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January 31, 2023
Project No. DNA-220214

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

2022 Annual Groundwater Monitoring and Corrective Action Report
AES Puerto Rico LP, Guayama, Puerto Rico

Dear Ms. Ortiz:

DNA-Environment, LLC (DNA) has prepared this 2022 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)]:

At the beginning and the end of the 2022 reporting period, the CCR unit operated under the assessment monitoring program per §257.95. Pursuant to 40 CFR 257.94(e) and 257.95, the facility established an assessment monitoring program on July 16, 2018. 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 pursuant to 40 CFR 257.94(e) was not warranted. At the end of the 2022 reporting period, the most current statistical evaluation of groundwater monitoring data, which was completed in June 2022, determined statistically significant levels above the associated groundwater protection standards of selenium and molybdenum in groundwater samples collected from Monitoring Well MW-3, and lithium and molybdenum from Monitoring Well MW-4.

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).*

The following key actions were completed in 2022 to comply with the CCR Rule:

- Assessment-monitoring sampling events were conducted in April and October 2022 in accordance with 40 CFR §257.95.
- Statistical evaluations were completed in January and June 2022 per 40 CFR §257.93(h) and §257.95(h).[1] These evaluations resulted in statistically significant levels above the groundwater protection standards (GWPS) of lithium, molybdenum, and selenium in groundwater samples collected from certain monitoring wells at AES-PR (see below).
- In 2022, the installation of a composite liner was completed in 90% of the Phase I portion of the Agremax Staging Area.
- In 2022, 75% of the Phase II portion of the Agremax Staging Area was prepared for liner installation by commencement of removal of Agremax and placement of soil fill material.

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 January and June 2022 correspond to data evaluation through the October 2021 and April 2022 sampling events, respectively.

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 the municipality of 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. Figure 3 shows the locations of temporary 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 detection or assessment monitoring program.

Groundwater analytical results and field monitoring data for the samples collected during the 2022 CCR monitoring events are summarized in Tables 2 and 3.

§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);

AES-PR remained in the assessment monitoring program during 2022.

Statistical evaluations completed in January 2022 and June 2022 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 (see Tables 4A and 4B).

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

Assessment monitoring events were completed in April and October 2022 per §257.95(b) and §257.95(d). Tables 2 and 3 summarize the groundwater analytical results and field monitoring data for these events. Tables 4A and 4B summarize the groundwater protection standards and site background levels established in accordance with §257.95(d)(2) and §257.95(h).

Projected key activities to be completed during the 2023 calendar year include the following:

- Statistical evaluation through the October 2022 and April 2023 sampling-event results.
- Annual and semiannual assessment monitoring sampling events in accordance with 40 CFR 257.95, as applicable.

AES-PR expects that the key activities listed below will occur in 2023. However, the timing of these activities may vary depending on factors including, but not limited to, the timing of regulatory agency approvals and permits, potential issues related to the COVID-19 global pandemic, contractor availability, Agremax shipment schedules, and other logistical considerations.

- Complete Phase I and Phase II of the liner installation; and
- Establish and implement the Corrective Action Groundwater Monitoring Program in accordance with §257.98.

Other information included with the 2022 Annual Report

Appendix A includes 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 2022 and October 2022 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.

Appendix C includes a discussion of statistical methods, statistical evaluation findings, and statistical software outputs for the statistical analyses completed in 2022 (*i.e.*, statistical evaluations through October 2021 and April 2022 sampling results, respectively).[2]

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. Angelique Collier, AES US Services, LLC – w/enclosures
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

[2] Analytical reports for the October 2021 sampling event were included in the *Addendum to the 2021 CCR Annual Groundwater Monitoring and Corrective Action Report, AES Puerto Rico LP, Guayama, Puerto Rico* (March 11, 2022), available at the AES-PR's CCR Rule webpage.

TABLES

Table 1. Summary of 2022 CCR Groundwater Sampling Program, AES Puerto Rico LP, Guayama, Puerto Rico

Monitoring Well ID	Upgradient or Downgradient Well	Number of Samples Collected in 2022 *	Sample Collection Date	Monitoring Phase
MW-1	Upgradient	2	11-Apr-22 11-Oct-22	Assessment
MW-2	Upgradient	2	11-Apr-22 11-Oct-22	Assessment
MW-3	Downgradient	2	11-Apr-22 11-Oct-22	Assessment
MW-4	Downgradient	4	11-Apr-22 11-Oct-22	Assessment
MW-5	Downgradient	2	11-Apr-22 11-Oct-22	Assessment

Notes:

* 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).

Table 2. Analytical Results and Monitoring Data for Groundwater Samples Collected in April 2022
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-MW1-041122	AES-MW2-041122	AES-MW3-041122	AES-MW4-041122	AES-MW4-DUP-041122	AES-MW5-041122
	Sampling Date	4/11/22	4/11/22	4/11/22	4/11/22	4/11/22	4/11/22
Static Water Elevation (ft MSL)		5.19	5.64	-1.54	1.30	NA	-0.01
Field Parameters	**Units**						
pH	SU	7.02	6.91	6.75	6.95	NA	6.42
Conductivity	mS/cm	1.42	0.93	11.11	35.18	NA	13.46
Redox Potential	mV	48.1	364.1	407.0	-83.5	NA	56.3
Dissolved Oxygen	mg/L	0.45	0.86	0.67	0.14	NA	0.92
Turbidity	NTU	2.70	44.02	4.14	12.72	NA	16.43
Temperature	°C	29.7	31.0	30.5	32.3	NA	29.0
Analytical Results	**Units**						
Antimony	mg/L	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Arsenic	mg/L	0.00023 U	0.00042 J	0.0010	0.0020	0.0023	0.0030
Barium	mg/L	0.033	0.12	0.098	0.036	0.034	0.036
Beryllium	mg/L	0.00053 U	0.00053 U	0.00053 U	0.00053 U	0.00053 U	0.00053 U
Cadmium	mg/L	0.00017 U	0.00017 U	0.00027 J	0.00017 U	0.00017 U	0.00020 J
Chromium	mg/L	0.0014 J	0.0011 U	0.0011 J	0.0011 U	0.0011 U	0.0011 U
Cobalt	mg/L	0.00057 J	0.0028	0.0019	0.0017	0.0017	0.0037
Fluoride	mg/L	0.63	0.39	1.9	0.78	0.78	0.45
Lead	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Lithium	mg/L	0.0025 U	0.0025 U	0.0030 J	0.49	0.47	0.0030 J
Mercury	mg/L	0.000098 U	0.000098 U	0.000098 U	0.000098 U	0.000098 U	0.000098 U
Molybdenum	mg/L	0.0025 U	0.0025 U	0.12	1.0	0.97	0.0033 J
Selenium	mg/L	0.0019 J	0.00098 U	0.072	0.0076	0.010	0.0029
Thallium	mg/L	0.00057 U	0.00057 U	0.00057 U	0.00057 U	0.00057 U	0.00057 U
Radium 226 and 228 combined	pCi/L	0.267 U	-0.0562 U	0.0756 U	0.580 U	0.232 U	0.142 U
Boron	mg/L	0.22	0.17	0.79	0.96	0.89	0.29
Calcium	mg/L	100	92	300	550	530	830
Chloride	mg/L	210	100	3300	9400	9800	4500
pH (field)	SU	7.02	6.91	6.75	6.95	NA	6.42
Sulfate	mg/L	210	31	1300	11000	10000	2100
Total Dissolved Solids	mg/L	1000	600	7400	30000	31000	11000

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-041122 is the field duplicate sample of AES-MW4-041122.
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 11-April-2022, using land survey data of September 2020.

