZ5	EET CF	10/30/23 20:55
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 18:29
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 16:22
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:00
Total/NA	Analysis	SM 2540C		1	737973	CLB	EET CHI	10/19/23 17:30
Total/NA	Analysis	SM 4500 Cl- E		20	738855	TR	EET CHI	10/25/23 12:44
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 10:24
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/16/23 10:57

Client Sample ID: AES-MW3-101623

Date Collected: 10/16/23 12:20

Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		50	404386	QTZ5	EET CF	10/30/23 21:32
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 18:58
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 16:40
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:11
Total/NA	Analysis	SM 2540C		1	737973	CLB	EET CHI	10/19/23 17:38
Total/NA	Analysis	SM 4500 Cl- E		100	738855	TR	EET CHI	10/25/23 12:38

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW3-101623

Lab Sample ID: 500-241251-3

Matrix: Water

Date Collected: 10/16/23 12:20

Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 14:36
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/16/23 12:20

Client Sample ID: AES-MW4-101623

Lab Sample ID: 500-241251-4

Matrix: Water

Date Collected: 10/16/23 14:25

Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404386	QTZ5	EET CF	10/30/23 21:45
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 1
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:02
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 1
Total Recoverable	Analysis	6020B		1	740085	BJH	EET CHI	11/01/23 20:04
Total Recoverable	Prep	3005A			742180	MC	EET CHI	11/14/23 18:46 - 11/14/23 23:46 1
Total Recoverable	Analysis	6020B		1	742360	BJH	EET CHI	11/15/23 12:14
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 1
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 16:43
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 1
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:13
Total/NA	Analysis	SM 2540C		1	737973	CLB	EET CHI	10/19/23 17:41
Total/NA	Analysis	SM 4500 Cl- E		100	738855	TR	EET CHI	10/25/23 12:38
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 14:40
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/16/23 14:25

Client Sample ID: AES-MW4-DUP-101623

Lab Sample ID: 500-241251-5

Matrix: Water

Date Collected: 10/16/23 14:58

Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404386	QTZ5	EET CF	10/30/23 21:58
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 1
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:06
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 1
Total Recoverable	Analysis	6020B		1	740085	BJH	EET CHI	11/01/23 20:09
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 1
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 16:47
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 1
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:15
Total/NA	Analysis	SM 2540C		1	737973	CLB	EET CHI	10/19/23 17:43
Total/NA	Analysis	SM 4500 Cl- E		100	738855	TR	EET CHI	10/25/23 12:39
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 14:45

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-MW5-101623

Date Collected: 10/16/23 15:32

Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404386	QTZ5	EET CF	10/30/23 22:10
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:11
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 16:50
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:16
Total/NA	Analysis	SM 2540C		1	737973	CLB	EET CHI	10/19/23 17:46
Total/NA	Analysis	SM 4500 Cl- E		100	738855	TR	EET CHI	10/25/23 12:39
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 14:59
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/16/23 15:32

Client Sample ID: AES-FB-101623

Date Collected: 10/16/23 15:35

Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	404386	QTZ5	EET CF	10/30/23 22:23
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:15
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:01
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:18
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:26
Total/NA	Analysis	SM 4500 Cl- E		1	738855	TR	EET CHI	10/25/23 11:44
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 15:04

Client Sample ID: AES-TW101-101723

Date Collected: 10/17/23 10:01

Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		50	404667	QTZ5	EET CF	11/02/23 09:44
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:19
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:04
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:20
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:28
Total/NA	Analysis	SM 4500 Cl- E		100	738855	TR	EET CHI	10/25/23 12:39
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 15:10

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW101-101723

Lab Sample ID: 500-241251-8

Matrix: Water

Date Collected: 10/17/23 10:01
Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 10:01

Client Sample ID: AES-TW102-101723

Lab Sample ID: 500-241251-9

Matrix: Water

Date Collected: 10/17/23 10:50
Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404667	QTZ5	EET CF	11/02/23 09:57
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:23
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	740085	BJH	EET CHI	11/01/23 20:12
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:08
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:22
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:31
Total/NA	Analysis	SM 4500 Cl- E		100	738855	TR	EET CHI	10/25/23 12:40
Total/NA	Analysis	SM 4500 F C		1	739993	SO	EET CHI	11/01/23 15:14
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 10:50

Client Sample ID: AES-TW103-101723

Lab Sample ID: 500-241251-10

Matrix: Water

Date Collected: 10/17/23 11:42
Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404667	QTZ5	EET CF	11/02/23 10:09
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:35
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:11
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:44
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:33
Total/NA	Analysis	SM 4500 Cl- E		400	738855	TR	EET CHI	10/25/23 13:06
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 10:37
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 11:42

Client Sample ID: AES-TW105-101723

Lab Sample ID: 500-241251-11

Matrix: Water

Date Collected: 10/17/23 12:58
Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404667	QTZ5	EET CF	11/02/23 10:22

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW105-101723

Lab Sample ID: 500-241251-11

Matrix: Water

Date Collected: 10/17/23 12:58

Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:39
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:14
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:46
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:36
Total/NA	Analysis	SM 4500 Cl- E		300	738855	TR	EET CHI	10/25/23 13:06
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 10:41
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 12:58

Client Sample ID: AES-TW106-101723

Lab Sample ID: 500-241251-12

Matrix: Water

Date Collected: 10/17/23 14:40

Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404667	QTZ5	EET CF	11/02/23 10:34
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:44
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:18
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:46
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:39
Total/NA	Analysis	SM 4500 Cl- E		400	738855	TR	EET CHI	10/25/23 13:05
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 10:45
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 14:40

Client Sample ID: AES-TW107-101723

Lab Sample ID: 500-241251-13

Matrix: Water

Date Collected: 10/17/23 15:58

Date Received: 10/19/23 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404667	QTZ5	EET CF	11/02/23 10:47
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:48
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:21
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:51
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:41
Total/NA	Analysis	SM 4500 Cl- E		300	738855	TR	EET CHI	10/25/23 13:05
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 10:50

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Client Sample ID: AES-TW107-101723

Date Collected: 10/17/23 15:58
Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 15:58

Client Sample ID: AES-TW108-101723

Date Collected: 10/17/23 16:49
Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	404667	QTZ5	EET CF	11/02/23 11:00
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:52
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:25
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:53
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:44
Total/NA	Analysis	SM 4500 Cl- E		400	738855	TR	EET CHI	10/25/23 13:04
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 10:54
Total/NA	Analysis	Field Sampling		1	739924	DN	EET CHI	10/17/23 16:49

Client Sample ID: AES-FB-101723

Date Collected: 10/17/23 17:00
Date Received: 10/19/23 08:10

Lab Sample ID: 500-241251-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	404667	QTZ5	EET CF	11/02/23 11:12
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	738917	BJH	EET CHI	10/25/23 19:56
Total Recoverable	Prep	3005A			738370	BDE	EET CHI	10/23/23 08:57 - 10/23/23 09:27 ¹
Total Recoverable	Analysis	6020B		1	739233	BJH	EET CHI	10/26/23 17:28
Total/NA	Prep	7470A			738974	SS	EET CHI	10/26/23 11:10 - 10/26/23 13:10 ¹
Total/NA	Analysis	7470A		1	739992	MJG	EET CHI	11/01/23 12:55
Total/NA	Analysis	SM 2540C		1	737992	CLB	EET CHI	10/19/23 18:46
Total/NA	Analysis	SM 4500 Cl- E		1	738855	TR	EET CHI	10/25/23 11:45
Total/NA	Analysis	SM 4500 F C		1	740227	SO	EET CHI	11/02/23 11:09

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

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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

Eurofins Chicago

Accreditation/Certification Summary

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring

Job ID: 500-241251-1
SDG: AES Puerto Rico, LP

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2903	04-29-24
Georgia	State	N/A	04-29-24
Georgia (DW)	State	939	04-29-24
Hawaii	State	NA	04-29-24
Illinois	NELAP	IL00035	04-29-24
Indiana	State	C-IL-02	04-29-24
Iowa	State	082	05-01-24
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	04-29-24
Kentucky (WW)	State	KY90023	12-31-23
Louisiana (All)	NELAP	02046	06-30-23 *
Mississippi	State	NA	04-29-24
North Carolina (WW/SW)	State	291	12-31-23
North Dakota	State	R-194	04-29-24
South Carolina	State	77001003	04-29-24
USDA	US Federal Programs	P330-18-00018	02-11-24
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	04-29-24

Laboratory: Eurofins Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	11-15-23
Georgia	State	IA100001 (OR)	11-15-23
Illinois	NELAP	200024	11-19-23
Iowa	State	007	11-15-23
Kansas	NELAP	E-10341	01-31-24
Minnesota	NELAP	019-999-319	12-31-23
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-24
Oregon	NELAP	IA100001	11-15-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record

Client Information		Sampler Vicente Perez / Rafael Diaz		Lab PM McCutcheon, Carlene		Carrier Tracking No(s)		COC No:					
Client Contact: Alberto Melendez		Phone: (787) 209-6386		E-Mail Carlene.McCutcheon@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 2					
Company: DNA-Environment, LLC		PWSID		Analysis Requested									
Address 35 Calle Juan C Borbon STE 67-227		Due Date Requested											
City Guaynabo		TAT Requested (days) 10 Days (Regular TAT)											
State, Zip: PR, 00969-5375		Compliance Project <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
Phone: 787-209-6386		PO #: 500-241251 COC											
Email alberto.melendez@dnainv.com		WO #:											
Project Name: CCR Groundwater Monitoring		Project #:											
Site: AES Puerto Rico LP, Guayama, Puerto Rico		SSOW#:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=tissue, A=air)	Preservation Code.	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500 Cl_E-Chloride, Field pH, 9056A-Sulfate, SM4500_F_C-Fluoride, SM2540C-TDS	6020B - Total Metals, 7470A-Total Mercury	Total Number of containers	Special Instructions/Note:	
AES-MW1-101623		10/16/23	0955	G	Water	N	X	X			2	pH = 6.93	
AES-MW2-101623		10/16/23	1057	G	Water	N	X	X			2	pH = 6.69	
AES-MW2-101623 MS		10/16/23	1122	G	Water	N	Y	X	X		2	---	
AES-MW2-101623 MSD		10/16/23	1146	G	Water	N	Y	X	X		2	---	
AES-MW3-101623		10/16/23	1220	G	Water	N	X	X			2	pH = 6.82	
AES-MW4-101623		10/16/23	1425	G	Water	N	X	X			2	pH = 7.20	
AES-MW4-DUP-101623		10/16/23	1458	G	Water	N	X	X			2	---	
AES-MW5-101623		10/16/23	1532	G	Water	N	X	X			2	pH = 6.58	
AES-FB-101623		10/16/23	1535	G	Water	N	X	X			2	---	
												Note pH = Field pH Measurement	
Possible Hazard Identification <input checked="" 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						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months							
Deliverable Requested: I, II, III, IV, Other (specify): Level IV						Special Instructions/QC Requirements							
Empty Kit Relinquished by		Date		Time		Method of Shipment:							
Relinquished by:		Date/Time: 10-18-2023 / 13.00		Company DNA		Received by <i>John - Root</i>		Date/Time: 10/19/23		Company EPTA			
Relinquished by:		Date/Time:		Company		Received by		Date/Time:		Company			
Relinquished by		Date/Time:		Company		Received by		Date/Time:		Company			
Custody Seals Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks. <i>26 → 24, 28 → 26</i>									

Chain of Custody Record

Client Information		Sampler Vlcente Perez / Rafael Diaz		Lab PM McCutcheon, Carlene		Carrier Tracking No(s)		COC No:			
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Puerto Rico		Page: Page 2 of 2	Job #: 508-241251					
Company: DNA-Environment, LLC		PWSID	Analysis Requested								
Address: 35 Calle Juan C Borbon STE 67-227		Due Date Requested									
City Guaynabo		TAT Requested (days) 10 Days (Regular TAT)									
State, Zip: PR, 00969-5375		Compliance Project <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Phone: 787-209-6386		PO #:									
Email: alberto.melendez@dnainv.com		WO #:									
Project Name: CCR Groundwater Monitoring		Project #:									
Site: AES Puerto Rico LP, Guayama, Puerto Rico		SSOW#:									
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500, Cl_E-Chloride, Field pH, 9056A-Sulfate, SM2540C-TDS	6020B - Total Metals, 7470A-Total Mercury	Total Number of containers	
						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	D			
AES-TW101-101723		10/17/23	1001	G	Water	N	X	X		2	pH = 6.64
AES-TW102-101723		10/17/23	1050	G	Water	N	X	X		2	pH = 6.76
AES-TW103-101723		10/17/23	1142	G	Water	N	X	X		2	pH = 6.77
AES-TW105-101723		10/17/23	1258	G	Water	N	X	X		2	pH = 6.66
AES-TW106-101723		10/17/23	1440	G	Water	N	X	X		2	pH = 6.71
AES-TW107-101723		10/17/23	1558	G	Water	N	X	X		2	pH = 6.71
AES-TW108-101723		10/17/23	1649	G	Water	N	X	X		2	pH = 6.50
AES-FB-101723		10/17/23	1700	G	Water	N	X	X		2	---
											Note pH = Field pH Measurement
Possible Hazard Identification <input checked="" 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						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested I, II, III, IV, Other (specify): Level IV						Special Instructions/QC Requirements					
Empty Kit Relinquished by		Date		Time		Method of Shipment:					
Relinquished by		Date/Time: 10-18-2023 / 13:00		Company DNA		Received by <i>John Rosta</i>		Date/Time: 10/19/23 08:10		Company ETD	
Relinquished by		Date/Time:		Company		Received by:		Date/Time:		Company	
Relinquished by		Date/Time:		Company		Received by:		Date/Time:		Company	
Custody Seals Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No				Cooler Temperature(s) °C and Other Remarks <i>26 → 24, 28 → 26</i>					

1
EUROFINS ENVIRONMENT TESTING NC
343 W. Main
Leola, PA 17540
330-966-9263

2
EUROFINS ENVIRO TESTING NC

3
Date: 11/21/2023 11:19:22 AM

4
CREDIT CARD SALE

5
VISA

6
CARD NUMBER: **** * * * * 9516 F

7
TOTAL AMOUNT: \$4,017.00

8
APPROVAL CD: 750138

9
RECORD #: 000

10
CLERK ID: JHEALY

11
INVOICE #: 500-241251-1

X _____
12 Alberto Melendez

13 I AGREE TO PAY THE ABOVE TOTAL AMOUNT
ACCORDING TO THE CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)

14 Merchant Copy

11/21/23, 10:19 AM

Receipt

1
EUROFINS ENVIRONMENT TESTING NC
343 W. Main
Leola, PA 17540
330-966-9263

2
EUROFINS ENVIRO TESTING NC

3
Date: 11/21/2023 11:19:22 AM

4
CREDIT CARD SALE

5
VISA

6
CARD NUMBER: ****9516 F

7
TOTAL AMOUNT: \$4,017.00

8
APPROVAL CD: 750138

9
RECORD #: 000

9
CLERK ID: JHEALY

10
INVOICE #: 500-241251-1

11
Customer Copy

1
2
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8
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14

DNH CITY, JUAN C. BORBON
35 CALLE JUAN C. BORBON
STE 67-227
GUAYNABO, PR 00969
UNITED STATES US

BILL CREDIT CARD
NO EET 30.37(N)

7439743559188682 EXPIRE 01/24

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TEST
2417 BOND STREET



UNIVERSITY PARK IL 60484

(708) 534-5200

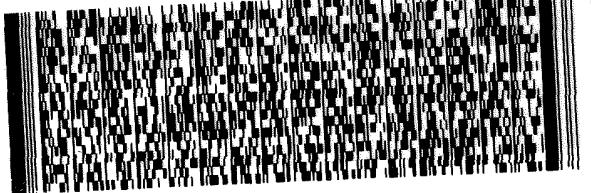
REF:

TNU:

PO#:

DEPT:

500-241251 Waybill US)



REL#

THU - 19 OCT 8:30A

INTL FIRST
NSR AHS
60484
IL-US ORD

1 of 2

TRK# 7852 1877 6890
0430

MASTER

X1 JOTA



FedEx First Overnight®

151969 REV 3/21

ORIGIN DHL
ALBERTO MELENDEZ
DNA-ENVIRONMENT, LLC
35 CALLE JUAN C. BORBON
STE 67-227
GUAYNABO, PR 00969
UNITED STATES US

LNU: DIMS: 24x14x14 IN
BILL CREDIT CARD

1629743559188682 EXPIRE 01/24

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

(708) 534-5200

TNU:

PO#:

REF:

DEPT:



REL#

THU - 19 OCT 8:30A

INTL FIRST
NSR AHS
60484
IL-US ORD

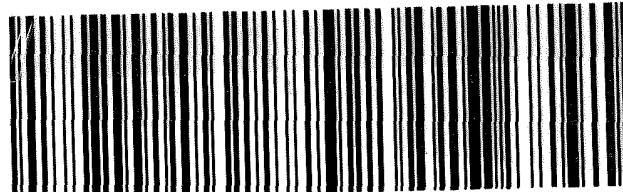
2 of 2

MPS# 7852 1877 6904
0441

Mstr# 7852 1877 6890

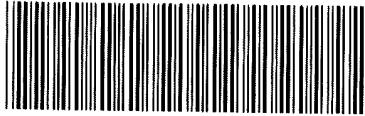
O/

X1 JOTA





Environment Testing
America



500-241251 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: Chicago			
City/State:	CITY	STATE	Project:
Received: 10-21-23 845 Received By: mc			
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx SAT <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other:			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID:			
Multiple Coolers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Cooler # ____ of ____			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: R Correction Factor (°C): 0			
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): 0.1 05 Corrected Temp (°C): 0.1 05			
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

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 (Sub Contract Lab)		Sampler	Lab PM McCUTCHEON Carlene	Carrier Tracking No(s): COC No: 500-180512.1																																																																											
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofins.com	State of Origin: Puerto Rico	Page: 1 of 2																																																																											
Company: Eurofins Environment Testing North Centr	Address: 3019 Venture Way City: Cedar Falls State Zip: IA 50613 Phone: 319-277-2401(Tel) 319-277-2425(Fax) Email: Project Name: CCR GW Monitoring Site: SSOW#:	Accreditations Required (See note): 500-241251-1	Job #: 500-241251-1	Preservation Codes: M - Hexane N - None B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH S - H2SO4 G - Anchior H - Ascorbic Acid I - Ice U - Acetone V - MCA W - pH 4-5 Y - EDTA L - EDA Z - other (specify) Other																																																																											
<table border="1"> <thead> <tr> <th colspan="2">Analysis Requested</th> <th colspan="2">Total Number of containers</th> <th>Special Instructions/Note:</th> </tr> </thead> <tbody> <tr> <td colspan="2"></td> <td colspan="2"></td> <td>9056A - OGF/M-28D/ (MxD) Any single action</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td>Perform MS/MSD (yes or No)</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td>Field Filtered Sample (yes or No)</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td>Preservation Code: <input checked="" type="checkbox"/> X</td> </tr> <tr> <td colspan="2">Sample Identification - Client ID (Lab ID)</td> <td>Sample Date</td> <td>Sample Time</td> <td>Matrix (Water Solid, Oil/Fat/oil, Organic, Acidic, Acid)</td> </tr> <tr> <td colspan="2">AES-MW1-101623 (500-241251-1)</td> <td>10/16/23</td> <td>09:55</td> <td>Water X</td> </tr> <tr> <td colspan="2">AES-MW2-101623 (500-241251-2)</td> <td>10/16/23</td> <td>10:57</td> <td>Water X</td> </tr> <tr> <td colspan="2">AES-MW2-101623 (500-241251-2MS)</td> <td>10/16/23</td> <td>10:57</td> <td>MS Water X</td> </tr> <tr> <td colspan="2">AES-MW2-101623 (500-241251-2MSD)</td> <td>10/16/23</td> <td>10:57</td> <td>MSD Water X</td> </tr> <tr> <td colspan="2">AES-MW3-101623 (500-241251-3)</td> <td>10/16/23</td> <td>12:20</td> <td>Water X</td> </tr> <tr> <td colspan="2">AES-MW4-101623 (500-241251-4)</td> <td>10/16/23</td> <td>14:25</td> <td>Water X</td> </tr> <tr> <td colspan="2">AES-MW4-DUP-101623 (500-241251-5)</td> <td>10/16/23</td> <td>14:58</td> <td>Water X</td> </tr> <tr> <td colspan="2">AES-MW5-101623 (500-241251-6)</td> <td>10/16/23</td> <td>15:32</td> <td>Water X</td> </tr> <tr> <td colspan="2">AES-FB-101623 (500-241251-7)</td> <td>10/16/23</td> <td>15:35</td> <td>Water X</td> </tr> </tbody> </table>					Analysis Requested		Total Number of containers		Special Instructions/Note:					9056A - OGF/M-28D/ (MxD) Any single action					Perform MS/MSD (yes or No)					Field Filtered Sample (yes or No)					Preservation Code: <input checked="" type="checkbox"/> X	Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Matrix (Water Solid, Oil/Fat/oil, Organic, Acidic, Acid)	AES-MW1-101623 (500-241251-1)		10/16/23	09:55	Water X	AES-MW2-101623 (500-241251-2)		10/16/23	10:57	Water X	AES-MW2-101623 (500-241251-2MS)		10/16/23	10:57	MS Water X	AES-MW2-101623 (500-241251-2MSD)		10/16/23	10:57	MSD Water X	AES-MW3-101623 (500-241251-3)		10/16/23	12:20	Water X	AES-MW4-101623 (500-241251-4)		10/16/23	14:25	Water X	AES-MW4-DUP-101623 (500-241251-5)		10/16/23	14:58	Water X	AES-MW5-101623 (500-241251-6)		10/16/23	15:32	Water X	AES-FB-101623 (500-241251-7)		10/16/23	15:35	Water X
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<p>Note: Since laboratory accreditations are subject to change Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/ matrix being analyzed the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Chicago</p>																																																																															
<p>Possible Hazard Identification</p> <p>Unconfirmed</p> <p>Deliverable Requested I II III IV Other (specify)</p> <p>Empty Kit Relinquished by: <i>John Woods</i></p> <p>Relinquished by:</p> <p>Relinquished by:</p> <p>Custody Seals Intact: <input checked="" type="checkbox"/> Custody Seal No △ Yes △ No</p>																																																																															
<p>Primary Deliverable Rank: 2</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months</p> <p>Special Instructions/QC Requirements:</p> <p>Date/Time: <i>10/16/23</i> Date/Time: <i>10/21/23</i> Date/Time: <i>8:15</i></p> <p>Received by: <i>M</i></p> <p>Received by: <i>M</i></p> <p>Received by: <i>M</i></p> <p>Method of Shipment:</p> <p>Cooler Temperature(s) °C and Other Remarks:</p>																																																																															

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Chain of Custody Record

Note: Since laboratory accreditations are subject to change Eurofins Chicago places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification

Unconfirmed

בכינור אדריכלי (טכני) ורשמי

Empty Kit Relinquished by

Golmankhaneh et al.

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Published by

עמ' נסיך וויליאם

Beinguished by:

600 *Journal of Health Politics*

Custody Seals intact: Custody Seal No: _____

✓ Yes □ No

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Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-241251-1
SDG Number: AES Puerto Rico, LP

Login Number: 241251

List Source: Eurofins Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		6
The cooler's custody seal, if present, is intact.	True		7
Sample custody seals, if present, are intact.	True		8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	True		10
Cooler Temperature is acceptable.	True		11
Cooler Temperature is recorded.	True	2.4,2.6	12
COC is present.	True		13
COC is filled out in ink and legible.	True		14
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: DNA-Environment LLC

Job Number: 500-241251-1
SDG Number: AES Puerto Rico, LP

Login Number: 241251
List Number: 2
Creator: Costello, Mackenzie K

List Source: Eurofins Cedar Falls
List Creation: 10/21/23 11:12 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
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	
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?	False	Received project as a subcontract.
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Alberto Melendez
DNA-Environment LLC
35 Calle Juan C Borbon
Guaynabo, Puerto Rico 00969-5735

Generated 11/27/2023 11:47:13 AM

JOB DESCRIPTION

CCR GW Monitoring, AES Puerto Rico, LP

JOB NUMBER

500-241265-1

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
11/27/2023 11:47:13 AM

Authorized for release by
Shawn Hayes, Senior Project Manager
Shawn.Hayes@et.eurofinsus.com
(708)534-5200

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Case Narrative

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-241265-1

Laboratory: Eurofins Chicago

Narrative

**Job Narrative
500-241265-1**

Receipt

The samples were received on 10/19/2023 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice.

RAD

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: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-241265-1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	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:

None = None

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

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: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-241265-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
500-241265-1	AES-MW1-101623	Water	10/16/23 09:55	10/19/23 09:35	1
500-241265-2	AES-MW2-101623	Water	10/16/23 10:57	10/19/23 09:35	2
500-241265-3	AES-MW3-101623	Water	10/16/23 12:20	10/19/23 09:35	3
500-241265-4	AES-MW4-101623	Water	10/16/23 14:25	10/19/23 09:35	4
500-241265-5	AES-MW4-DUP-101623	Water	10/16/23 14:58	10/19/23 09:35	5
500-241265-6	AES-MW5-101623	Water	10/16/23 15:32	10/19/23 09:35	6
500-241265-7	AES-FB-101623	Water	10/16/23 15:35	10/19/23 09:35	7
500-241265-8	AES-TW101-101723	Water	10/17/23 10:01	10/19/23 09:35	8
500-241265-9	AES-TW102-101723	Water	10/17/23 10:50	10/19/23 09:35	9
500-241265-10	AES-TW103-101723	Water	10/17/23 11:42	10/19/23 09:35	10
500-241265-11	AES-TW105-101723	Water	10/17/23 12:58	10/19/23 09:35	11
500-241265-12	AES-TW106-101723	Water	10/17/23 14:40	10/19/23 09:35	12
500-241265-13	AES-TW107-101723	Water	10/17/23 15:58	10/19/23 09:35	13
500-241265-14	AES-TW108-101723	Water	10/17/23 16:49	10/19/23 09:35	14
500-241265-15	AES-FB-101723	Water	10/17/23 17:00	10/19/23 09:35	

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101623

Lab Sample ID: 500-241265-1

Matrix: Water

Date Collected: 10/16/23 09:55

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	-0.0208	U	0.0436	0.0436	1.00	0.109	pCi/L	10/23/23 11:10	11/22/23 09:28	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.2		30 - 110					10/23/23 11:10	11/22/23 09:28	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.0306	U	0.289	0.289	1.00	0.534	pCi/L	10/23/23 11:13	11/16/23 16:11	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.2		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	82.6		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.00974	U	0.292	0.292	5.00	0.534	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW2-101623

Lab Sample ID: 500-241265-2

Date Collected: 10/16/23 10:57

Matrix: Water

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.00182	U	0.0830	0.0830	1.00	0.163	pCi/L	10/23/23 11:10	11/22/23 09:28	1
Carrier										
Ba Carrier	96.0	Qualifier	Limits							
			30 - 110							

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.245	U	0.343	0.344	1.00	0.576	pCi/L	10/23/23 11:13	11/16/23 16:11	1
Carrier										
Ba Carrier	96.0	Qualifier	Limits							
			30 - 110							
Y Carrier	84.9	Qualifier	Limits							
			30 - 110							

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.247	U	0.353	0.354	5.00	0.576	pCi/L	11/22/23 21:51		1

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-101623

Lab Sample ID: 500-241265-3

Date Collected: 10/16/23 12:20

Matrix: Water

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.227		0.106	0.108	1.00	0.131	pCi/L	10/23/23 11:10	11/22/23 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		30 - 110					10/23/23 11:10	11/22/23 11:55	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	1.08		0.417	0.429	1.00	0.534	pCi/L	10/23/23 11:13	11/16/23 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	80.4		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	1.31		0.430	0.442	5.00	0.534	pCi/L	11/22/23 21:51		1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-101623

Lab Sample ID: 500-241265-4

Matrix: Water

Date Collected: 10/16/23 14:25

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0513	U	0.0790	0.0791	1.00	0.136	pCi/L	10/23/23 11:10	11/22/23 15:41	1
Carrier										
Ba Carrier	83.1	Qualifer	Limits							
			30 - 110							

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.419	U	0.372	0.374	1.00	0.586	pCi/L	10/23/23 11:13	11/16/23 16:11	1
Carrier										
Ba Carrier	83.1	Qualifer	Limits							
			30 - 110							
Y Carrier	85.6	Qualifer	Limits							
			30 - 110							

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.471	U	0.380	0.382	5.00	0.586	pCi/L	11/22/23 21:51		1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101623

Lab Sample ID: 500-241265-5

Matrix: Water

Date Collected: 10/16/23 14:58

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0650	U	0.0739	0.0741	1.00	0.120	pCi/L	10/23/23 11:10	11/22/23 11:55	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.7		30 - 110					10/23/23 11:10	11/22/23 11:55	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.148	U	0.291	0.291	1.00	0.506	pCi/L	10/23/23 11:13	11/16/23 16:11	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.7		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	81.5		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.213	U	0.300	0.300	5.00	0.506	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-101623

Lab Sample ID: 500-241265-6

Matrix: Water

Date Collected: 10/16/23 15:32

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	-0.0128	U	0.0571	0.0571	1.00	0.122	pCi/L	10/23/23 11:10	11/22/23 11:55	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	96.2		30 - 110					10/23/23 11:10	11/22/23 11:55	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.487	U	0.332	0.335	1.00	0.492	pCi/L	10/23/23 11:13	11/16/23 16:11	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	96.2		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	86.4		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.474	U	0.337	0.340	5.00	0.492	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-101623