Table 3. Analytical Results and Monitoring Data for Groundwater Samples Collected in October 2022
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-MW1-101122	AES-MW2-101122	AES-MW3-101122	AES-MW4-101122	AES-MW4-DUP-101122	AES-MW5-101122
	Sampling Date	10/11/22	10/11/22	10/11/22	10/11/22	10/11/22	10/11/22
Static Water Elevation (ft MSL)		7.03	7.92	2.61	4.32	NA	3.16
Field Parameters	**Units**						
pH	SU	7.27	7.35	8.16	8.53	NA	8.28
Conductivity	mS/cm	1.88	0.97	13.80	22.03	NA	12.32
Redox Potential	mV	89.6	45.8	-48.9	-42.7	NA	-44.7
Dissolved Oxygen	mg/L	1.17	0.26	0.32	0.24	NA	0.21
Turbidity	NTU	12.26	11.98	2.69	5.81	NA	11.55
Temperature	°C	29.6	31.6	31.0	31.9	NA	31.1
Analytical Results	**Units**						
Antimony	mg/L	0.0013 U	0.0013 U	0.0013 U	0.0028 J	0.0031	0.0013 U
Arsenic	mg/L	0.00029 J	0.00026 J	0.0012	0.0018	0.0019	0.0043
Barium	mg/L	0.042	0.11	0.072	0.036	0.040	0.028
Beryllium	mg/L	0.00053 U	0.00053 U	0.00053 U	0.00053 U	0.00053 U	0.00053 U
Cadmium	mg/L	0.00017 U	0.00017 U	0.00019 J	0.00022 J	0.00017 U	0.00017 U
Chromium	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Cobalt	mg/L	0.00056 J	0.00040 U	0.0026	0.0098	0.011	0.0029
Fluoride	mg/L	0.58	0.51	2.1	0.95	0.90	0.39
Lead	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Lithium	mg/L	0.0025 U	0.0025 U	0.0030 J	0.13	0.14	0.0025 U
Mercury	mg/L	0.000098 U	0.000098 U	0.000098 U	0.000098 U	0.000098 U	0.000098 U
Molybdenum	mg/L	0.0026 J	0.0025 U	0.11	1.2	1.3	0.0057
Selenium	mg/L	0.016	0.024	0.061	0.62	0.69	0.0015 J
Thallium	mg/L	0.00057 U	0.00057 U	0.00057 U	0.00057 U	0.00057 U	0.00057 U
Radium 226 and 228 combined	pCi/L	0.338 U	0.0668 U	0.180 U	0.341 U	0.551 U	0.499
Boron	mg/L	0.23	0.18	0.88	0.85	1.0	0.36
Calcium	mg/L	110	90	390	540	570	560
Chloride	mg/L	330	110	4300	4600	4500	3500
pH (field)	SU	7.27	7.35	8.16	8.53	NA	8.28
Sulfate	mg/L	190	81	1900	6300	8000	2000
Total Dissolved Solids	mg/L	1100	600	8900	16000	17000	8300

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-101122 is the field duplicate sample of AES-MW4-101122.
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 11-October-2022, using land survey data of September 2020.

Table 4A. Statistical Evaluation through October 2021 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**	0.001	0.0018	0.1633	0.001	0.001	0.0039	0.0025	0.8696	0.0013	0.005	0.0002	0.015	0.013	0.0005	0.8573
Monitoring Well ID[1]	**Through Monitoring Date[2]**	**Lower Confidence Limit[3]**														
MW-3	4-Oct-2021	0.0017	0.00229	0.2005	0.001	0.0005	0.0024	0.002061	1.612	0.001	0.004757	0.0002	**0.1724**	**0.1179**	0.0005	0.253
MW-4	4-Oct-2021	0.0019	0.002977	0.04657	0.0017	0.00036	0.002	0.0011	0.61	0.0005	**0.6453**	0.0002	**0.4352**	0.005373	0.0005	0.1571
MW-5	4-Oct-2021	0.0025	0.008727	0.03392	0.001	0.0005	0.0025	0.0029	0.42	0.001	0.0038	0.0002	0.0025	0.002011	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 2020 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.

[1]Downgradient Monitoring Well Identification

[2]Statistical evaluation of groundwater analytical results from all groundwater monitoring events through October 4, 2021.

[3]Lower 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.

Table 4B. Statistical Evaluation through April 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)
	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**	0.001	0.0018	0.1633	0.001	0.001	0.0039	0.0025	0.8696	0.0013	0.005	0.0002	0.015	0.013	0.0005	0.8573
Monitoring Well ID[1]	**Through Monitoring Date[2]**	**Lower Confidence Limit[3]**														
MW-3	11-Apr-2022	0.0017	0.002174	0.191	0.001	0.0005	0.0024	0.00205	1.629	0.001	0.004605	0.0002	**0.1617**	**0.114**	0.0005	0.231
MW-4	11-Apr-2022	0.0022	0.002898	0.04567	0.0017	0.00036	0.002	0.0011	0.63	0.0005	**0.6332**	0.0002	**0.41**	0.005511	0.0005	0.1802
MW-5	11-Apr-2022	0.0025	0.007656	0.03405	0.001	0.0005	0.0025	0.0029	0.42	0.001	0.0038	0.0002	0.0025	0.002062	0.0005	0.2118

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 2020 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.

[1]Downgradient Monitoring Well Identification

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

[3]Lower 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

AES Puerto Rico
Approximate Property Boundary

N

0 250 500 750 1000 1250 ft

DNA-ENVIRONMENT, LLC

Figure 2

CCR Groundwater Monitoring System

AES Puerto Rico, LP
Guayama, Puerto Rico

N

0 200 400 600 ft

DNA-ENVIRONMENT, LLC

Figure 3

CCR Groundwater Monitoring System and Nature and Extent Temporary Wells

AES Puerto Rico, LP in Guayama, PR

N

0 100 200 300 ft

DNA-ENVIRONMENT, LLC

APPENDIX A

GROUNDWATER FLOW DIRECTION AND RATE

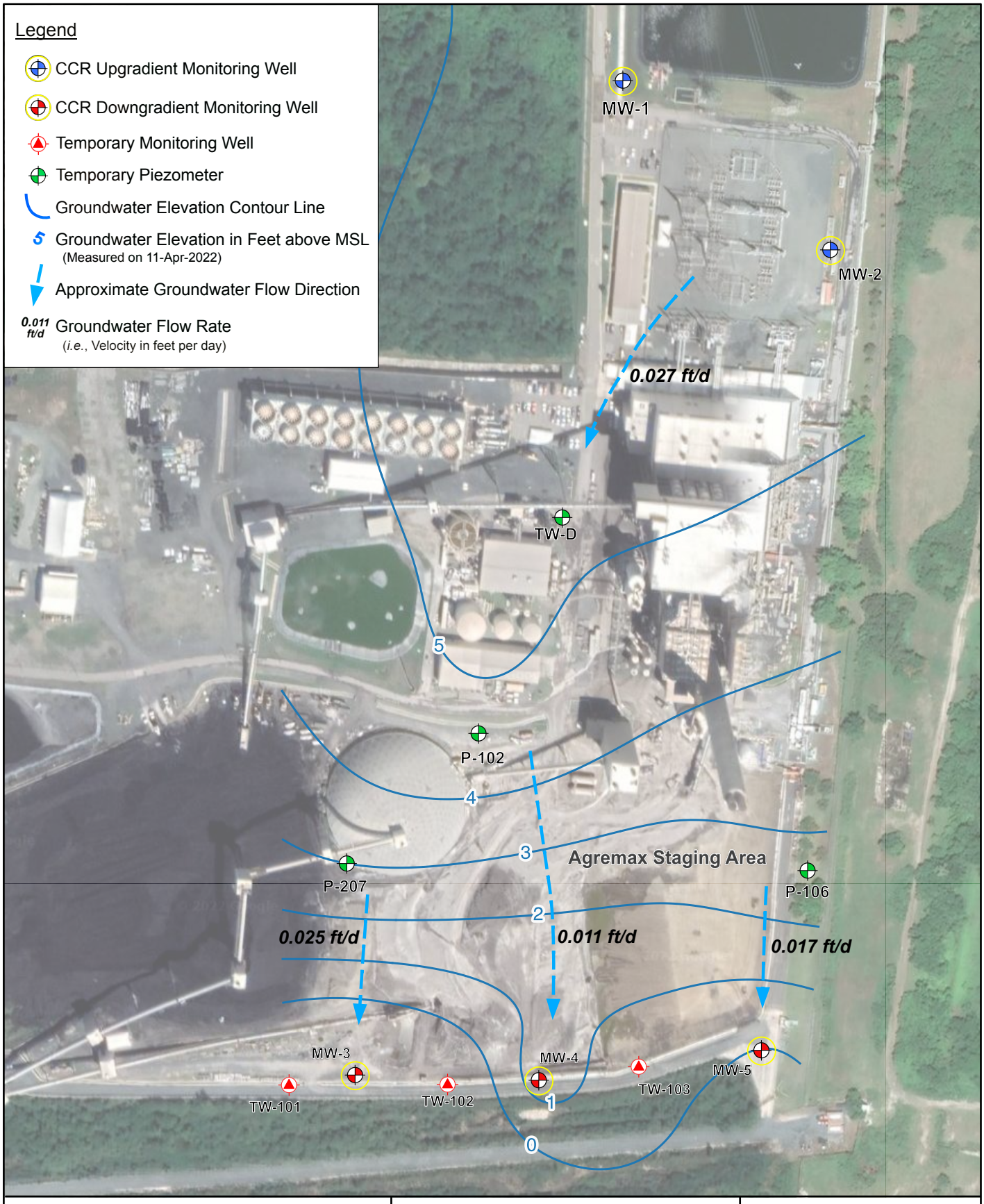

Figure A-1
April 2022 Groundwater Contour Map
AES Puerto Rico, LP
Guayama, Puerto Rico

DNA-ENVIRONMENT, LLC

Figure A-2
October 2022 Groundwater Contour Map
AES Puerto Rico, LP
Guayama, Puerto Rico

N

0 100 200 300 400 ft

DNA-ENVIRONMENT, LLC

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

April 2022 Sampling Event

		Calculations						
Uppermost Aquifer	**Flow Path Direction**	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**K_h**	**n_e**	**V (ft/d)**
North	Southwest (MW-2 to TW-D)	5.64	5.15	681.24	0.00072	9.45	0.25	0.027
South	South (P-207 to MW-3)	3.00	-1.54	378.76	0.0120	0.56	0.27	0.025
	South (P-102 to MW-4)	4.70	1.30	628.89	0.0054	0.56	0.27	0.011
	South (P-106 to MW-5)	2.64	-0.01	326.83	0.0081	0.56	0.27	0.017

October 2022 Sampling Event

		Calculations						
Uppermost Aquifer	**Flow Path Direction**	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**K_h**	**n_e**	**V (ft/d)**
North	Southwest (MW-2 to TW-D)	7.92	7.84	681.24	0.00012	9.45	0.25	0.004
South	South (P-207 to MW-3)	6.41	2.61	378.76	0.0100	0.56	0.27	0.021
	South (P-102 to MW-4)	7.77	4.32	628.89	0.0055	0.56	0.27	0.011
	South (P-106 to MW-5)	6.02	3.16	326.83	0.0088	0.56	0.27	0.018

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 elavation between points

Δl = distance between location 1 and 2

Δh/Δl = 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 2022 AND OCTOBER 2022)

LABORATORY ANALYTICAL REPORTS: APRIL 2022 SAMPLING EVENT

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-215017-1
Client Project/Site: CCR GW Monitoring, AES Puerto Rico, LP
Revision: 1

For:
DNA-Environment, LLC
35 Calle Juan C Borbon
Ste 67-227
Guaynabo, Puerto Rico 00969-5375

Attn: Alberto Melendez

Authorized for release by:
5/13/2022 3:01:16 PM

Richard Wright, Senior Project Manager
(708)746-0045
Richard.Wright@et.eurofinsus.com

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Case Narrative

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-215017-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-215017-1

Revision
The report being provided is a revision of the original report dated on 5/2/2022. The report (revision 1) is being revised due to: Pages and information that do not pertain to the metals/inorganics analyses have been removed.

Receipt
The samples were received on 4/13/2022 9:55 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 0.4º C.

Metals
Method 6020B: The following samples were diluted to bring the concentration of target analytes within the calibration range: AES-MW3-041122 (500-215017-3), AES-MW4-041122 (500-215017-4), AES-MW4-DUP-041122 (500-215017-5) and AES-MW5-041122 (500-215017-6). Elevated reporting limits (RL's) are reported for Ca.

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

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

Detection Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041122 — Lab Sample ID: 500-215017-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.033		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.22		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	100		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0014	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.00057	J	0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Selenium	0.0019	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	210		20	9.5	mg/L	100		9056A	Total/NA
Total Dissolved Solids	1000		10	4.3	mg/L	1		SM 2540C	Total/NA
Chloride	210		20	10	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.63		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	7.02				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW2-041122 — Lab Sample ID: 500-215017-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00042	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.12		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.17		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	92		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0028		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Sulfate	31		1.0	0.48	mg/L	5		9056A	Total/NA
Total Dissolved Solids	600		10	4.3	mg/L	1		SM 2540C	Total/NA
Chloride	100		20	10	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.39		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.91				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW3-041122 — Lab Sample ID: 500-215017-3