Lab Sample ID: 500-241265-7

Matrix: Water

Date Collected: 10/16/23 15:35

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.00157	U	0.0545	0.0545	1.00	0.112	pCi/L	10/23/23 11:10	11/22/23 11:55	1
Carrier										
Ba Carrier	%Yield	Qualifier	Limits		100	0.112	pCi/L	Prepared	Analyzed	Dil Fac
			30 - 110							

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac					
			Uncert. (2σ+/-)	Uncert. (2σ+/-)											
Radium-228	0.256	U	0.341	0.342	1.00	0.569	pCi/L	10/23/23 11:13	11/16/23 16:11	1					
Carrier															
Ba Carrier	%Yield	Qualifier	Limits		100	0.569	pCi/L	Prepared	Analyzed	Dil Fac					
			30 - 110												
Y Carrier			30 - 110												

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.258	U	0.345	0.346	5.00	0.569	pCi/L	11/22/23 21:51		1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW101-101723

Lab Sample ID: 500-241265-8

Date Collected: 10/17/23 10:01

Matrix: Water

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0633	U	0.0687	0.0690	1.00	0.109	pCi/L	10/23/23 11:10	11/22/23 11:55	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	93.7		30 - 110					10/23/23 11:10	11/22/23 11:55	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.687		0.376	0.381	1.00	0.529	pCi/L	10/23/23 11:13	11/16/23 16:11	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	93.7		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	84.5		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.750		0.382	0.387	5.00	0.529	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW102-101723

Lab Sample ID: 500-241265-9

Matrix: Water

Date Collected: 10/17/23 10:50

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.158		0.104	0.105	1.00	0.148	pCi/L	10/23/23 11:10	11/22/23 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		30 - 110					10/23/23 11:10	11/22/23 11:55	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.168	U	0.377	0.377	1.00	0.653	pCi/L	10/23/23 11:13	11/16/23 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	85.6		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.326	U	0.391	0.391	5.00	0.653	pCi/L	11/22/23 21:51		1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW103-101723

Lab Sample ID: 500-241265-10

Matrix: Water

Date Collected: 10/17/23 11:42

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0800	U	0.0831	0.0834	1.00	0.132	pCi/L	10/23/23 11:10	11/22/23 11:54	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	93.2		30 - 110					10/23/23 11:10	11/22/23 11:54	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.213	U	0.322	0.322	1.00	0.546	pCi/L	10/23/23 11:13	11/16/23 16:11	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	93.2		30 - 110					10/23/23 11:13	11/16/23 16:11	1
Y Carrier	79.6		30 - 110					10/23/23 11:13	11/16/23 16:11	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.293	U	0.333	0.333	5.00	0.546	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW105-101723

Lab Sample ID: 500-241265-11

Matrix: Water

Date Collected: 10/17/23 12:58

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0720	U	0.0966	0.0968	1.00	0.162	pCi/L	10/23/23 11:10	11/22/23 11:54	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	98.0		30 - 110					10/23/23 11:10	11/22/23 11:54	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.122	U	0.468	0.468	1.00	0.829	pCi/L	10/23/23 11:13	11/16/23 16:12	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	98.0		30 - 110					10/23/23 11:13	11/16/23 16:12	1
Y Carrier	86.0		30 - 110					10/23/23 11:13	11/16/23 16:12	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.194	U	0.478	0.478	5.00	0.829	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW106-101723

Lab Sample ID: 500-241265-12

Matrix: Water

Date Collected: 10/17/23 14:40

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.116	U	0.0971	0.0977	1.00	0.142	pCi/L	10/23/23 11:10	11/22/23 12:21	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.0		30 - 110					10/23/23 11:10	11/22/23 12:21	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.579	U	0.427	0.431	1.00	0.649	pCi/L	10/23/23 11:13	11/16/23 16:10	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.0		30 - 110					10/23/23 11:13	11/16/23 16:10	1
Y Carrier	85.2		30 - 110					10/23/23 11:13	11/16/23 16:10	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.694		0.438	0.442	5.00	0.649	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW107-101723

Lab Sample ID: 500-241265-13

Matrix: Water

Date Collected: 10/17/23 15:58

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.153		0.108	0.109	1.00	0.148	pCi/L	10/23/23 11:10	11/22/23 12:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		30 - 110					10/23/23 11:10	11/22/23 12:21	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.181	U	0.354	0.354	1.00	0.713	pCi/L	10/23/23 11:13	11/16/23 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		30 - 110					10/23/23 11:13	11/16/23 16:10	1
Y Carrier	90.1		30 - 110					10/23/23 11:13	11/16/23 16:10	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	-0.0280	U	0.370	0.370	5.00	0.713	pCi/L	11/22/23 21:51		1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW108-101723

Lab Sample ID: 500-241265-14

Matrix: Water

Date Collected: 10/17/23 16:49

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0449	U	0.0817	0.0818	1.00	0.146	pCi/L	10/23/23 11:10	11/22/23 12:21	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	94.7		30 - 110					10/23/23 11:10	11/22/23 12:21	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.491	U	0.420	0.422	1.00	0.652	pCi/L	10/23/23 11:13	11/16/23 16:10	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	94.7		30 - 110					10/23/23 11:13	11/16/23 16:10	1
Y Carrier	83.4		30 - 110					10/23/23 11:13	11/16/23 16:10	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	0.536	U	0.428	0.430	5.00	0.652	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Client Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-101723

Lab Sample ID: 500-241265-15

Matrix: Water

Date Collected: 10/17/23 17:00

Date Received: 10/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	-0.00400	U	0.0445	0.0445	1.00	0.0996	pCi/L	10/23/23 11:10	11/22/23 12:22	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	96.7		30 - 110					10/23/23 11:10	11/22/23 12:22	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	-0.0478	U	0.277	0.277	1.00	0.529	pCi/L	10/23/23 11:13	11/16/23 16:10	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	96.7		30 - 110					10/23/23 11:13	11/16/23 16:10	1
Y Carrier	87.1		30 - 110					10/23/23 11:13	11/16/23 16:10	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Combined Radium 226 + 228	-0.0518	U	0.281	0.281	5.00	0.529	pCi/L		11/22/23 21:51	1

Eurofins Chicago

Definitions/Glossary

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

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.

¤	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

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QC Association Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-241265-1

Rad

Prep Batch: 632939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241265-1	AES-MW1-101623	Total/NA	Water	PrecSep-21	
500-241265-2	AES-MW2-101623	Total/NA	Water	PrecSep-21	
500-241265-3	AES-MW3-101623	Total/NA	Water	PrecSep-21	
500-241265-4	AES-MW4-101623	Total/NA	Water	PrecSep-21	
500-241265-5	AES-MW4-DUP-101623	Total/NA	Water	PrecSep-21	
500-241265-6	AES-MW5-101623	Total/NA	Water	PrecSep-21	
500-241265-7	AES-FB-101623	Total/NA	Water	PrecSep-21	
500-241265-8	AES-TW101-101723	Total/NA	Water	PrecSep-21	
500-241265-9	AES-TW102-101723	Total/NA	Water	PrecSep-21	
500-241265-10	AES-TW103-101723	Total/NA	Water	PrecSep-21	
500-241265-11	AES-TW105-101723	Total/NA	Water	PrecSep-21	
500-241265-12	AES-TW106-101723	Total/NA	Water	PrecSep-21	
500-241265-13	AES-TW107-101723	Total/NA	Water	PrecSep-21	
500-241265-14	AES-TW108-101723	Total/NA	Water	PrecSep-21	
500-241265-15	AES-FB-101723	Total/NA	Water	PrecSep-21	
MB 160-632939/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-632939/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-241265-2 MS	AES-MW2-101623	Total/NA	Water	PrecSep-21	
500-241265-2 MSD	AES-MW2-101623	Total/NA	Water	PrecSep-21	

Prep Batch: 632940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-241265-1	AES-MW1-101623	Total/NA	Water	PrecSep_0	
500-241265-2	AES-MW2-101623	Total/NA	Water	PrecSep_0	
500-241265-3	AES-MW3-101623	Total/NA	Water	PrecSep_0	
500-241265-4	AES-MW4-101623	Total/NA	Water	PrecSep_0	
500-241265-5	AES-MW4-DUP-101623	Total/NA	Water	PrecSep_0	
500-241265-6	AES-MW5-101623	Total/NA	Water	PrecSep_0	
500-241265-7	AES-FB-101623	Total/NA	Water	PrecSep_0	
500-241265-8	AES-TW101-101723	Total/NA	Water	PrecSep_0	
500-241265-9	AES-TW102-101723	Total/NA	Water	PrecSep_0	
500-241265-10	AES-TW103-101723	Total/NA	Water	PrecSep_0	
500-241265-11	AES-TW105-101723	Total/NA	Water	PrecSep_0	
500-241265-12	AES-TW106-101723	Total/NA	Water	PrecSep_0	
500-241265-13	AES-TW107-101723	Total/NA	Water	PrecSep_0	
500-241265-14	AES-TW108-101723	Total/NA	Water	PrecSep_0	
500-241265-15	AES-FB-101723	Total/NA	Water	PrecSep_0	
MB 160-632940/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-632940/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-241265-2 MS	AES-MW2-101623	Total/NA	Water	PrecSep_0	
500-241265-2 MSD	AES-MW2-101623	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-632939/1-A

Matrix: Water

Analysis Batch: 637801

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 632939

Analyte	MB		MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Uncert.									
Radium-226	0.05564	U		0.0726	0.0728	1.00	0.121	pCi/L	10/23/23 11:10	11/22/23 09:21	1
Carrier											
Ba Carrier	97.0			30 - 110					Prepared	Analyzed	Dil Fac
									10/23/23 11:10	11/22/23 09:21	1

Lab Sample ID: LCS 160-632939/2-A

Matrix: Water

Analysis Batch: 637801

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 632939

Analyte	MB		MB Qualifier	Limits	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	Limits	
	Result	Uncert.									
Radium-226	0.05564	U		30 - 110	0.0728	1.00	0.0944	pCi/L	94	75 - 125	
Carrier											
Ba Carrier	100			30 - 110							

Lab Sample ID: 500-241265-2 MS

Matrix: Water

Analysis Batch: 637957

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 632939

Analyte	Sample		Spike Added	MS		Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	Limits
	Result	Qual		Result	Qual						
Radium-226	0.00182	U	11.3	10.60		1.12	1.00	0.114	pCi/L	94	60 - 140
Carrier											
Ba Carrier	96.5			30 - 110							

Lab Sample ID: 500-241265-2 MSD

Matrix: Water

Analysis Batch: 637957

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 632939

Analyte	Sample		Spike Added	MSD		Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	RER Limits
	Result	Qual		Result	Qual						
Radium-226	0.00182	U	11.4	10.11		1.10	1.00	0.143	pCi/L	89	60 - 140
Carrier											
Ba Carrier	94.2			30 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-632940/1-A

Matrix: Water

Analysis Batch: 637230

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 632940

Analyte	MB		MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Uncert.									
Radium-228	-0.4020	U		0.264	0.266	1.00	0.589	pCi/L	10/23/23 11:13	11/16/23 16:08	1

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QC Sample Results

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9320 - Radium-228 (GFPC) (Continued)

<i>Carrier</i>	<i>MB %Yield</i>	<i>MB Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	97.0		30 - 110	10/23/23 11:13	11/16/23 16:08	1
Y Carrier	86.7		30 - 110	10/23/23 11:13	11/16/23 16:08	1

Lab Sample ID: LCS 160-632940/2-A

Matrix: Water

Analysis Batch: 637230

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 632940

<i>Analyte</i>			<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qual</i>	<i>Total</i>		<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec Limits</i>
	<i>Sample Result</i>	<i>Sample Qual</i>				<i>Uncert. (2σ+/-)</i>	<i>RL</i>				
Radium-228	0.245	U	7.71	8.059		1.12	1.00	0.501	pCi/L	104	75 - 125

LCS LCS

<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
Ba Carrier	100		30 - 110
Y Carrier	88.6		30 - 110

Lab Sample ID: 500-241265-2 MS

Matrix: Water

Analysis Batch: 637230

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 632940

<i>Analyte</i>			<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qual</i>	<i>Total</i>		<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec Limits</i>
	<i>Sample Result</i>	<i>Sample Qual</i>				<i>Uncert. (2σ+/-)</i>	<i>RL</i>				
Radium-228	0.245	U	7.70	8.630		1.21	1.00	0.512	pCi/L	109	60 - 140

MS MS

<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
Ba Carrier	96.5		30 - 110
Y Carrier	83.0		30 - 110

Lab Sample ID: 500-241265-2 MSD

Matrix: Water

Analysis Batch: 637230

Client Sample ID: AES-MW2-101623

Prep Type: Total/NA

Prep Batch: 632940

<i>Analyte</i>			<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qual</i>	<i>Total</i>		<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RER</i>	<i>RER Limit</i>
	<i>Sample Result</i>	<i>Sample Qual</i>				<i>Uncert. (2σ+/-)</i>	<i>RL</i>						
Radium-228	0.245	U	7.77	8.309		1.18	1.00	0.469	pCi/L	104	60 - 140	0.13	1

MSD MSD

<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
Ba Carrier	94.2		30 - 110
Y Carrier	82.2		30 - 110

Eurofins Chicago

Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101623

Lab Sample ID: 500-241265-1

Matrix: Water

Date Collected: 10/16/23 09:55

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637957	SCB	EET SL	11/22/23 09:28
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-MW2-101623

Lab Sample ID: 500-241265-2

Matrix: Water

Date Collected: 10/16/23 10:57

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637957	SCB	EET SL	11/22/23 09:28
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-MW3-101623

Lab Sample ID: 500-241265-3

Matrix: Water

Date Collected: 10/16/23 12:20

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:55
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-MW4-101623

Lab Sample ID: 500-241265-4

Matrix: Water

Date Collected: 10/16/23 14:25

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 15:41
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

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Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101623

Lab Sample ID: 500-241265-5

Matrix: Water

Date Collected: 10/16/23 14:58

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:55
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-MW5-101623

Lab Sample ID: 500-241265-6

Matrix: Water

Date Collected: 10/16/23 15:32

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:55
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-FB-101623

Lab Sample ID: 500-241265-7

Matrix: Water

Date Collected: 10/16/23 15:35

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:55
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-TW101-101723

Lab Sample ID: 500-241265-8

Matrix: Water

Date Collected: 10/17/23 10:01

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:55
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

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Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW102-101723

Lab Sample ID: 500-241265-9

Matrix: Water

Date Collected: 10/17/23 10:50

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:55
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-TW103-101723

Lab Sample ID: 500-241265-10

Matrix: Water

Date Collected: 10/17/23 11:42

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:54
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:11
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-TW105-101723

Lab Sample ID: 500-241265-11

Matrix: Water

Date Collected: 10/17/23 12:58

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637959	SCB	EET SL	11/22/23 11:54
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637230	FLC	EET SL	11/16/23 16:12
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-TW106-101723