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	0.098		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.79		0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00027	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	300		2.0	0.44	mg/L	10		6020B	Total Recoverable
Chromium	0.0011	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0019		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0030	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041122 (Continued)
Lab Sample ID: 500-215017-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.12		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.072		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	1300		200	95	mg/L	1000		9056A	Total/NA
Total Dissolved Solids	7400		100	43	mg/L	1		SM 2540C	Total/NA
Chloride	3300		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.9		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.75				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-041122
Lab Sample ID: 500-215017-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0020		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.036		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.96		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	550		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.0017		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.49		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	1.0		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0076		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	11000		400	190	mg/L	2000		9056A	Total/NA
Total Dissolved Solids	30000		500	220	mg/L	1		SM 2540C	Total/NA
Chloride	9400		400	200	mg/L	200		SM 4500 Cl- E	Total/NA
Fluoride	0.78		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.95				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-DUP-041122
Lab Sample ID: 500-215017-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0023		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.034		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.89		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	530		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.0017		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.47		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.97		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.010		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	10000		400	190	mg/L	2000		9056A	Total/NA
Total Dissolved Solids	31000		500	220	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: AES-MW4-DUP-041122 (Continued)
Lab Sample ID: 500-215017-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9800		600	300	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.78		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA

Client Sample ID: AES-MW5-041122
Lab Sample ID: 500-215017-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0030		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.036		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.29		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	830		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.0037		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0030	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0033	J	0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0029		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sulfate	2100		400	190	mg/L	2000		9056A	Total/NA
Total Dissolved Solids	11000		100	43	mg/L	1		SM 2540C	Total/NA
Chloride	4500		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.45		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Field pH	6.42				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-FB-041122
Lab Sample ID: 500-215017-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00081	J	0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Calcium	0.11	J	0.20	0.044	mg/L	1		6020B	Total Recoverable
Sulfate	0.41		0.20	0.095	mg/L	1		9056A	Total/NA
Total Dissolved Solids	8.0	J	10	4.3	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
9056A	Anions, Ion Chromatography	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
Field Sampling	Field Sampling	EPA	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
7470A	Preparation, Mercury	SW846	TAL 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:

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

Sample Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-215017-1	AES-MW1-041122	Water	04/11/22 09:39	04/13/22 09:55
500-215017-2	AES-MW2-041122	Water	04/11/22 14:19	04/13/22 09:55
500-215017-3	AES-MW3-041122	Water	04/11/22 12:55	04/13/22 09:55
500-215017-4	AES-MW4-041122	Water	04/11/22 15:28	04/13/22 09:55
500-215017-5	AES-MW4-DUP-041122	Water	04/11/22 15:49	04/13/22 09:55
500-215017-6	AES-MW5-041122	Water	04/11/22 17:59	04/13/22 09:55
500-215017-7	AES-FB-041122	Water	04/11/22 18:00	04/13/22 09:55

Client Sample Results

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041122
Lab Sample ID: 500-215017-1
Date Collected: 04/11/22 09:39
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:03	1
Arsenic	0.00023	U	0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:03	1
Barium	**0.033**		0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:03	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 13:51	1
Boron	**0.22**		0.050	0.013	mg/L		04/20/22 15:53	04/29/22 14:59	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 15:55	1
Calcium	**100**		0.20	0.044	mg/L		04/20/22 15:53	04/22/22 15:55	1
Chromium	**0.0014**	**J**	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 15:55	1
Cobalt	**0.00057**	**J**	0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:03	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 15:55	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 13:51	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:03	1
Selenium	**0.0019**	**J**	0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:03	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 15:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 07:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**210**		20	9.5	mg/L			04/18/22 16:48	100
Total Dissolved Solids	**1000**		10	4.3	mg/L			04/15/22 05:31	1
Chloride	**210**		20	10	mg/L			04/14/22 10:42	10
Fluoride	**0.63**		0.10	0.056	mg/L			04/25/22 17:56	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.02**				SU			04/11/22 09:39	1

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW2-041122
Lab Sample ID: 500-215017-2
Date Collected: 04/11/22 14:19
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:07	1
Arsenic	**0.00042**	**J**	0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:07	1
Barium	**0.12**		0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:07	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 13:55	1
Boron	**0.17**		0.050	0.013	mg/L		04/20/22 15:53	04/29/22 15:02	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 16:05	1
Calcium	**92**		0.20	0.044	mg/L		04/20/22 15:53	04/22/22 16:05	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 16:05	1
Cobalt	**0.0028**		0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:07	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 16:05	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 13:55	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:07	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:07	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 16:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 07:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**31**		1.0	0.48	mg/L			04/18/22 17:02	5
Total Dissolved Solids	**600**		10	4.3	mg/L			04/15/22 05:36	1
Chloride	**100**		20	10	mg/L			04/14/22 10:38	10
Fluoride	**0.39**		0.10	0.056	mg/L			04/25/22 18:10	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.91**				SU			04/11/22 14:19	1

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041122
Lab Sample ID: 500-215017-3
Date Collected: 04/11/22 12:55
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:31	1
Arsenic	**0.0010**		0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:31	1
Barium	**0.098**		0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:31	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 14:18	1
Boron	**0.79**		0.050	0.013	mg/L		04/20/22 15:53	04/29/22 15:26	1
Cadmium	**0.00027**	**J**	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 16:22	1
Calcium	**300**		2.0	0.44	mg/L		04/20/22 15:53	04/26/22 18:48	10
Chromium	**0.0011**	**J**	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 16:22	1
Cobalt	**0.0019**		0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:31	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 16:22	1
Lithium	**0.0030**	**J**	0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 14:18	1
Molybdenum	**0.12**		0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:31	1
Selenium	**0.072**		0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:31	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 16:22	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 07:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1300**		200	95	mg/L			04/18/22 18:10	1000
Total Dissolved Solids	**7400**		100	43	mg/L			04/15/22 05:44	1
Chloride	**3300**		200	100	mg/L			04/14/22 10:42	100
Fluoride	**1.9**		0.10	0.056	mg/L			04/25/22 18:19	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.75**				SU			04/11/22 12:55	1

Client Sample Results

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-041122
Lab Sample ID: 500-215017-4
Date Collected: 04/11/22 15:28
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:34	1
Arsenic	**0.0020**		0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:34	1
Barium	**0.036**		0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:34	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 14:22	1
Boron	**0.96**		0.050	0.013	mg/L		04/20/22 15:53	04/29/22 15:29	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 16:26	1
Calcium	**550**		2.0	0.44	mg/L		04/20/22 15:53	04/26/22 19:02	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 16:26	1
Cobalt	**0.0017**		0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:34	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 16:26	1
Lithium	**0.49**		0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 14:22	1
Molybdenum	**1.0**		0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:34	1
Selenium	**0.0076**		0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:34	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 16:26	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 07:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**11000**		400	190	mg/L			04/19/22 13:08	2000
Total Dissolved Solids	**30000**		500	220	mg/L			04/15/22 05:46	1
Chloride	**9400**		400	200	mg/L			04/14/22 10:47	200
Fluoride	**0.78**		0.10	0.056	mg/L			04/25/22 18:32	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.95**				SU			04/11/22 15:28	1

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041122
Lab Sample ID: 500-215017-5
Date Collected: 04/11/22 15:49
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:38	1
Arsenic	**0.0023**		0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:38	1
Barium	**0.034**		0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:38	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 14:25	1
Boron	**0.89**		0.050	0.013	mg/L		04/20/22 15:53	04/29/22 15:33	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 16:29	1
Calcium	**530**		2.0	0.44	mg/L		04/20/22 15:53	04/26/22 19:09	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 16:29	1
Cobalt	**0.0017**		0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:38	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 16:29	1
Lithium	**0.47**		0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 14:25	1
Molybdenum	**0.97**		0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:38	1
Selenium	**0.010**		0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:38	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 16:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 08:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**10000**		400	190	mg/L			04/18/22 18:37	2000
Total Dissolved Solids	**31000**		500	220	mg/L			04/15/22 05:49	1
Chloride	**9800**		600	300	mg/L			04/14/22 13:07	300
Fluoride	**0.78**		0.10	0.056	mg/L			04/25/22 18:35	1

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-041122
Lab Sample ID: 500-215017-6
Date Collected: 04/11/22 17:59
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:41	1
Arsenic	**0.0030**		0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:41	1
Barium	**0.036**		0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:41	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 14:29	1
Boron	**0.29**		0.050	0.013	mg/L		04/20/22 15:53	04/29/22 15:36	1
Cadmium	**0.00020**	**J**	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 16:33	1
Calcium	**830**		2.0	0.44	mg/L		04/20/22 15:53	04/26/22 19:16	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 16:33	1
Cobalt	**0.0037**		0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:41	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 16:33	1
Lithium	**0.0030**	**J**	0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 14:29	1
Molybdenum	**0.0033**	**J**	0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:41	1
Selenium	**0.0029**		0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:41	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 16:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 08:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2100**		400	190	mg/L			04/18/22 18:50	2000
Total Dissolved Solids	**11000**		100	43	mg/L			04/15/22 05:52	1
Chloride	**4500**		200	100	mg/L			04/14/22 11:42	100
Fluoride	**0.45**		0.10	0.056	mg/L			04/25/22 18:38	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**6.42**				SU			04/11/22 17:59	1

Client Sample Results

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-041122
Lab Sample ID: 500-215017-7

Date Collected: 04/11/22 18:00
Matrix: Water
Date Received: 04/13/22 09:55

Method: 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		04/20/22 15:53	04/26/22 04:45	1
Arsenic	0.00023	U	0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 04:45	1
Barium	**0.00081**	**J**	0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 04:45	1
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 14:32	1
Boron	0.013	U	0.050	0.013	mg/L		04/20/22 15:53	04/29/22 15:40	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 16:36	1
Calcium	**0.11**	**J**	0.20	0.044	mg/L		04/20/22 15:53	04/22/22 16:36	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 16:36	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 04:45	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 16:36	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 14:32	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 04:45	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 04:45	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 16:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 08:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**0.41**		0.20	0.095	mg/L			04/18/22 19:04	1
Total Dissolved Solids	**8.0**	**J**	10	4.3	mg/L			04/15/22 05:54	1
Chloride	1.0	U	2.0	1.0	mg/L			04/14/22 11:41	1
Fluoride	0.056	U	0.10	0.056	mg/L			04/25/22 18:45	1

Definitions/Glossary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

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

Metals

Prep Batch: 652626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total Recoverable	Water	3005A	
500-215017-2	AES-MW2-041122	Total Recoverable	Water	3005A	
500-215017-3	AES-MW3-041122	Total Recoverable	Water	3005A	
500-215017-4	AES-MW4-041122	Total Recoverable	Water	3005A	
500-215017-5	AES-MW4-DUP-041122	Total Recoverable	Water	3005A	
500-215017-6	AES-MW5-041122	Total Recoverable	Water	3005A	
500-215017-7	AES-FB-041122	Total Recoverable	Water	3005A	
MB 500-652626/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-652626/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-215017-2 MS	AES-MW2-041122	Total Recoverable	Water	3005A	
500-215017-2 MSD	AES-MW2-041122	Total Recoverable	Water	3005A	
500-215017-2 DU	AES-MW2-041122	Total Recoverable	Water	3005A	

Prep Batch: 652783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	7470A	
500-215017-2	AES-MW2-041122	Total/NA	Water	7470A	
500-215017-3	AES-MW3-041122	Total/NA	Water	7470A	
500-215017-4	AES-MW4-041122	Total/NA	Water	7470A	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	7470A	
500-215017-6	AES-MW5-041122	Total/NA	Water	7470A	
500-215017-7	AES-FB-041122	Total/NA	Water	7470A	
MB 500-652783/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-652783/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	7470A	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	7470A	

Analysis Batch: 652964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	7470A	652783
500-215017-2	AES-MW2-041122	Total/NA	Water	7470A	652783
500-215017-3	AES-MW3-041122	Total/NA	Water	7470A	652783
500-215017-4	AES-MW4-041122	Total/NA	Water	7470A	652783
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	7470A	652783
500-215017-6	AES-MW5-041122	Total/NA	Water	7470A	652783
500-215017-7	AES-FB-041122	Total/NA	Water	7470A	652783
MB 500-652783/12-A	Method Blank	Total/NA	Water	7470A	652783
LCS 500-652783/13-A	Lab Control Sample	Total/NA	Water	7470A	652783
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	7470A	652783
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	7470A	652783

Analysis Batch: 653045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total Recoverable	Water	6020B	652626
500-215017-2	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-3	AES-MW3-041122	Total Recoverable	Water	6020B	652626
500-215017-4	AES-MW4-041122	Total Recoverable	Water	6020B	652626
500-215017-5	AES-MW4-DUP-041122	Total Recoverable	Water	6020B	652626
500-215017-6	AES-MW5-041122	Total Recoverable	Water	6020B	652626
500-215017-7	AES-FB-041122	Total Recoverable	Water	6020B	652626
MB 500-652626/1-A	Method Blank	Total Recoverable	Water	6020B	652626

Metals (Continued)

Analysis Batch: 653045 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-652626/2-A	Lab Control Sample	Total Recoverable	Water	6020B	652626
500-215017-2 MS	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 MSD	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 DU	AES-MW2-041122	Total Recoverable	Water	6020B	652626

Analysis Batch: 653431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total Recoverable	Water	6020B	652626
500-215017-2	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-3	AES-MW3-041122	Total Recoverable	Water	6020B	652626
500-215017-4	AES-MW4-041122	Total Recoverable	Water	6020B	652626
500-215017-5	AES-MW4-DUP-041122	Total Recoverable	Water	6020B	652626
500-215017-6	AES-MW5-041122	Total Recoverable	Water	6020B	652626
500-215017-7	AES-FB-041122	Total Recoverable	Water	6020B	652626
MB 500-652626/1-A	Method Blank	Total Recoverable	Water	6020B	652626
LCS 500-652626/2-A	Lab Control Sample	Total Recoverable	Water	6020B	652626
500-215017-2 MS	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 MSD	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 DU	AES-MW2-041122	Total Recoverable	Water	6020B	652626

Analysis Batch: 653621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-3	AES-MW3-041122	Total Recoverable	Water	6020B	652626
500-215017-4	AES-MW4-041122	Total Recoverable	Water	6020B	652626
500-215017-5	AES-MW4-DUP-041122	Total Recoverable	Water	6020B	652626
500-215017-6	AES-MW5-041122	Total Recoverable	Water	6020B	652626