Lab Sample ID: 500-241265-12

Matrix: Water

Date Collected: 10/17/23 14:40

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637801	SCB	EET SL	11/22/23 12:21
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637236	FLC	EET SL	11/16/23 16:10
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

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Lab Chronicle

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-TW107-101723

Lab Sample ID: 500-241265-13

Matrix: Water

Date Collected: 10/17/23 15:58

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637801	SCB	EET SL	11/22/23 12:21
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637236	FLC	EET SL	11/16/23 16:10
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-TW108-101723

Lab Sample ID: 500-241265-14

Matrix: Water

Date Collected: 10/17/23 16:49

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637801	SCB	EET SL	11/22/23 12:21
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637236	FLC	EET SL	11/16/23 16:10
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Client Sample ID: AES-FB-101723

Lab Sample ID: 500-241265-15

Matrix: Water

Date Collected: 10/17/23 17:00

Date Received: 10/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632939	KAC	EET SL	10/23/23 11:10
Total/NA	Analysis	9315		1	637801	SCB	EET SL	11/22/23 12:22
Total/NA	Prep	PrecSep_0			632940	KAC	EET SL	10/23/23 11:13
Total/NA	Analysis	9320		1	637236	FLC	EET SL	11/16/23 16:10
Total/NA	Analysis	Ra226_Ra228		1	638008	EMH	EET SL	11/22/23 21:51

Laboratory References:

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

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Accreditation/Certification Summary

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	12-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago

Eurofins Chicago

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

Chain of Custody Record

eurofins

Environment Testing
America

Client Information		Sampler Vicente Perez / Rafael Diaz		Lab PM McCutcheon, Carlene		Carrier Tracking No(s)		COC No:					
Client Contact: Alberto Melendez		Phone: (787) 209-6386		E-Mail Carlene.McCutcheon@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 2					
Company: DNA-Environment, LLC		PWSID		Analysis Requested						Job #: 500-241265			
Address: 35 Calle Juan C Borbon STE 67-227		Due Date Requested								Preservation Codes			
City: Guaynabo		TAT Requested (days) Regular TAT								A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		
State, Zip: PR, 00969-5375		Compliance Project <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								Other			
Phone: 787-209-6386		PO #:											
Email alberto.melendez@dnenv.com		WO #:											
Project Name: CCR Groundwater Monitoring		Project #:											
Site: AES Puerto Rico LP, Guayama, Puerto Rico		SSOW#:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform NS/NSD (Yes or No)	9315_Ra226, 9320_Ra228, Radium-226 & Radium-228	Total Number of containers	Special Instructions/Note			
						<input type="checkbox"/>	<input checked="" type="checkbox"/> D						
AES-MW1-101623		10/16/23	0955	G	Water	N	X			2			
AES-MW2-101623		10/16/23	1057	G	Water	N	X			2			
AES-MW2-101623 MS		10/16/23	1122	G	Water	N	Y	X		2			
AES-MW2-101623 MSD		10/16/23	1146	G	Water	N	Y	X		2			
AES-MW3-101623		10/16/23	1220	G	Water	N	X			2			
AES-MW4-101623		10/16/23	1425	G	Water	N	X			2			
AES-MW4-DUP-101623		10/16/23	1458	G	Water	N	X			2			
AES-MW5-101623		10/16/23	1532	G	Water	N	X			2			
AES-FB-101623		10/16/23	1535	G	Water	N	X			2			
Possible Hazard Identification <input checked="" 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													
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months													
Deliverable Requested I, II, III, IV Other (specify): Level IV													
Empty Kit Relinquished by:		Date		Time		Method of Shipment:							
Relinquished by:		Date/Time: 10-18 2023 / 13:00		Company DNA		Received by: <i>Alvin Scott</i>		Date/Time: 10/19/23 09:35		Company RTTA			
Relinquished by:		Date/Time:		Company		Received by:		Date/Time:		Company			
Relinquished by:		Date/Time:		Company		Received by:		Date/Time:		Company			
Custody Seals Intact. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks.									

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Chain of Custody Record

Do not lift using this

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ
DNA-ENVIRONMENT, LLC
35 CALLE JUAN C. BORBON
STE 67-227
GUAYNABO, PR 00969
UNITED STATES US

SHIP DATE: 18 OCT 23
TOTWTG: 103.00 LB
CAD: 6998634/SSFE2441
DIMS: 24x14x14 IN
BILL CREDIT CARD
NO EEE 30.37(a)

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ
DNA-ENVIRONMENT, LLC
35 CALLE JUAN C. BORBON
STE 67-227
GUAYNABO, PR 00969
UNITED STATES US

SHIP DATE: 18 OCT 23
ACTWTG: 50.00 LB
CAD: 6998634/SSFE2441
DIMS: 23x13x13 IN
BILL CREDIT CARD

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

(708) 534-5200
INR:
PO:

REF:
DEPT:

500-241265 Waybi



REL#

1 of 2
TRK# 7852 1910 4993
0430 ## MASTER ##

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60484
IL-US ORD



Part # 156297-SEAS/REB/2024/01/24

TO RECEIVING DEPT
EUROFINS ENVIRONMENT TESTING
2417 BOND STREET

UNIVERSITY PARK IL 60484

(708) 534-5200
INR:
PO:

REF:
DEPT:

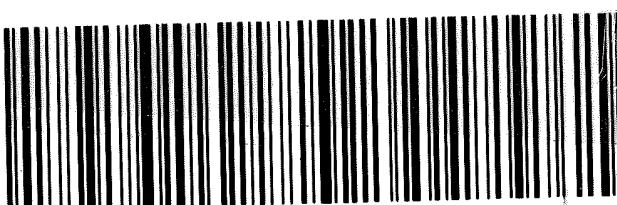


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2 of 2
MPS# 7852 1910 5007
0441 Metr# 7852 1910 4993
0430

XN JOTA

THU - 19 OCT 10:30A
INTL PRIORITY
NSR
60484
IL-US ORD





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

Chain of Custody Record

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

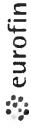
Environment Testing

Client Information (Sub Contract Lab)		Sampler:		Lab PM		Carrier Tracking No(s):		COC No	
Client Contact: Shipping/Receiving Company		Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: TestAmerica.Laboratories.Inc@gmail.com		E-Mail: Carlene.McCutcheon@eurofinsus.com		State of Origin Puerto Rico		Page: 1 of 2	
TestAmerica Laboratories, Inc		Address:		Due Date Requested: 11/12/2023		Analysis Requested		Job # 500-241265-1	
City: Earth City		State, Zip: MO, 63045		TAT Requested (days):				Preservation Codes:	
Phone:		PO #:						M - Hexane A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DiWater K - EDTA L - EDA Other:	
Email:		W/O #:						N - None O - NaNO2 P - Na2O4S Q - Na2SC3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MeAA W - pH 4.5 Y - Trizma Z - other (specify)	
Project Name: CCR GW Monitoring, AES Puerto Rico, LP		Site:		Project #: 50021397 SSOW#:		Total Number of Contaminants:		Special Instructions/Note:	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix (W=water, S=solid, O=oil, B=tissue, A=air)	
AES-MW1-101623 (500-241265-1)		10/16/23		09:55		Water		X X X	
AES-MW2-101623 (500-241265-2)		10/16/23		10:57		Water		X X X	
AES-MW2-101623 (500-241265-2MS)		10/16/23		10:57		MS		X X X	
AES-MW2-101623 (500-241265-2MSD)		10/16/23		10:57		MSD		X X X	
AES-MW3-101623 (500-241265-3)		10/16/23		12:20		Water		X X X	
AES-MW4-101623 (500-241265-4)		10/16/23		14:25		Water		X X X	
AES-MW4-DUP-101623 (500-241265-5)		10/16/23		14:58		Water		X X X	
AES-MW5-101623 (500-241265-6)		10/16/23		15:32		Water		X X X	
AES-FB-101623 (500-241265-7)		10/16/23		15:35		Water		X X X	
Possible Hazard Identification		Deliverable Requested I, II, III, IV. Other (specify)		Primary Deliverable Rank: 2		Date:		Time:	
Unconfirmed		Empty Kit Relinquished by: FedEx		Date/Time: 10/16/23 1400		Received by: FedEx		Method of Shipment: Date/Time: Oct 20 2023 0915	
Relinquished by:		Relinquished By:		Date/Time:		Date/Time:		Company: Company	
Custody Seals Intact: △ Yes △ No		Custody Seal No.:		Date/Time:		Date/Time:		Cooler Temperature(s), °C and Other Remarks:	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method/analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the state of origin listed above or for analysis/testmatrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.</p>									
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months</p> <p>Special Instructions/QC Requirements:</p>									

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 (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No
Client Contact	Phone	McCutcheon, Carlene	E-Mail:	State of Origin:	500-180478-2
Shipping/Receiving Company		Carlene.McCutcheon@et.eurofinsus.com		Puerto Rico	Page
TestAmerica Laboratories, Inc.					Page 2 of 2
Address:	13715 Rider Trail North,	Date Due Requested:	11/27/2023	Accreditations Required (See note):	Job #
City		TAT Requested (days):			500-241265-1
Earth City					Preservation Codes:
State/Zip					A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchors H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:
MO: 63045					
Phone	314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:		WFO #:			
Project Name	CCR GW Monitoring, AES Puerto Rico, LP	Project #	50021397		
Site:		SSOW#:			
Sample Identification - Client ID (Lab ID)					
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Sapid, Oil/water, Br/Issue, Air)	Preservation Code:
AES-TW101-101723 (500-241265-8)	10/17/23	10:01	Water	X X X	
AES-TW102-101723 (500-241265-9)	10/17/23	10:50	Water	X X X	
AES-TW103-101723 (500-241265-10)	10/17/23	11:42	Water	X X X	
AES-TW105-101723 (500-241265-11)	10/17/23	12:58	Water	X X X	
AES-TW106-101723 (500-241265-12)	10/17/23	14:40	Water	X X X	
AES-TW107-101723 (500-241265-13)	10/17/23	15:58	Water	X X X	
AES-TW108-101723 (500-241265-14)	10/17/23	16:49	Water	X X X	
AES-FB-101723 (500-241265-15)	10/17/23	17:00	Water	X X X	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analytic & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

Possible Hazard Identification

Unconfirmed	Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Reinquished by	Stephano M. Jimenez	Date/Time: 10/17/23 16:00	Received By: Stephano M. Jimenez
Reinquished by	Feeley	Date/Time: 10/17/23 16:00	Received By: Feeley
Reinquished by		Date/Time:	Method of Shipment:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Sample Disposal	Return To Client	Disposal By Lab	Archive For Months
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Custody Seals intact: Yes No
Custody Seal No.: _____

Cooler Temperature(s) °C and Other Remarks: _____

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-241265-1

Login Number: 241265

List Source: Eurofins Chicago

List Number: 1

Creator: Scott, Sherri L

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	Unchilled
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: DNA-Environment LLC

Job Number: 500-241265-1

Login Number: 241265

List Source: Eurofins St. Louis

List Number: 2

List Creation: 10/20/23 02:24 PM

Creator: Pinette, Meadow L

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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: DNA-Environment LLC

Job ID: 500-241265-1

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	
500-241265-1	AES-MW1-101623	97.2	
500-241265-2	AES-MW2-101623	96.0	
500-241265-2 MS	AES-MW2-101623	96.5	
500-241265-2 MSD	AES-MW2-101623	94.2	
500-241265-3	AES-MW3-101623	101	
500-241265-4	AES-MW4-101623	83.1	
500-241265-5	AES-MW4-DUP-101623	97.7	
500-241265-6	AES-MW5-101623	96.2	
500-241265-7	AES-FB-101623	100	
500-241265-8	AES-TW101-101723	93.7	
500-241265-9	AES-TW102-101723	94.5	
500-241265-10	AES-TW103-101723	93.2	
500-241265-11	AES-TW105-101723	98.0	
500-241265-12	AES-TW106-101723	97.0	
500-241265-13	AES-TW107-101723	92.4	
500-241265-14	AES-TW108-101723	94.7	
500-241265-15	AES-FB-101723	96.7	
LCS 160-632939/2-A	Lab Control Sample	100	
MB 160-632939/1-A	Method Blank	97.0	

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	Y (30-110)
500-241265-1	AES-MW1-101623	97.2	82.6
500-241265-2	AES-MW2-101623	96.0	84.9
500-241265-2 MS	AES-MW2-101623	96.5	83.0
500-241265-2 MSD	AES-MW2-101623	94.2	82.2
500-241265-3	AES-MW3-101623	101	80.4
500-241265-4	AES-MW4-101623	83.1	85.6
500-241265-5	AES-MW4-DUP-101623	97.7	81.5
500-241265-6	AES-MW5-101623	96.2	86.4
500-241265-7	AES-FB-101623	100	84.9
500-241265-8	AES-TW101-101723	93.7	84.5
500-241265-9	AES-TW102-101723	94.5	85.6
500-241265-10	AES-TW103-101723	93.2	79.6
500-241265-11	AES-TW105-101723	98.0	86.0
500-241265-12	AES-TW106-101723	97.0	85.2
500-241265-13	AES-TW107-101723	92.4	90.1
500-241265-14	AES-TW108-101723	94.7	83.4
500-241265-15	AES-FB-101723	96.7	87.1
LCS 160-632940/2-A	Lab Control Sample	100	88.6
MB 160-632940/1-A	Method Blank	97.0	86.7

Tracer/Carrier Legend

Ba = Ba Carrier

Eurofins Chicago

Tracer/Carrier Summary

Client: DNA-Environment LLC

Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Y = Y Carrier

Job ID: 500-241265-1

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APPENDIX C

STATISTICAL ANALYSIS REPORTS



STATISTICAL ANALYSIS REPORT

OCTOBER 2022, SECOND SEMIANNUAL EVENT

AES PUERTO RICO LP, GUAYAMA, PR

This Statistical Analysis Report describes the procedures and findings of a statistical evaluation performed on the groundwater data available through the October 2022 sampling event collected from the groundwater monitoring well network at AES Puerto Rico, LP (AES-PR), Guayama, Puerto Rico.

Groundwater monitoring and statistical analysis were performed in compliance with the groundwater monitoring and corrective action requirements of the United States Environmental Protection Agency's (USEPA's) Coal Combustion Residuals Rule (CCR Rule). Statistical evaluation was performed following the procedures described in the PE-certified Statistical Analysis Plan included in the document entitled *Groundwater Monitoring System & Sampling and Analysis Program, AES Puerto Rico LP, Guayama, Puerto Rico* (DNA, August 2017). The statistical methods employed are in accordance with the CCR Rule and USEPA's guidance document entitled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (USEPA 2009). The Unified Guidance describes the methodologies for statistical analysis of groundwater data that are recommended by the USEPA, which meet the statistical testing requirements in the CCR Rule.