Analysis Batch: 654105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total Recoverable	Water	6020B	652626
500-215017-1	AES-MW1-041122	Total Recoverable	Water	6020B	652626
500-215017-2	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-3	AES-MW3-041122	Total Recoverable	Water	6020B	652626
500-215017-3	AES-MW3-041122	Total Recoverable	Water	6020B	652626
500-215017-4	AES-MW4-041122	Total Recoverable	Water	6020B	652626
500-215017-4	AES-MW4-041122	Total Recoverable	Water	6020B	652626
500-215017-5	AES-MW4-DUP-041122	Total Recoverable	Water	6020B	652626
500-215017-5	AES-MW4-DUP-041122	Total Recoverable	Water	6020B	652626
500-215017-6	AES-MW5-041122	Total Recoverable	Water	6020B	652626
500-215017-6	AES-MW5-041122	Total Recoverable	Water	6020B	652626
500-215017-7	AES-FB-041122	Total Recoverable	Water	6020B	652626
500-215017-7	AES-FB-041122	Total Recoverable	Water	6020B	652626
MB 500-652626/1-A	Method Blank	Total Recoverable	Water	6020B	652626
MB 500-652626/1-A	Method Blank	Total Recoverable	Water	6020B	652626
LCS 500-652626/2-A	Lab Control Sample	Total Recoverable	Water	6020B	652626
LCS 500-652626/2-A	Lab Control Sample	Total Recoverable	Water	6020B	652626
500-215017-2 MS	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 MS	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 MSD	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 MSD	AES-MW2-041122	Total Recoverable	Water	6020B	652626

Metals (Continued)

Analysis Batch: 654105 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-2 DU	AES-MW2-041122	Total Recoverable	Water	6020B	652626
500-215017-2 DU	AES-MW2-041122	Total Recoverable	Water	6020B	652626

General Chemistry

Analysis Batch: 651784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-2	AES-MW2-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-3	AES-MW3-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-4	AES-MW4-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-6	AES-MW5-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-7	AES-FB-041122	Total/NA	Water	SM 4500 Cl- E	
MB 500-651784/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
MB 500-651784/52	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-651784/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
LCS 500-651784/53	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-7 MS	AES-FB-041122	Total/NA	Water	SM 4500 Cl- E	
500-215017-7 MSD	AES-FB-041122	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 651822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	SM 2540C	
500-215017-2	AES-MW2-041122	Total/NA	Water	SM 2540C	
500-215017-3	AES-MW3-041122	Total/NA	Water	SM 2540C	
500-215017-4	AES-MW4-041122	Total/NA	Water	SM 2540C	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	SM 2540C	
500-215017-6	AES-MW5-041122	Total/NA	Water	SM 2540C	
500-215017-7	AES-FB-041122	Total/NA	Water	SM 2540C	
MB 500-651822/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-651822/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	SM 2540C	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	SM 2540C	
500-215017-1 DU	AES-MW1-041122	Total/NA	Water	SM 2540C	

Analysis Batch: 652224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	9056A	
500-215017-2	AES-MW2-041122	Total/NA	Water	9056A	
500-215017-3	AES-MW3-041122	Total/NA	Water	9056A	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	9056A	
500-215017-6	AES-MW5-041122	Total/NA	Water	9056A	
500-215017-7	AES-FB-041122	Total/NA	Water	9056A	
MB 500-652224/3	Method Blank	Total/NA	Water	9056A	
LCS 500-652224/4	Lab Control Sample	Total/NA	Water	9056A	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	9056A	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	9056A	

QC Association Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

General Chemistry

Analysis Batch: 652388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-4	AES-MW4-041122	Total/NA	Water	9056A	
MB 500-652388/3	Method Blank	Total/NA	Water	9056A	
LCS 500-652388/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 653388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	SM 4500 F C	
500-215017-2	AES-MW2-041122	Total/NA	Water	SM 4500 F C	
500-215017-3	AES-MW3-041122	Total/NA	Water	SM 4500 F C	
500-215017-4	AES-MW4-041122	Total/NA	Water	SM 4500 F C	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	SM 4500 F C	
500-215017-6	AES-MW5-041122	Total/NA	Water	SM 4500 F C	
500-215017-7	AES-FB-041122	Total/NA	Water	SM 4500 F C	
MB 500-653388/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-653388/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-653388/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-653388/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	SM 4500 F C	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 651957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	Field Sampling	
500-215017-2	AES-MW2-041122	Total/NA	Water	Field Sampling	
500-215017-3	AES-MW3-041122	Total/NA	Water	Field Sampling	
500-215017-4	AES-MW4-041122	Total/NA	Water	Field Sampling	
500-215017-6	AES-MW5-041122	Total/NA	Water	Field Sampling	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-652626/1-A
Matrix: Water
Analysis Batch: 653045

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.00017	U	0.00050	0.00017	mg/L		04/20/22 15:53	04/22/22 15:28	1
Calcium	0.044	U	0.20	0.044	mg/L		04/20/22 15:53	04/22/22 15:28	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		04/20/22 15:53	04/22/22 15:28	1
Lead	0.00019	U	0.00050	0.00019	mg/L		04/20/22 15:53	04/22/22 15:28	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		04/20/22 15:53	04/22/22 15:28	1

Lab Sample ID: MB 500-652626/1-A
Matrix: Water
Analysis Batch: 653431

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		04/20/22 15:53	04/26/22 03:36	1
Arsenic	0.00023	U	0.0010	0.00023	mg/L		04/20/22 15:53	04/26/22 03:36	1
Barium	0.00073	U	0.0025	0.00073	mg/L		04/20/22 15:53	04/26/22 03:36	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		04/20/22 15:53	04/26/22 03:36	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		04/20/22 15:53	04/26/22 03:36	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		04/20/22 15:53	04/26/22 03:36	1

Lab Sample ID: MB 500-652626/1-A
Matrix: Water
Analysis Batch: 654105

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.00053	U	0.0010	0.00053	mg/L		04/20/22 15:53	04/29/22 13:44	1
Lithium	0.0025	U	0.010	0.0025	mg/L		04/20/22 15:53	04/29/22 13:44	1

Lab Sample ID: MB 500-652626/1-A
Matrix: Water
Analysis Batch: 654105

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.013	U	0.050	0.013	mg/L		04/20/22 15:53	04/29/22 14:52	1

Lab Sample ID: LCS 500-652626/2-A
Matrix: Water
Analysis Batch: 653045

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.0500	0.0517		mg/L		103	80 - 120
Calcium	10.0	9.11		mg/L		91	80 - 120
Chromium	0.200	0.206		mg/L		103	80 - 120
Lead	0.100	0.103		mg/L		103	80 - 120
Thallium	0.100	0.0982		mg/L		98	80 - 120

Lab Sample ID: LCS 500-652626/2-A
Matrix: Water
Analysis Batch: 653431

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.534		mg/L		107	80 - 120

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

Lab Sample ID: LCS 500-652626/2-A
Matrix: Water
Analysis Batch: 653431

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.100	0.104		mg/L		104	80 - 120
Barium	0.500	0.533		mg/L		107	80 - 120
Cobalt	0.500	0.487		mg/L		97	80 - 120
Molybdenum	1.00	0.972		mg/L		97	80 - 120
Selenium	0.100	0.104		mg/L		104	80 - 120

Lab Sample ID: LCS 500-652626/2-A
Matrix: Water
Analysis Batch: 654105

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.0500	0.0509		mg/L		102	80 - 120
Lithium	0.100	0.104		mg/L		104	80 - 120