The CCR monitoring well network at AES-PR consists of five groundwater monitoring wells that have been installed pursuant to 40 CFR Part 257.91 to monitor the groundwater quality of the CCR Unit at AES-PR. This monitoring well network consists of the following:

- **Upgradient Wells:** MW-1 and MW-2; and
- **Downgradient Wells:** MW-3, MW-4, and MW-5.

Wells MW-1 and MW-2 are located hydraulically upgradient from the CCR Unit. Therefore, analytical data from groundwater samples collected from these upgradient wells are statistically evaluated to calculate site background levels for the CCR constituents (see below). Wells MW-3, MW-4, and MW-5 are located hydraulically downgradient of the CCR Unit. Therefore, analytical data from groundwater samples collected from these downgradient wells are statistically analyzed to evaluate compliance with the groundwater quality requirements in the CCR Rule.

The CCR constituents that are included in the groundwater monitoring program at AES-PR are those listed in Appendix III and Appendix IV to 40 CFR Part 257. These are as follows:

- **Appendix III Constituents** (Detection Monitoring): boron, calcium, chloride, fluoride, pH, sulfate, and Total Dissolved Solids (TDS); and

- **Appendix IV Constituents** (Assessment Monitoring): antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228 combined.

On July 16, 2018, AES-PR established an assessment monitoring program pursuant to 40 CFR 257.94(e) and 257.95. Therefore, statistical evaluation of the constituents listed in Appendix IV to 40 CFR Part 257 was performed as required under assessment monitoring, and evaluation of statistically significant increase over background levels for one or more constituents listed in Appendix III was not warranted.

Statistical analyses were performed using Sanitas™ Statistical Software. Sanitas™ is a software package that offers comprehensive RCRA statistics for Subtitle C and D facilities and incorporates the statistical tests and methods recommended in the USEPA Unified Guidance.

Statistical Methods

Data Screening

Handling of Datasets with Non-Detect Results

Note that statistical analyses are not required on wells and constituents containing 100% non-detects (See USEPA Unified Guidance 2009, Chapter 6).

Groundwater analytical data with non-detect (ND) results were handled as follows:

- Datasets containing less than 15% non-detects were replaced with one-half the reporting limit (RL), whereas datasets containing more than 15% non-detects were replaced with the RL. The reporting limit used for non-detects was the practical quantitation limit (PQL) as reported by the analytical laboratory (identified as “RL” in the laboratory analytical reports).
- Datasets containing between 15-50% non-detects were submitted to the Kaplan-Meier adjustments. This method adjusts the mean and standard deviation of the dataset to account for concentrations below the reporting limit.
- Nonparametric statistics were used on datasets containing greater than 50% non-detects.

Upgradient Wells (Background Data)

The background data from upgradient wells MW-1 and MW-2 were screened and tested using various graphical displays and statistical tests to prepare the data for evaluating site background levels. The Unified Guidance recommends that at least four to eight new groundwater results be available before the site background levels can be updated. Nonetheless, after receiving the groundwater results from each sampling event, all background data are screened for potential outliers and temporal trends.

The background data screening procedure was as follows:

- Prepared time series plots to visually screen for suspected outliers and trends in the concentrations of CCR constituents.
- Prepared box plots to screen for variation within individual wells and between wells.
- Tested the data distribution using the Shapiro-Wilk test for normality.
- Whenever possible, non-normally distributed data were transformed into normally distributed data using the Ladder of Powers method. In this method, the data is submitted to the following transformation sequence: x , $x^{1/2}$, x^2 , $x^{1/3}$, x^3 , $\ln(x)$, x^4 , x^5 , x^6 , until a suitable transformation is applied to normalize the data.
- Formally tested the pooled background data from MW-1 and MW-2 for outliers using Tukey's statistical test. Extreme outliers were flagged and deselected before computing background levels.
- Formally tested for temporal trends for the proposed background data using the Sen's Slope/Mann Kendall trend test to identify statistical increasing or decreasing trends, which may indicate natural variability in groundwater at upgradient wells.

Downgradient Wells

The groundwater data collected from the sampling of downgradient wells MW-3, MW-4, and MW-5 were visually evaluated by plotting time series and box plots. Data distribution in individual downgradient wells was tested using the Shapiro-Wilk test for normality. Whenever possible, non-normal data were transformed into normally distributed data using the Ladder of Powers method. Each downgradient well dataset was subsequently used to construct confidence intervals for each detected Appendix IV constituent and compared to the associated Groundwater Protection Standard (GWPS) as described below.

Updating Background Levels

Background levels were established following the initial eight rounds of upgradient-well sampling completed in 2017. The Unified Guidance recommends that at least four to eight new groundwater results be available before background levels can be updated to allow for statistical comparison between the existing background data and a potential set of newer data. Based on the above, site background levels have been updated every one or two years. The most recent update of background levels includes the results obtained from the October 2022 sampling event (see below).

The Upper Tolerance Limit (UTL) was used to calculate the site background limit for each Appendix IV constituent, using the pooled upgradient-well data (*i.e.*, MW-1 and MW-2). The parametric UTL, with 95% confidence and 95% coverage, was calculated for normal or transformed-normal distributions. Nonparametric Upper Tolerance Limits were calculated when the distribution of the background data was not normal or transformed-normal or when the dataset contained more than 50 percent of non-detects. The achieved confidence and coverage

rates for nonparametric UTLS were based on the number of available observations in the dataset. Background levels were subsequently used when establishing groundwater protection standards under 40 CFR §257.95(h).

Establishing Groundwater Protection Standards

During assessment monitoring, downgradient well concentrations of detected Appendix IV constituents are statistically compared to the corresponding GWPS. The GWPS for all detected Appendix IV constituents were calculated in accordance with 40 CFR §257.95(h).

Per 40 CFR §257.95(h) and the USEPA amendments to §257.95 of July 30, 2018,¹ which promulgated CCR-Rule numeric criteria for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L), the GWPS will be:

- The maximum contaminant level (MCL) established under §§141.62 and 141.66 of this title;
- The CCR-Rule numeric criteria for constituents for which an MCL has not been established (i.e., cobalt, lead, lithium, and molybdenum); or
- The corresponding background concentration when the background level is higher than the MCL or CCR-Rule numeric criteria.

Determination of Statistically Significant Level

The groundwater data were statistically evaluated by comparing the confidence intervals for detected constituents in downgradient wells to the associated GWPS. The lower confidence limit (LCL) of the mean (or median for nonparametric analysis) was computed for each constituent of concern to determine if a statistically significant level (SSL) exists above the corresponding GWPS. An SSL was detected if the LCL exceeded the associated GWPS.

Parametric confidence intervals were calculated when the data followed a normal or transformed-normal distribution. Nonparametric confidence intervals were computed when the data could not be transformed to normality or when the dataset contained greater than 50% non-detects. Parametric and nonparametric confidence intervals were constructed with a 95% confidence level.

Statistical Evaluation Results

Descriptive Statistics

Attachment 1 provides the Sanitas™ output for all available data through October 2022, showing a summary of descriptive statistics (e.g., mean, standard deviation, median, %ND) from box plot analysis for all background and downgradient wells.² Additional statistics (e.g., sample distribution, significance level) are provided under the pertinent statistical test output file.

¹ See Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.

² The box plot summary table in Attachment 1 excludes the extreme selenium outliers identified in the background wells (See Outlier and Trend Evaluation section, below).

Outlier and Trend Evaluation

Attachment 2 provides the Sanitas™ output files that summarize the outlier analysis results. The outlier analyses performed on the pooled upgradient well data through October 2022 identified two outlier values for selenium (MW-1 and MW-2) and one outlier value for cobalt (MW-2). The extreme outlier values for selenium were flagged and excluded from the October 2022 update to provide a lower background limit for selenium as a conservative measure from a regulatory standpoint. However, the flagged selenium values will be kept in the database and statistically reevaluated in future sampling events as new data become available. The cobalt outlier value was flagged but not excluded from the cobalt background limit update. It will be statistically reevaluated in future sampling events.

No statistically significant trends were identified in the background well dataset. **Attachment 3** provides a summary of the trend test results.

Background Levels

As described above, background levels were computed as the Upper Tolerance Limit from the pooled background well dataset, less previously identified extreme outliers. A summary of the Upper Tolerance Limits for all Appendix IV constituents is presented in **Attachment 4**.

Groundwater Protection Standards

Attachment 5 provides a summary of the background levels and GWPS determined for all available data through October 2022.

Confidence Intervals

Attachment 6 provides a comparison of the Lower Confidence Limit (LCL) for each downgradient-well/constituent pair to the associated GWPS (*i.e.*, “Compliance” limit). Based on this statistical comparison, the following SSL were identified:

- Lithium: MW-4
- Molybdenum: MW-3 and MW-4
- Selenium: MW-3

Based on the statistical evaluation of the dataset through the October 2022 sampling event, the CCR unit at AES-PR will remain in assessment monitoring.

REFERENCES

DNA-Environment, LLC. August 2017. *Groundwater Monitoring System & Sampling and Analysis Program, AES Puerto Rico LP, Guayama, Puerto Rico.*

USEPA (United States Environmental Protection Agency). 2009. *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance.* Washington, DC: EPA. EPA 530/R-09-007.

ATTACHMENT 1

BOX PLOT SUMMARY: ALL CCR WELLS (OCTOBER 2022)

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 10:43 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	MW-1 (bg)	17	0.002441	0.0005832	0.0001414	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-2 (bg)	17	0.002441	0.0005832	0.0001414	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-3	17	0.002271	0.0006881	0.0001669	0.0025	0.001	0.003	82.35
Antimony (mg/L)	MW-4	17	0.002288	0.0006499	0.0001576	0.0025	0.001	0.003	70.59
Antimony (mg/L)	MW-5	17	0.008406	0.02361	0.005727	0.0025	0.001	0.1	94.12
Barium (mg/L)	MW-1 (bg)	18	0.04628	0.01176	0.002772	0.0465	0.019	0.063	0
Barium (mg/L)	MW-2 (bg)	18	0.1172	0.01967	0.004635	0.11	0.089	0.16	0
Barium (mg/L)	MW-3	18	0.2378	0.1302	0.03069	0.22	0.072	0.66	0
Barium (mg/L)	MW-4	18	0.04861	0.009004	0.002122	0.0465	0.035	0.061	0
Barium (mg/L)	MW-5	18	0.03572	0.005131	0.001209	0.034	0.028	0.05	5.556
Beryllium (mg/L)	MW-1 (bg)	16	0.001937	0.00075	0.0001875	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-2 (bg)	16	0.001937	0.00075	0.0001875	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-3	16	0.001893	0.0008263	0.0002066	0.0025	0.00029	0.0025	93.75
Beryllium (mg/L)	MW-4	16	0.001981	0.0007111	0.0001778	0.0025	0.001	0.0025	93.75
Beryllium (mg/L)	MW-5	16	0.008125	0.02451	0.006128	0.0025	0.001	0.1	100
Cadmium (mg/L)	MW-1 (bg)	17	0.001853	0.0009145	0.0002218	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-2 (bg)	17	0.001853	0.0009145	0.0002218	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-3	17	0.001412	0.001073	0.0002602	0.001	0.00019	0.0025	58.82
Cadmium (mg/L)	MW-4	17	0.001272	0.001065	0.0002583	0.00057	0.00018	0.0025	58.82
Cadmium (mg/L)	MW-5	17	0.007605	0.02383	0.00578	0.0025	0.000091	0.1	88.24
Chromium (mg/L)	MW-1 (bg)	16	0.002681	0.00129	0.0003225	0.0025	0.0007	0.005	81.25
Chromium (mg/L)	MW-2 (bg)	16	0.003025	0.001343	0.0003357	0.0025	0.001	0.005	93.75
Chromium (mg/L)	MW-3	16	0.004469	0.00719	0.001798	0.0025	0.001	0.031	81.25
Chromium (mg/L)	MW-4	16	0.002731	0.0013	0.0003249	0.0025	0.001	0.005	81.25
Chromium (mg/L)	MW-5	16	0.009125	0.02426	0.006066	0.0025	0.001	0.1	100
Cobalt (mg/L)	MW-1 (bg)	18	0.0007861	0.0002501	0.00005895	0.00072	0.00046	0.00125	11.11
Cobalt (mg/L)	MW-2 (bg)	18	0.001676	0.000999	0.0002355	0.0025	0.00028	0.0028	55.56
Cobalt (mg/L)	MW-3	18	0.002369	0.000704	0.0001659	0.00225	0.00085	0.004	0
Cobalt (mg/L)	MW-4	18	0.001933	0.001993	0.0004697	0.0017	0.00083	0.0098	0
Cobalt (mg/L)	MW-5	18	0.0057	0.01106	0.002607	0.003	0.0027	0.05	5.556
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	18	0.3119	0.1842	0.04342	0.3355	-0.168	0.62	0
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	18	0.235	0.2837	0.06687	0.1885	-0.0965	0.839	0
Combined Radium 226 + 228 (pCi/L)	MW-3	18	0.3883	0.3728	0.08786	0.313	-0.0595	1.49	0
Combined Radium 226 + 228 (pCi/L)	MW-4	18	0.3268	0.3338	0.07869	0.341	-0.258	1.12	0
Combined Radium 226 + 228 (pCi/L)	MW-5	18	0.3191	0.2259	0.05325	0.313	-0.0397	0.723	0
Fluoride (mg/L)	MW-1 (bg)	18	0.61	0.1196	0.02818	0.595	0.4	0.91	0
Fluoride (mg/L)	MW-2 (bg)	18	0.506	0.1326	0.03126	0.47	0.35	0.728	0
Fluoride (mg/L)	MW-3	18	1.791	0.3391	0.07992	1.85	0.87	2.3	0
Fluoride (mg/L)	MW-4	18	1.199	2.203	0.5193	0.655	0.23	10	5.556
Fluoride (mg/L)	MW-5	18	0.51	0.3868	0.09116	0.455	0.05	2	11.11
Lead (mg/L)	MW-1 (bg)	16	0.001029	0.0003511	0.00008778	0.0013	0.0005	0.0013	93.75
Lead (mg/L)	MW-2 (bg)	16	0.001063	0.00035	0.0000875	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-3	16	0.001063	0.00035	0.0000875	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-4	16	0.0009394	0.0004157	0.0001039	0.00115	0.0003	0.0013	81.25
Lead (mg/L)	MW-5	16	0.00725	0.02474	0.006184	0.0013	0.0005	0.1	100
Lithium (mg/L)	MW-1 (bg)	18	0.003816	0.002959	0.0006974	0.005	0.00054	0.01	61.11
Lithium (mg/L)	MW-2 (bg)	18	0.003837	0.002939	0.0006927	0.005	0.00052	0.01	66.67
Lithium (mg/L)	MW-3	18	0.008028	0.007936	0.00187	0.0062	0.0014	0.034	0
Lithium (mg/L)	MW-4	18	0.7028	0.2764	0.06515	0.745	0.13	1.1	0
Lithium (mg/L)	MW-5	18	0.0099	0.02256	0.005316	0.0045	0.0014	0.1	16.67

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 10:43 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Mercury (mg/L)	MW-1 (bg)	16	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-2 (bg)	16	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-3	16	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-4	16	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-5	16	0.0002	0	0	0.0002	0.0002	0.0002	100
Molybdenum (mg/L)	MW-1 (bg)	18	0.006953	0.005958	0.001404	0.004	0.00076	0.015	55.56
Molybdenum (mg/L)	MW-2 (bg)	18	0.007483	0.006336	0.001493	0.005	0.00085	0.015	61.11
Molybdenum (mg/L)	MW-3	18	0.2128	0.1183	0.02788	0.195	0.064	0.53	0
Molybdenum (mg/L)	MW-4	18	0.5756	0.2472	0.05826	0.455	0.35	1.2	0
Molybdenum (mg/L)	MW-5	18	0.02137	0.06956	0.0164	0.00515	0.0022	0.3	16.67
Selenium (mg/L)	MW-1 (bg)	17	0.006376	0.00388	0.0009411	0.0059	0.0014	0.016	0
Selenium (mg/L)	MW-2 (bg)	17	0.001539	0.001167	0.0002829	0.0013	0.00035	0.0045	41.18
Selenium (mg/L)	MW-3	18	0.1758	0.1371	0.03231	0.135	0.026	0.57	0
Selenium (mg/L)	MW-4	18	0.04096	0.1445	0.03407	0.00625	0.0012	0.62	0
Selenium (mg/L)	MW-5	18	0.009998	0.02285	0.005385	0.00315	0.00046	0.1	22.22
Thallium (mg/L)	MW-1 (bg)	16	0.000625	0.0002236	0.0000559	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-2 (bg)	16	0.000625	0.0002236	0.0000559	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-3	16	0.000625	0.0002236	0.0000559	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-4	16	0.000625	0.0002236	0.0000559	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-5	16	0.003719	0.01234	0.003086	0.0005	0.0005	0.05	100
Arsenic (mg/L)	MW-3	18	0.002444	0.0008466	0.0001995	0.0024	0.001	0.0038	0
Arsenic (mg/L)	MW-4	18	0.003272	0.001118	0.0002634	0.0033	0.0018	0.0059	0
Arsenic (mg/L)	MW-5	10	0.01123	0.007042	0.002227	0.0086	0.003	0.022	0

ATTACHMENT 2

OUTLIER ANALYSIS SUMMARY: BACKGROUND WELLS (OCTOBER 2022)

Outlier Analysis - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 10:27 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Cobalt (mg/L)	MW-1,MW-2	Yes	0.0028	n/a w/combined bg	NP	NaN	36	0.0008419	0.0004069	normal	ShapiroWilk
Selenium (mg/L)	MW-1,MW-2	Yes	0.025,0.024	n/a w/combined bg	NP	NaN	36	0.005274	0.005898	normal	ShapiroWilk

Outlier Analysis - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 10:27 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.003	0	unknown	ShapiroWilk
Arsenic (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.0007911	0.0003284	normal	ShapiroWilk
Barium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.08172	0.03933	normal	ShapiroWilk
Beryllium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	32	0.001	0	unknown	ShapiroWilk
Cadmium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.0005	0	unknown	ShapiroWilk
Chromium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	32	0.004634	0.001073	unknown	ShapiroWilk
Cobalt (mg/L)	MW-1,MW-2	Yes	0.0028	n/a w/combined bg	NP	NaN	36	0.0008419	0.0004069	normal	ShapiroWilk
Combined Radium 226 + 228 (pCi/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.2735	0.239	normal	ShapiroWilk
Fluoride (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.558	0.1351	normal	ShapiroWilk
Lead (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	32	0.0005084	0.00004773	unknown	ShapiroWilk
Lithium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.006799	0.004328	normal	ShapiroWilk
Mercury (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	32	0.0002	0	unknown	ShapiroWilk
Molybdenum (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.003662	0.001667	normal	ShapiroWilk
Selenium (mg/L)	MW-1,MW-2	Yes	0.025,0.024	n/a w/combined bg	NP	NaN	36	0.005274	0.005898	normal	ShapiroWilk
Thallium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	32	0.001	0	unknown	ShapiroWilk

ATTACHMENT 3

TREND TEST SUMMARY: BACKGROUND WELLS (OCTOBER 2022)

Trend Test - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 12:28 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-1 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Antimony (mg/L)	MW-2 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-1 (bg)	0	-10	-68	No	18	38.89	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-2 (bg)	-0.0001459	-61	-68	No	18	38.89	n/a	n/a	0.01	NP
Barium (mg/L)	MW-1 (bg)	-0.003519	-59	-68	No	18	0	n/a	n/a	0.01	NP
Barium (mg/L)	MW-2 (bg)	0.003625	36	68	No	18	0	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-1 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-2 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	MW-1 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	MW-2 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-1 (bg)	0	-18	-58	No	16	81.25	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-2 (bg)	0	1	58	No	16	93.75	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-1 (bg)	0.00001984	14	68	No	18	11.11	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-2 (bg)	0	-42	-68	No	18	55.56	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	-0.01159	-15	-68	No	18	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	-0.02542	-15	-68	No	18	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-1 (bg)	0.04274	63	68	No	18	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-2 (bg)	0.05984	61	68	No	18	0	n/a	n/a	0.01	NP
Lead (mg/L)	MW-1 (bg)	0	1	58	No	16	93.75	n/a	n/a	0.01	NP
Lead (mg/L)	MW-2 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-1 (bg)	0	-14	-68	No	18	61.11	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-2 (bg)	0	3	68	No	18	66.67	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-1 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-2 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-1 (bg)	0	30	68	No	18	55.56	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-2 (bg)	0	25	68	No	18	61.11	n/a	n/a	0.01	NP
Thallium (mg/L)	MW-1 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Thallium (mg/L)	MW-2 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Selenium (mg/L)	MW-2 (bg)	0.0005455	62	63	No	17	41.18	n/a	n/a	0.01	NP
Selenium (mg/L)	MW-1 (bg)	-0.0002719	-20	-63	No	17	0	n/a	n/a	0.01	NP

ATTACHMENT 4

UPPER TOLERANCE LIMIT SUMMARY (OCTOBER 2022):

BACKGROUND LEVELS UPDATE

Tolerance Limit

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 12:33 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	34	100	n/a	0.1748	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0018	n/a	n/a	n/a	36	38.89	n/a	0.1578	NP Inter(normality)
Barium (mg/L)	n/a	0.1666	n/a	n/a	n/a	36	0	No	0.05	Inter
Beryllium (mg/L)	n/a	0.001	n/a	n/a	n/a	32	100	n/a	0.1937	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	34	100	n/a	0.1748	NP Inter(NDs)
Chromium (mg/L)	n/a	0.005	n/a	n/a	n/a	32	87.5	n/a	0.1937	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.0028	n/a	n/a	n/a	36	33.33	n/a	0.1578	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	0.7892	n/a	n/a	n/a	36	0	No	0.05	Inter
Fluoride (mg/L)	n/a	0.8497	n/a	n/a	n/a	36	0	No	0.05	Inter
Lead (mg/L)	n/a	0.0013	n/a	n/a	n/a	32	96.88	n/a	0.1937	NP Inter(NDs)
Lithium (mg/L)	n/a	0.01	n/a	n/a	n/a	36	63.89	n/a	0.1578	NP Inter(NDs)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	32	100	n/a	0.1937	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.015	n/a	n/a	n/a	36	58.33	n/a	0.1578	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01346	n/a	n/a	n/a	34	20.59	sqrt(x)	0.05	Inter
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	32	100	n/a	0.1937	NP Inter(NDs)

ATTACHMENT 5

BACKGROUND LEVELS AND GROUNDWATER PROTECTION STANDARDS (OCTOBER 2022)

Background Levels and Groundwater Protection Standards Corresponding to the October 2022 Sampling Event
 AES Puerto Rico LP, Guayama, Puerto Rico

Constituent	Units	MCL	CCR-Rule Specified Criteria ¹	Background Level ²	GWPS
Antimony	mg/L	0.006		0.003	0.006
Arsenic	mg/L	0.010		0.0018	0.010
Barium	mg/L	2		0.1666	2
Beryllium	mg/L	0.004		0.001	0.004
Cadmium	mg/L	0.005		0.0005	0.005
Chromium	mg/L	0.1		0.005	0.1
Cobalt	mg/L		0.006	0.0028	0.006
Fluoride	mg/L	4.0		0.8497	4.0
Lead	mg/L		0.015	0.0013	0.015
Lithium	mg/L		0.040	0.01	0.040
Mercury	mg/L	0.002		0.0002	0.002
Molybdenum	mg/L		0.100	0.015	0.100
Selenium	mg/L	0.05		0.01346	0.05
Thallium	mg/L	0.002		0.001	0.002
Radium 266 and 228 combined	pCi/L	5		0.7892	5

Notes:

mg/L = milligram per Liter

MCL = Maximum Contaminant Level

GWPS = Groundwater Protection Standard

¹See Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.

²Background levels were updated through October 2022 data and computed as the Upper Tolerance Limit from the pooled background dataset.

ATTACHMENT 6

CONFIDENCE INTERVAL SUMMARY (OCTOBER 2022):

DETERMINATION OF STATISTICALLY SIGNIFICANT LEVEL

Confidence Interval - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 4:13 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	MW-4	0.8161	0.5894	0.04	Yes	18	0.7028	0.2764	0	None	No	0.05	Param.
Molybdenum (mg/L)	MW-3	0.2455	0.1577	0.1	Yes	18	0.2128	0.1183	0	None	sqrt(x)	0.05	Param.
Molybdenum (mg/L)	MW-4	0.66	0.41	0.1	Yes	18	0.5756	0.2472	0	None	No	0.05	NP (normality)
Selenium (mg/L)	MW-3	0.2067	0.1096	0.05	Yes	18	0.1758	0.1371	0	None	sqrt(x)	0.05	Param.

Confidence Interval - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES Printed 1/25/2023, 4:13 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-3	0.003	0.0017	0.006	No	17	0.002271	0.0006881	82.35	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-4	0.0028	0.0022	0.006	No	17	0.002288	0.0006499	70.59	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-5	0.003	0.0025	0.006	No	17	0.008406	0.02361	94.12	None	No	0.05	NP (NDs)
Barium (mg/L)	MW-3	0.2734	0.1792	2	No	18	0.2378	0.1302	0	None	sqrt(x)	0.05	Param.
Barium (mg/L)	MW-4	0.0523	0.04492	2	No	18	0.04861	0.009004	0	None	No	0.05	Param.
Barium (mg/L)	MW-5	0.03783	0.03362	2	No	18	0.03572	0.005131	5.556	None	No	0.05	Param.
Beryllium (mg/L)	MW-3	0.0025	0.001	0.004	No	16	0.001893	0.0008263	93.75	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-4	0.0025	0.0017	0.004	No	16	0.001981	0.0007111	93.75	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-5	0.0025	0.001	0.004	No	16	0.008125	0.02451	100	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-3	0.0025	0.00042	0.005	No	17	0.001412	0.001073	58.82	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-4	0.0025	0.00036	0.005	No	17	0.001272	0.001065	58.82	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-5	0.0025	0.0005	0.005	No	17	0.007605	0.02383	88.24	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-3	0.005	0.0024	0.1	No	16	0.004469	0.00719	81.25	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-4	0.0035	0.002	0.1	No	16	0.002731	0.0013	81.25	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-5	0.005	0.0025	0.1	No	16	0.009125	0.02426	100	None	No	0.05	NP (NDs)
Cobalt (mg/L)	MW-3	0.002658	0.002081	0.006	No	18	0.002369	0.000704	0	None	No	0.05	Param.
Cobalt (mg/L)	MW-4	0.0017	0.0013	0.006	No	18	0.001933	0.001993	0	None	No	0.05	NP (normality)
Cobalt (mg/L)	MW-5	0.0034	0.0029	0.006	No	18	0.0057	0.01106	5.556	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-3	0.462	0.18	5	No	18	0.3883	0.3728	0	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-4	0.4636	0.1899	5	No	18	0.3268	0.3338	0	None	No	0.05	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	0.4117	0.2264	5	No	18	0.3191	0.2259	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-3	1.93	1.652	4	No	18	1.791	0.3391	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-4	0.78	0.63	4	No	18	1.199	2.203	5.556	None	No	0.05	NP (normality)
Fluoride (mg/L)	MW-5	0.48	0.42	4	No	18	0.51	0.3868	11.11	None	No	0.05	NP (normality)
Lead (mg/L)	MW-3	0.0013	0.001	0.015	No	16	0.001063	0.00035	100	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-4	0.0013	0.0005	0.015	No	16	0.0009394	0.0004157	81.25	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-5	0.0013	0.001	0.015	No	16	0.00725	0.02474	100	None	No	0.05	NP (NDs)
Lithium (mg/L)	MW-3	0.008938	0.004477	0.04	No	18	0.008028	0.007936	0	None	x^(1/3)	0.05	Param.
Lithium (mg/L)	MW-4	0.8161	0.5894	0.04	Yes	18	0.7028	0.2764	0	None	No	0.05	Param.
Lithium (mg/L)	MW-5	0.005	0.0039	0.04	No	18	0.0099	0.02256	16.67	None	No	0.05	NP (normality)
Mercury (mg/L)	MW-3	0.0002	0.0002	0.002	No	16	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-4	0.0002	0.0002	0.002	No	16	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-5	0.0002	0.0002	0.002	No	16	0.0002	0	100	None	No	0.05	NP (NDs)
Molybdenum (mg/L)	MW-3	0.2455	0.1577	0.1	Yes	18	0.2128	0.1183	0	None	sqrt(x)	0.05	Param.
Molybdenum (mg/L)	MW-4	0.66	0.41	0.1	Yes	18	0.5756	0.2472	0	None	No	0.05	NP (normality)
Molybdenum (mg/L)	MW-5	0.0057	0.0036	0.1	No	18	0.02137	0.06956	16.67	None	No	0.05	NP (normality)
Selenium (mg/L)	MW-3	0.2067	0.1096	0.05	Yes	18	0.1758	0.1371	0	None	sqrt(x)	0.05	Param.
Selenium (mg/L)	MW-4	0.01	0.0048	0.05	No	18	0.04096	0.1445	0	None	No	0.05	NP (normality)
Selenium (mg/L)	MW-5	0.004205	0.001678	0.05	No	18	0.00998	0.02285	22.22	Kaplan-Meier	In(x)	0.05	Param.
Thallium (mg/L)	MW-3	0.001	0.0005	0.002	No	16	0.000625	0.0002236	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-4	0.001	0.0005	0.002	No	16	0.000625	0.0002236	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-5	0.001	0.0005	0.002	No	16	0.003719	0.01234	100	None	No	0.05	NP (NDs)
Arsenic (mg/L)	MW-3	0.002792	0.002097	0.01	No	18	0.002444	0.0008466	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-4	0.003731	0.002814	0.01	No	18	0.003272	0.001118	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-5	0.01531	0.007148	0.01	No	10	0.01123	0.007042	0	None	No	0.05	Param.