Lab Sample ID: LCS 500-652626/2-A
Matrix: Water
Analysis Batch: 654105

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.14		mg/L		114	80 - 120

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 653045

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.00017	U	0.0500	0.0516		mg/L		103	75 - 125
Calcium	92		10.0	97.5	4	mg/L		53	75 - 125
Chromium	0.0011	U	0.200	0.196		mg/L		98	75 - 125
Lead	0.00019	U	0.100	0.103		mg/L		103	75 - 125
Thallium	0.00057	U	0.100	0.0978		mg/L		98	75 - 125

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 653431

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.0013	U	0.500	0.514		mg/L		103	75 - 125
Arsenic	0.00042	J	0.100	0.103		mg/L		102	75 - 125
Barium	0.12		0.500	0.626		mg/L		102	75 - 125
Cobalt	0.0028		0.500	0.517		mg/L		103	75 - 125
Molybdenum	0.0025	U	1.00	0.956		mg/L		96	75 - 125
Selenium	0.00098	U	0.100	0.102		mg/L		102	75 - 125

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.00053	U	0.0500	0.0493		mg/L		99	75 - 125

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

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.0025	U	0.100	0.100		mg/L		100	75 - 125

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.17		1.00	1.12		mg/L		95	75 - 125

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 653045

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cadmium	0.00017	U	0.0500	0.0524		mg/L		105	75 - 125	2	20
Calcium	92		10.0	98.3	4	mg/L		62	75 - 125	1	20
Chromium	0.0011	U	0.200	0.197		mg/L		98	75 - 125	0	20
Lead	0.00019	U	0.100	0.105		mg/L		105	75 - 125	2	20
Thallium	0.00057	U	0.100	0.0996		mg/L		100	75 - 125	2	20

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 653431

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

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	0.518		mg/L		104	75 - 125	1	20
Arsenic	0.00042	J	0.100	0.106		mg/L		105	75 - 125	3	20
Barium	0.12		0.500	0.631		mg/L		102	75 - 125	1	20
Cobalt	0.0028		0.500	0.530		mg/L		106	75 - 125	3	20
Molybdenum	0.0025	U	1.00	0.971		mg/L		97	75 - 125	2	20
Selenium	0.00098	U	0.100	0.101		mg/L		101	75 - 125	1	20

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	0.00053	U	0.0500	0.0498		mg/L		100	75 - 125	1	20
Lithium	0.0025	U	0.100	0.101		mg/L		101	75 - 125	1	20

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.17		1.00	1.14		mg/L		98	75 - 125	2	20

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

Lab Sample ID: 500-215017-2 DU
Matrix: Water
Analysis Batch: 653045

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	0.00017	U	0.00017	U	mg/L		NC	20
Calcium	92		90.8		mg/L		2	20
Chromium	0.0011	U	0.0011	U	mg/L		NC	20
Lead	0.00019	U	0.00019	U	mg/L		NC	20
Thallium	0.00057	U	0.00057	U	mg/L		NC	20

Lab Sample ID: 500-215017-2 DU
Matrix: Water
Analysis Batch: 653431

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

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	0.00042	J	0.000396	J	mg/L		6	20
Barium	0.12		0.119		mg/L		0.6	20
Cobalt	0.0028		0.00267		mg/L		4	20
Molybdenum	0.0025	U	0.0025	U	mg/L		NC	20
Selenium	0.00098	U	0.00098	U	mg/L		NC	20

Lab Sample ID: 500-215017-2 DU
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Beryllium	0.00053	U	0.00053	U	mg/L		NC	20
Lithium	0.0025	U	0.0025	U	mg/L		NC	20

Lab Sample ID: 500-215017-2 DU
Matrix: Water
Analysis Batch: 654105

Client Sample ID: AES-MW2-041122
Prep Type: Total Recoverable
Prep Batch: 652626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	0.17		0.165		mg/L		2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-652783/12-A
Matrix: Water
Analysis Batch: 652964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 652783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		04/21/22 11:35	04/22/22 07:30	1

Lab Sample ID: LCS 500-652783/13-A
Matrix: Water
Analysis Batch: 652964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 652783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.00202		mg/L		101	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 652964

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA
Prep Batch: 652783

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000098	U	0.00100	0.000991		mg/L		99	75 - 125

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 652964

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA
Prep Batch: 652783

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.000098	U	0.00100	0.000983		mg/L		98	75 - 125	1	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 500-652224/3
Matrix: Water
Analysis Batch: 652224

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.095	U	0.20	0.095	mg/L			04/18/22 09:27	1

Lab Sample ID: LCS 500-652224/4
Matrix: Water
Analysis Batch: 652224

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	5.00	4.73		mg/L		95	80 - 120

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 652224

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	31		12.5	44.4		mg/L		109	80 - 120

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 652224

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	31		12.5	44.4		mg/L		109	80 - 120	0	15

Lab Sample ID: MB 500-652388/3
Matrix: Water
Analysis Batch: 652388

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.095	U	0.20	0.095	mg/L			04/19/22 11:39	1

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

Lab Sample ID: LCS 500-652388/4
Matrix: Water
Analysis Batch: 652388

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate			5.00	5.06		mg/L		101	80 - 120		

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

Lab Sample ID: MB 500-651822/1
Matrix: Water
Analysis Batch: 651822

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			04/15/22 05:21	1

Lab Sample ID: LCS 500-651822/2
Matrix: Water
Analysis Batch: 651822

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	248		mg/L		99	80 - 120		

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 651822

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	600		250	816		mg/L		88	75 - 125		

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 651822

Client Sample ID: AES-MW2-041122
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	600		250	836		mg/L		96	75 - 125	2	20

Lab Sample ID: 500-215017-1 DU
Matrix: Water
Analysis Batch: 651822

Client Sample ID: AES-MW1-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1000			1030		mg/L				1	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-651784/16
Matrix: Water
Analysis Batch: 651784

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			04/14/22 10:37	1

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

Lab Sample ID: MB 500-651784/52
Matrix: Water
Analysis Batch: 651784

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			04/14/22 11:41	1

Lab Sample ID: LCS 500-651784/17
Matrix: Water
Analysis Batch: 651784

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	20.8		mg/L		104	85 - 115

Lab Sample ID: LCS 500-651784/53
Matrix: Water
Analysis Batch: 651784

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	21.9		mg/L		110	85 - 115

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 651784

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	100		20.0	118	4	mg/L		88	75 - 125

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 651784

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	100		20.0	118	4	mg/L		84	75 - 125	1	20

Lab Sample ID: 500-215017-7 MS
Matrix: Water
Analysis Batch: 651784

Client Sample ID: AES-FB-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1.0	U	20.0	22.0		mg/L		110	75 - 125

Lab Sample ID: 500-215017-7 MSD
Matrix: Water
Analysis Batch: 651784

Client Sample ID: AES-FB-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1.0	U	20.0	21.9		mg/L		110	75 - 125	0	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-653388/3
Matrix: Water
Analysis Batch: 653388

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.056	U	0.10	0.056	mg/L			04/25/22 16:46	1

Lab Sample ID: MB 500-653388/31
Matrix: Water
Analysis Batch: 653388

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.056	U	0.10	0.056	mg/L			04/25/22 18:26	1