STATISTICAL ANALYSIS REPORT

APRIL 2023, FIRST SEMIANNUAL EVENT

AES PUERTO RICO LP, GUAYAMA, PR

This Statistical Analysis Report describes the procedures and findings of a statistical evaluation performed on the groundwater data available through the April 2023 sampling event collected from the groundwater monitoring well network at AES Puerto Rico, LP (AES-PR) in Guayama, Puerto Rico.

Groundwater monitoring and statistical analysis were performed in compliance with the groundwater monitoring and corrective action requirements of the United States Environmental Protection Agency's (USEPA's) Coal Combustion Residuals Rule (CCR Rule). Statistical evaluation was performed following the procedures described in the PE-Certified Statistical Analysis Plan included in the document entitled *Groundwater Monitoring System & Sampling and Analysis Program, AES Puerto Rico LP, Guayama, Puerto Rico* (DNA, August 2017). The statistical methods employed are in accordance with the CCR Rule and USEPA's guidance document entitled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (USEPA 2009), commonly referred to as the Unified Guidance. The Unified Guidance describes the methodologies for statistical analysis of groundwater data that are recommended by the USEPA, which meet the statistical testing requirements under 40 CFR §257.93(f)(1-5) and the performance standards under 40 CFR §257.93(g)(1-2).

The CCR monitoring well network at AES-PR consists of five groundwater monitoring wells installed pursuant to 40 CFR §257.91 to monitor the groundwater quality of the CCR unit at AES-PR. This monitoring well network consists of the following:

- **Upgradient Wells:** MW-1 and MW-2; and
- **Downgradient Wells:** MW-3, MW-4, and MW-5.

Wells MW-1 and MW-2 are located hydraulically upgradient from the CCR Unit. Therefore, analytical data from groundwater samples collected from these upgradient wells are statistically evaluated to calculate site background levels for the CCR constituents (see below). Wells MW-3, MW-4, and MW-5 are located hydraulically downgradient of the CCR Unit. Therefore, analytical data from groundwater samples collected from these downgradient wells are statistically analyzed to evaluate compliance with the groundwater quality requirements in the CCR Rule.

The CCR constituents that are included in the groundwater monitoring program at AES-PR are those listed in Appendix III and Appendix IV to 40 CFR Part 257. These are as follows:

- **Appendix III Constituents** (Detection Monitoring): boron, calcium, chloride, fluoride, pH, sulfate, and Total Dissolved Solids (TDS); and

- **Appendix IV Constituents** (Assessment Monitoring): antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 and 228 combined.

On July 16, 2018, AES-PR established an assessment monitoring program pursuant to 40 CFR 257.94(e) and 257.95. Therefore, statistical evaluation of the constituents listed in Appendix IV to 40 CFR Part 257 was performed as required under assessment monitoring, and evaluation of a statistically significant increase over background levels for one or more constituents listed in Appendix III was not warranted.

Statistical analyses were performed using Sanitas™ Statistical Software. Sanitas™ is a software package that offers comprehensive RCRA statistics for Subtitle C and D facilities and incorporates the statistical tests and methods recommended in the Unified Guidance.

Below is a description of the statistical methods, followed by the statistical evaluation results corresponding to the April 2023 semiannual groundwater sampling event.

Statistical Methods

Data Screening

Handling of Datasets with Non-Detect Results

Note that statistical analyses are not required on well/constituent pairs containing 100% non-detects according to the Unified Guidance.

Where available, estimated results less than the reporting limit (i.e., “J” flagged data) were used in the statistical evaluation. Groundwater analytical data with non-detect results were handled as follows:

- Datasets containing less than 15% non-detects were replaced with one-half the reporting limit (RL). The reporting limit used for non-detects was the practical quantitation limit (PQL) as reported by the analytical laboratory (identified as “RL” in laboratory analytical reports).
- Datasets containing between 15-50% non-detects were submitted to the Kaplan-Meier adjustments. This method adjusts the mean and standard deviation of the dataset to account for non-detect values.
- Nonparametric statistics were used on datasets containing more than 50% non-detects. Non-detects were set at the RL (i.e., PQL) for statistical testing.

Upgradient Wells (Background Data)

The background data from upgradient wells MW-1 and MW-2 were screened and tested using various graphical displays and statistical tests. Even though background levels are not updated after each sampling event (see below), all background data are screened for potential outliers

and temporal trends, which may indicate natural variability in groundwater quality unrelated to practices at the facility.

The background data screening procedure was as follows:

- Prepared time series plots to visually screen for suspected outliers and trends in the concentrations of CCR constituents.
- Prepared box plots to screen for variation within individual wells and between wells.
- Tested the data distribution using the Shapiro-Wilk test for normality.
- Whenever possible, non-normally distributed data were transformed into normally distributed data using the Ladder of Powers method. In this method, the data is submitted to the following transformation sequence: x , $x^{1/2}$, x^2 , $x^{1/3}$, x^3 , $\ln(x)$, x^4 , x^5 , x^6 , until a suitable transformation is applied to normalize the data.
- Formally tested the pooled background data from MW-1 and MW-2 for outliers using Tukey's statistical test. Confirmed outliers were flagged.
- Formally tested for temporal trends for the proposed background data using the Sen's Slope/Mann Kendall trend tests to identify statistical increasing or decreasing trends, which may indicate natural variability in groundwater at upgradient wells.

Downgradient Wells

The groundwater data collected from the sampling of downgradient wells MW-3, MW-4, and MW-5 were visually evaluated by plotting time series and box plots. Data distribution in individual downgradient wells was tested using the Shapiro-Wilk test for normality. Whenever possible, non-normal data were transformed into normally distributed data using the Ladder of Powers method. Each downgradient well dataset was subsequently used to construct confidence intervals for each detected Appendix IV constituent and compared to the associated Groundwater Protection Standard (GWPS) as described below.

Updating Background Levels

Background levels were established following the initial eight rounds of upgradient-well sampling completed in 2017. The Unified Guidance recommends that at least four to eight new measurements be available before background data undergo a statistical evaluation to update background levels. Background levels were last updated after the October 2022 sampling event and will be statistically reassessed when groundwater results from the 2024 second semiannual sampling event become available.

Establishing Groundwater Protection Standards

During assessment monitoring, downgradient well concentrations of detected Appendix IV constituents were statistically compared to the corresponding GWPS. The GWPS for all detected Appendix IV constituents were calculated in accordance with 40 CFR §257.95(h).

Per 40 CFR §257.95(h) and the USEPA amendments to §257.95 of July 30, 2018,¹ which promulgated CCR-Rule numeric criteria for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L), the GWPS will be:

- The maximum contaminant level (MCL) established under 40 CFR §§141.62 and 141.66;
- The CCR-Rule specified numeric criteria for constituents for which an MCL has not been established (i.e., cobalt, lead, lithium, and molybdenum); or
- The corresponding background concentration when the background level is higher than the MCL or CCR-Rule specified numeric criteria.

Determination of Statistically Significant Level

The groundwater data were statistically evaluated by comparing the confidence intervals for detected constituents in downgradient wells against the associated GWPS. The lower confidence limit (LCL) of the mean, or median for nonparametric analysis, was computed for each detected Appendix IV constituent, and a statistically significant level (SSL) was identified if the LCL exceeded the respective GWPS.

Parametric confidence intervals were calculated when the data followed a normal or transformed-normal distribution. Nonparametric confidence intervals were computed when the data could not be transformed to normality or when the dataset contained more than 50% non-detects. Parametric and nonparametric confidence intervals were constructed with a 95% confidence level.

Statistical Evaluation Results

Descriptive Statistics

Attachment 1 provides the Sanitas™ descriptive statistics output for all available data through April 2023, showing a summary of descriptive statistics (e.g., mean, standard deviation, median, %ND) from box plot analysis for all background and downgradient wells. Additional statistics (e.g., sample distribution, significance level) are provided under the pertinent statistical test output file.

Outlier and Trend Evaluation

The outlier analyses performed on all available pooled background data through the April 2023 sampling event identified one outlier value for cobalt (0.0028 mg/L) in the groundwater sample collected from MW-2 on April 11, 2022 (**Attachment 2**). This value was not excluded from the dataset, given that background levels were not updated in April 2023. Data outliers will be

¹ See Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.

reassessed in future sampling events. Additional data outliers from extreme values excluded in previously sampling events were not identified.²

Attachment 3 provides a summary of the trend test results for the upgradient wells. Statistically significant decreasing trends were identified for arsenic in well MW-2, and barium in MW-1. However, their negative slope values are nearly two or more orders of magnitude less than the corresponding GWPS for arsenic (0.01 mg/L) and barium (2 mg/L), respectively. The background dataset will be reassessed for trends in future sampling events.

Background Levels

Background levels were not updated following the April 2023 sampling event and remained as established from the groundwater data through October 2022 (**Attachment 4**).

Groundwater Protection Standards

Attachment 4 provides a summary of background levels and GWPS determined for all available data through April 2023.

Confidence Intervals

Attachment 5 provides a comparison of the Lower Confidence Limit (LCL) for each downgradient well/constituent pair against the associated GWPS (*i.e.*, “Compliance” limit). From this statistical comparison, the following SSLs were identified:

- Lithium: MW-4
- Molybdenum: MW-3 and MW-4
- Selenium: MW-3

Based on the statistical evaluation of the dataset through the April 2023 sampling event, the CCR unit at AES-PR will remain in assessment monitoring.

² Extreme selenium outliers from the background well data were excluded in previous sampling events. However, the flagged selenium values were kept in the database and will be statistically reevaluated in future sampling events as new data become available.

REFERENCES

DNA-Environment, LLC. August 2017. *Groundwater Monitoring System & Sampling and Analysis Program, AES Puerto Rico LP, Guayama, Puerto Rico.*

USEPA (United States Environmental Protection Agency). 2009. *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance.* Washington, DC: EPA. EPA 530/R-09-007.

ATTACHMENT 1

BOX PLOT SUMMARY: ALL CCR WELLS (APRIL 2023)

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 4:26 PM

Constituent	Well	N	Mean	Std.Dev.	Std.Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	MW-1 (bg)	18	0.002472	0.0005809	0.0001369	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-2 (bg)	18	0.002472	0.0005809	0.0001369	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-3	18	0.002311	0.0006893	0.0001625	0.0025	0.001	0.003	83.33
Antimony (mg/L)	MW-4	18	0.002328	0.0006524	0.0001538	0.0025	0.001	0.003	72.22
Antimony (mg/L)	MW-5	18	0.008106	0.02294	0.005408	0.0025	0.001	0.1	94.44
Barium (mg/L)	MW-1 (bg)	19	0.04537	0.0121	0.002775	0.046	0.019	0.063	0
Barium (mg/L)	MW-2 (bg)	19	0.1226	0.03036	0.006965	0.11	0.089	0.22	0
Barium (mg/L)	MW-3	19	0.2294	0.1317	0.03021	0.22	0.072	0.66	0
Barium (mg/L)	MW-4	19	0.04805	0.009083	0.002084	0.046	0.035	0.061	0
Barium (mg/L)	MW-5	19	0.03579	0.004995	0.001146	0.034	0.028	0.05	5.263
Beryllium (mg/L)	MW-1 (bg)	17	0.001882	0.0007609	0.0001846	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-2 (bg)	17	0.001882	0.0007609	0.0001846	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-3	17	0.001841	0.0008289	0.000201	0.0025	0.00029	0.0025	94.12
Beryllium (mg/L)	MW-4	17	0.001924	0.0007285	0.0001767	0.0025	0.001	0.0025	94.12
Beryllium (mg/L)	MW-5	17	0.007706	0.02379	0.005771	0.0025	0.001	0.1	100
Cadmium (mg/L)	MW-1 (bg)	18	0.001778	0.0009428	0.0002222	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-2 (bg)	18	0.001778	0.0009428	0.0002222	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-3	18	0.001344	0.001081	0.0002547	0.000815	0.00018	0.0025	55.56
Cadmium (mg/L)	MW-4	18	0.001229	0.001049	0.0002472	0.000535	0.00018	0.0025	61.11
Cadmium (mg/L)	MW-5	18	0.007211	0.02318	0.005463	0.0025	0.000091	0.1	88.89
Chromium (mg/L)	MW-1 (bg)	17	0.002818	0.00137	0.0003322	0.0025	0.0007	0.005	82.35
Chromium (mg/L)	MW-2 (bg)	17	0.003141	0.001386	0.0003361	0.0025	0.001	0.005	94.12
Chromium (mg/L)	MW-3	17	0.0045	0.006963	0.001689	0.0025	0.001	0.031	82.35
Chromium (mg/L)	MW-4	17	0.002865	0.001373	0.0003331	0.0025	0.001	0.005	82.35
Chromium (mg/L)	MW-5	17	0.0088	0.02353	0.005707	0.0025	0.001	0.1	94.12
Cobalt (mg/L)	MW-1 (bg)	19	0.0007695	0.0002537	0.00005819	0.00069	0.00046	0.00125	10.53
Cobalt (mg/L)	MW-2 (bg)	19	0.00164	0.0009832	0.0002256	0.0025	0.00028	0.0028	57.89
Cobalt (mg/L)	MW-3	19	0.002361	0.0006853	0.0001572	0.0022	0.00085	0.004	0
Cobalt (mg/L)	MW-4	19	0.001894	0.001944	0.000446	0.0017	0.00083	0.0098	0
Cobalt (mg/L)	MW-5	19	0.005542	0.01077	0.002471	0.003	0.0027	0.05	5.263
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	19	0.299	0.1877	0.04306	0.333	-0.168	0.62	0
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	19	0.2457	0.2796	0.06415	0.196	-0.0965	0.839	0
Combined Radium 226 + 228 (pCi/L)	MW-3	19	0.3791	0.3645	0.08362	0.311	-0.0595	1.49	0
Combined Radium 226 + 228 (pCi/L)	MW-4	19	0.3336	0.3258	0.07474	0.341	-0.258	1.12	0
Combined Radium 226 + 228 (pCi/L)	MW-5	19	0.3071	0.2256	0.05176	0.3	-0.0397	0.723	0
Fluoride (mg/L)	MW-1 (bg)	19	0.6137	0.1173	0.02691	0.61	0.4	0.91	0
Fluoride (mg/L)	MW-2 (bg)	19	0.5046	0.129	0.0296	0.48	0.35	0.728	0
Fluoride (mg/L)	MW-3	19	1.792	0.3295	0.0756	1.8	0.87	2.3	0
Fluoride (mg/L)	MW-4	19	1.179	2.143	0.4916	0.66	0.23	10	5.263
Fluoride (mg/L)	MW-5	19	0.5155	0.3766	0.0864	0.46	0.05	2	10.53
Lead (mg/L)	MW-1 (bg)	17	0.0009982	0.0003634	0.00008814	0.0013	0.0005	0.0013	94.12
Lead (mg/L)	MW-2 (bg)	17	0.001029	0.0003653	0.0000886	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-3	17	0.001029	0.0003653	0.0000886	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-4	17	0.0009135	0.0004163	0.000101	0.001	0.0003	0.0013	82.35
Lead (mg/L)	MW-5	17	0.006836	0.02401	0.005824	0.0013	0.00022	0.1	94.12
Lithium (mg/L)	MW-1 (bg)	19	0.004142	0.003206	0.0007356	0.005	0.00054	0.01	63.16
Lithium (mg/L)	MW-2 (bg)	19	0.004162	0.003187	0.0007311	0.005	0.00052	0.01	68.42
Lithium (mg/L)	MW-3	19	0.007753	0.007805	0.001791	0.0056	0.0014	0.034	0
Lithium (mg/L)	MW-4	19	0.6853	0.2793	0.06407	0.74	0.13	1.1	0
Lithium (mg/L)	MW-5	19	0.009516	0.02198	0.005043	0.0044	0.0014	0.1	15.79

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 4:26 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Mercury (mg/L)	MW-1 (bg)	17	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-2 (bg)	17	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-3	17	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-4	17	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-5	17	0.0002	0	0	0.0002	0.0002	0.0002	100
Molybdenum (mg/L)	MW-1 (bg)	19	0.006851	0.005808	0.001332	0.005	0.00076	0.015	57.89
Molybdenum (mg/L)	MW-2 (bg)	19	0.007352	0.006184	0.001419	0.005	0.00085	0.015	63.16
Molybdenum (mg/L)	MW-3	19	0.2079	0.1169	0.02682	0.19	0.064	0.53	0
Molybdenum (mg/L)	MW-4	19	0.6189	0.3057	0.07014	0.47	0.35	1.4	0
Molybdenum (mg/L)	MW-5	19	0.02044	0.06772	0.01554	0.005	0.0022	0.3	15.79
Selenium (mg/L)	MW-1 (bg)	18	0.006911	0.004395	0.001036	0.00605	0.0014	0.016	0
Selenium (mg/L)	MW-2 (bg)	18	0.001531	0.001132	0.0002669	0.0013	0.00035	0.0045	38.89
Selenium (mg/L)	MW-3	19	0.169	0.1365	0.03131	0.13	0.026	0.57	0
Selenium (mg/L)	MW-4	19	0.03933	0.1407	0.03227	0.0064	0.0012	0.62	0
Selenium (mg/L)	MW-5	19	0.009735	0.02223	0.005101	0.0034	0.00046	0.1	21.05
Thallium (mg/L)	MW-1 (bg)	17	0.0006471	0.0002348	0.00005696	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-2 (bg)	17	0.0006471	0.0002348	0.00005696	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-3	17	0.0006471	0.0002348	0.00005696	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-4	17	0.0006471	0.0002348	0.00005696	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-5	17	0.003559	0.01197	0.002903	0.0005	0.0005	0.05	100
Arsenic (mg/L)	MW-1 (bg)	19	0.0008858	0.0004316	0.00009901	0.00081	0.00029	0.0018	36.84
Arsenic (mg/L)	MW-2 (bg)	19	0.0008563	0.0004308	0.00009884	0.00083	0.00026	0.0014	36.84
Arsenic (mg/L)	MW-3	19	0.002368	0.000887	0.0002035	0.0024	0.001	0.0038	0
Arsenic (mg/L)	MW-4	19	0.003211	0.001119	0.0002567	0.0033	0.0018	0.0059	0
Arsenic (mg/L)	MW-5	11	0.01097	0.006735	0.002031	0.0084	0.003	0.022	0

ATTACHMENT 2

OUTLIER ANALYSIS SUMMARY: BACKGROUND WELLS (APRIL 2023)

Outlier Analysis - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 3:17 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Cobalt (mg/L)	MW-1,MW-2	Yes	0.0028	n/a w/combined bg	NP	NaN	38	0.0008363	0.0004013	normal	ShapiroWilk

Outlier Analysis - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 3:17 PM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	36	0.003	0	unknown	ShapiroWilk
Arsenic (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	38	0.0007684	0.0003339	normal	ShapiroWilk
Barium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	38	0.08397	0.04528	normal	ShapiroWilk
Beryllium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.001	0	unknown	ShapiroWilk
Cadmium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	36	0.0005	0	unknown	ShapiroWilk
Chromium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.004656	0.001043	unknown	ShapiroWilk
Cobalt (mg/L)	MW-1,MW-2	Yes	0.0028	n/a w/combined bg	NP	NaN	38	0.0008363	0.0004013	normal	ShapiroWilk
Combined Radium 226 + 228 (pCi/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	38	0.2723	0.2365	normal	ShapiroWilk
Fluoride (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	38	0.5592	0.1336	normal	ShapiroWilk
Lead (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.0005079	0.0000463	unknown	ShapiroWilk
Lithium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	38	0.006967	0.004272	normal	ShapiroWilk
Mercury (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.0002	0	unknown	ShapiroWilk
Molybdenum (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	38	0.003733	0.001649	normal	ShapiroWilk
Selenium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	36	0.004396	0.00407	normal	ShapiroWilk
Thallium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	34	0.001	0	unknown	ShapiroWilk

ATTACHMENT 3

TREND TEST SUMMARY: BACKGROUND WELLS (APRIL 2023)

Trend Test - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 3:11 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	MW-2 (bg)	-0.0001485	-75	-74	Yes	19	36.84	n/a	n/a	0.01	NP
Barium (mg/L)	MW-1 (bg)	-0.003692	-75	-74	Yes	19	0	n/a	n/a	0.01	NP

Trend Test - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 3:11 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-1 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Antimony (mg/L)	MW-2 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-1 (bg)	-0.00001793	-26	-74	No	19	36.84	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-2 (bg)	-0.0001485	-75	-74	Yes	19	36.84	n/a	n/a	0.01	NP
Barium (mg/L)	MW-1 (bg)	-0.003692	-75	-74	Yes	19	0	n/a	n/a	0.01	NP
Barium (mg/L)	MW-2 (bg)	0.004876	54	74	No	19	0	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-1 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-2 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	MW-1 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	MW-2 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-1 (bg)	0	-15	-63	No	17	82.35	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-2 (bg)	0	2	63	No	17	94.12	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-1 (bg)	-0.000002138	-2	-74	No	19	10.53	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-2 (bg)	0	-36	-74	No	19	57.89	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	-0.02668	-29	-74	No	19	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	-0.009406	-7	-74	No	19	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-1 (bg)	0.0365	73	74	No	19	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-2 (bg)	0.0364	61	74	No	19	0	n/a	n/a	0.01	NP
Lead (mg/L)	MW-1 (bg)	0	0	63	No	17	94.12	n/a	n/a	0.01	NP
Lead (mg/L)	MW-2 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-1 (bg)	0	-7	-74	No	19	63.16	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-2 (bg)	0	9	74	No	19	68.42	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-1 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-2 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-1 (bg)	0	38	74	No	19	57.89	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-2 (bg)	0	32	74	No	19	63.16	n/a	n/a	0.01	NP
Selenium (mg/L)	MW-1 (bg)	-0.00003141	-4	-68	No	18	0	n/a	n/a	0.01	NP
Selenium (mg/L)	MW-2 (bg)	0.0004453	59	68	No	18	38.89	n/a	n/a	0.01	NP
Thallium (mg/L)	MW-1 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Thallium (mg/L)	MW-2 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP

ATTACHMENT 4

BACKGROUND LEVELS AND GROUNDWATER PROTECTION STANDARDS (APRIL 2023)

Background Levels and Groundwater Protection Standards Corresponding to the April 2023 Sampling Event
 AES Puerto Rico LP, Guayama, Puerto Rico

Constituent	Units	MCL	CCR-Rule Specified Criteria ¹	Background Level ²	GWPS
Antimony	mg/L	0.006		0.003	0.006
Arsenic	mg/L	0.010		0.0018	0.010
Barium	mg/L	2		0.1666	2
Beryllium	mg/L	0.004		0.001	0.004
Cadmium	mg/L	0.005		0.0005	0.005
Chromium	mg/L	0.1		0.005	0.1
Cobalt	mg/L		0.006	0.0028	0.006
Fluoride	mg/L	4.0		0.8497	4.0
Lead	mg/L		0.015	0.0013	0.015
Lithium	mg/L		0.040	0.01	0.040
Mercury	mg/L	0.002		0.0002	0.002
Molybdenum	mg/L		0.100	0.015	0.100
Selenium	mg/L	0.05		0.01346	0.05
Thallium	mg/L	0.002		0.001	0.002
Radium 266 and 228 combined	pCi/L	5		0.7892	5

Notes:

mg/L = milligram per Liter

MCL = Maximum Contaminant Level

GWPS = Groundwater Protection Standard

¹See Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.

²Background levels were updated through October 2022 data and computed as the Upper Tolerance Limit from the pooled background dataset.

ATTACHMENT 5

CONFIDENCE INTERVAL SUMMARY (APRIL 2023):

DETERMINATION OF STATISTICALLY SIGNIFICANT LEVEL

Confidence Interval - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 4:44 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	MW-4	0.7964	0.5742	0.04	Yes	19	0.6853	0.2793	0	None	No	0.05	Param.
Molybdenum (mg/L)	MW-3	0.2385	0.155	0.1	Yes	19	0.2079	0.1169	0	None	sqrt(x)	0.05	Param.
Molybdenum (mg/L)	MW-4	0.66	0.41	0.1	Yes	19	0.6189	0.3057	0	None	No	0.05	NP (normality)
Selenium (mg/L)	MW-3	0.1972	0.1045	0.05	Yes	19	0.169	0.1365	0	None	sqrt(x)	0.05	Param.

Confidence Interval - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2023_Statistics_AES Printed 6/29/2023, 4:44 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-3	0.003	0.0017	0.006	No	18	0.002311	0.0006893	83.33	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-4	0.0028	0.0022	0.006	No	18	0.002328	0.0006524	72.22	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-5	0.003	0.0025	0.006	No	18	0.008106	0.02294	94.44	None	No	0.05	NP (NDs)
Barium (mg/L)	MW-3	0.2633	0.1705	2	No	19	0.2294	0.1317	0	None	sqrt(x)	0.05	Param.
Barium (mg/L)	MW-4	0.05133	0.04409	2	No	19	0.04805	0.009083	0	None	sqrt(x)	0.05	Param.
Barium (mg/L)	MW-5	0.03778	0.0338	2	No	19	0.03579	0.004995	5.263	None	No	0.05	Param.
Beryllium (mg/L)	MW-3	0.0025	0.001	0.004	No	17	0.001841	0.0008289	94.12	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-4	0.0025	0.001	0.004	No	17	0.001924	0.0007285	94.12	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-5	0.0025	0.001	0.004	No	17	0.007706	0.02379	100	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-3	0.0025	0.00042	0.005	No	18	0.001344	0.001081	55.56	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-4	0.0025	0.00036	0.005	No	18	0.001229	0.001049	61.11	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-5	0.0025	0.0005	0.005	No	18	0.007211	0.02318	88.89	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-3	0.005	0.0024	0.1	No	17	0.0045	0.006963	82.35	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-4	0.0035	0.002	0.1	No	17	0.002865	0.001373	82.35	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-5	0.0036	0.0025	0.1	No	17	0.0088	0.02353	94.12	None	No	0.05	NP (NDs)
Cobalt (mg/L)	MW-3	0.002633	0.002088	0.006	No	19	0.002361	0.0006853	0	None	No	0.05	Param.
Cobalt (mg/L)	MW-4	0.0017	0.0012	0.006	No	19	0.001894	0.001944	0	None	No	0.05	NP (normality)
Cobalt (mg/L)	MW-5	0.0033	0.0029	0.006	No	19	0.005542	0.01077	5.263	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-3	0.429	0.214	5	No	19	0.3791	0.3645	0	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-4	0.4632	0.204	5	No	19	0.3336	0.3258	0	None	No	0.05	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	0.3969	0.2174	5	No	19	0.3071	0.2256	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-3	1.923	1.66	4	No	19	1.792	0.3295	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-4	0.78	0.63	4	No	19	1.179	2.143	5.263	None	No	0.05	NP (normality)
Fluoride (mg/L)	MW-5	0.49	0.42	4	No	19	0.5155	0.3766	10.53	None	No	0.05	NP (normality)
Lead (mg/L)	MW-3	0.0013	0.001	0.015	No	17	0.001029	0.0003653	100	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-4	0.0013	0.0005	0.015	No	17	0.0009135	0.0004163	82.35	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-5	0.0013	0.001	0.015	No	17	0.006836	0.02401	94.12	None	No	0.05	NP (NDs)
Lithium (mg/L)	MW-3	0.007662	0.004114	0.04	No	19	0.007753	0.007805	0	None	In(x)	0.05	Param.
Lithium (mg/L)	MW-4	0.7964	0.5742	0.04	Yes	19	0.6853	0.2793	0	None	No	0.05	Param.
Lithium (mg/L)	MW-5	0.0048	0.0038	0.04	No	19	0.009516	0.02198	15.79	None	No	0.05	NP (normality)
Mercury (mg/L)	MW-3	0.0002	0.0002	0.002	No	17	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-4	0.0002	0.0002	0.002	No	17	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-5	0.0002	0.0002	0.002	No	17	0.0002	0	100	None	No	0.05	NP (NDs)
Molybdenum (mg/L)	MW-3	0.2385	0.155	0.1	Yes	19	0.2079	0.1169	0	None	sqrt(x)	0.05	Param.
Molybdenum (mg/L)	MW-4	0.66	0.41	0.1	Yes	19	0.6189	0.3057	0	None	No	0.05	NP (normality)
Molybdenum (mg/L)	MW-5	0.0057	0.0037	0.1	No	19	0.02044	0.06772	15.79	None	No	0.05	NP (normality)
Selenium (mg/L)	MW-3	0.1972	0.1045	0.05	Yes	19	0.169	0.1365	0	None	sqrt(x)	0.05	Param.
Selenium (mg/L)	MW-4	0.01	0.0052	0.05	No	19	0.03933	0.1407	0	None	No	0.05	NP (normality)
Selenium (mg/L)	MW-5	0.004259	0.001778	0.05	No	19	0.009735	0.02223	21.05	Kaplan-Meier	In(x)	0.05	Param.
Thallium (mg/L)	MW-3	0.001	0.0005	0.002	No	17	0.0006471	0.0002348	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-4	0.001	0.0005	0.002	No	17	0.0006471	0.0002348	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-5	0.001	0.0005	0.002	No	17	0.003559	0.01197	100	None	No	0.05	NP (NDs)
Arsenic (mg/L)	MW-3	0.002721	0.002016	0.01	No	19	0.002368	0.000887	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-4	0.003562	0.002716	0.01	No	19	0.003211	0.001119	0	None	sqrt(x)	0.05	Param.
Arsenic (mg/L)	MW-5	0.01465	0.007292	0.01	No	11	0.01097	0.006735	0	None	No	0.05	Param.