Lab Sample ID: LCS 500-653388/32
Matrix: Water
Analysis Batch: 653388

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride			10.0	10.6		mg/L		106	90 - 119		

Lab Sample ID: LCS 500-653388/4
Matrix: Water
Analysis Batch: 653388

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride			10.0	10.4		mg/L		104	90 - 119		

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 653388

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride	0.39		5.00	5.59		mg/L		104	75 - 125		

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 653388

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.39		5.00	5.61		mg/L		104	75 - 125	0	20

Lab Chronicle

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041122
Lab Sample ID: 500-215017-1
Date Collected: 04/11/22 09:39
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 15:55	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:03	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 13:51	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 14:59	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 07:35	MJG	TAL CHI
Total/NA	Analysis	9056A		100	652224	04/18/22 16:48	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:31	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	651784	04/14/22 10:42	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 17:56	EAT	TAL CHI
Total/NA	Analysis	Field Sampling		1	651957	04/11/22 09:39	JMH	TAL CHI

Client Sample ID: AES-MW2-041122
Lab Sample ID: 500-215017-2
Date Collected: 04/11/22 14:19
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 16:05	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:07	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 13:55	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 15:02	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 07:38	MJG	TAL CHI
Total/NA	Analysis	9056A		5	652224	04/18/22 17:02	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:36	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	651784	04/14/22 10:38	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 18:10	EAT	TAL CHI
Total/NA	Analysis	Field Sampling		1	651957	04/11/22 14:19	JMH	TAL CHI

Client Sample ID: AES-MW3-041122
Lab Sample ID: 500-215017-3
Date Collected: 04/11/22 12:55
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		10	653621	04/26/22 18:48	FXG	TAL CHI

Lab Chronicle

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-041122
Lab Sample ID: 500-215017-3
Date Collected: 04/11/22 12:55
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 16:22	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:31	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 14:18	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 15:26	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 07:46	MJG	TAL CHI
Total/NA	Analysis	9056A		1000	652224	04/18/22 18:10	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:44	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		100	651784	04/14/22 10:42	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 18:19	EAT	TAL CHI
Total/NA	Analysis	Field Sampling		1	651957	04/11/22 12:55	JMH	TAL CHI

Client Sample ID: AES-MW4-041122
Lab Sample ID: 500-215017-4
Date Collected: 04/11/22 15:28
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		10	653621	04/26/22 19:02	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 16:26	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:34	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 14:22	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 15:29	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 07:48	MJG	TAL CHI
Total/NA	Analysis	9056A		2000	652388	04/19/22 13:08	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:46	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		200	651784	04/14/22 10:47	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 18:32	EAT	TAL CHI
Total/NA	Analysis	Field Sampling		1	651957	04/11/22 15:28	JMH	TAL CHI

Lab Chronicle

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041122
Lab Sample ID: 500-215017-5
Date Collected: 04/11/22 15:49
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		10	653621	04/26/22 19:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 16:29	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:38	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 14:25	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 15:33	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 08:11	MJG	TAL CHI
Total/NA	Analysis	9056A		2000	652224	04/18/22 18:37	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:49	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		300	651784	04/14/22 13:07	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 18:35	EAT	TAL CHI

Client Sample ID: AES-MW5-041122
Lab Sample ID: 500-215017-6
Date Collected: 04/11/22 17:59
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		10	653621	04/26/22 19:16	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 16:33	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:41	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 14:29	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 15:36	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 08:13	MJG	TAL CHI
Total/NA	Analysis	9056A		2000	652224	04/18/22 18:50	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:52	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		100	651784	04/14/22 11:42	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 18:38	EAT	TAL CHI
Total/NA	Analysis	Field Sampling		1	651957	04/11/22 17:59	JMH	TAL CHI

Lab Chronicle

Client: DNA-Environment, LLC
Job ID: 500-215017-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-041122
Lab Sample ID: 500-215017-7
Date Collected: 04/11/22 18:00
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653045	04/22/22 16:36	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	653431	04/26/22 04:45	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 14:32	FXG	TAL CHI
Total Recoverable	Prep	3005A			652626	04/20/22 15:53	LMB	TAL CHI
Total Recoverable	Analysis	6020B		1	654105	04/29/22 15:40	FXG	TAL CHI
Total/NA	Prep	7470A			652783	04/21/22 11:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	652964	04/22/22 08:15	MJG	TAL CHI
Total/NA	Analysis	9056A		1	652224	04/18/22 19:04	EAT	TAL CHI
Total/NA	Analysis	SM 2540C		1	651822	04/15/22 05:54	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	651784	04/14/22 11:41	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	653388	04/25/22 18:45	EAT	TAL CHI

Laboratory References:

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

Accreditation/Certification Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-1
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	04-29-22
Georgia	State	N/A	04-29-22
Georgia (DW)	State	939	04-30-21 *
Hawaii	State	NA	04-29-22
Illinois	NELAP	IL00035	04-29-22
Indiana	State	C-IL-02	04-29-22
Iowa	State	082	05-01-22
Kansas	NELAP	E-10161	10-31-22
Kentucky (UST)	State	AI # 108083	04-29-22
Kentucky (WW)	State	KY90023	12-31-22
Louisiana	NELAP	02046	06-30-22
Mississippi	State	NA	04-30-22
North Carolina (WW/SW)	State	291	12-31-22
North Dakota	State	R-194	04-29-22
Oklahoma	State	8908	08-31-22
South Carolina	State	77001003	04-29-22
USDA	US Federal Programs	P330-18-00018	02-11-24
Wisconsin	State	999580010	08-31-22
Wyoming	State	8TMS-Q	04-30-22

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

Eurofins TestAmerica, 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 / Ivan Cardona	Lab PM: Wright, Richard	Carrier Tracking No(s):	COC No:
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Richard.Wright@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: DNA-Environment, LLC	PWSID:			Job #: 500-215017
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: X Yes No			
Phone: 787-209-6386	PO #:			
Email: alberto.melendez@dnaenv.com	WO #:			
Project Name: CCR Groundwater Monitoring	Project #:			
Site: AES Puerto Rico LP, Guayama, Puerto Rico	SSOW#:			

Analysis Requested

500-215017 COC

Preservation Codes:
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)
Other:

	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, SM4500_F_C-Fluoride, SM2540C-TDS	6020B - Total Metals, 7470A-Total Mercury	Total Number of containers	Special Instructions/Note:
				Preservation Code:				I	D		
1	AES-MW1-041122	4/11/22	09:39	G	Water	N		X	X	2	pH = 7.02
2	AES-MW2-041122	4/11/22	14:19	G	Water	N		X	X	2	pH = 6.91
3	AES-MW2-041122 MS 2	4/11/22	15:42	G	Water	N	Y	X	X	2	---
4	AES-MW2-041122 MSD 2	4/11/22	16:23	G	Water	N	Y	X	X	2	---
5	AES-MW3-041122 3	4/11/22	12:55	G	Water	N		X	X	2	pH = 6.75
6	AES-MW4-041122 4	4/11/22	15:28	G	Water	N		X	X	2	pH = 6.95
7	AES-MW4-DUP-041122 5	4/11/22	15:49	G	Water	N		X	X	2	---
8	AES-MW5-041122 6	4/11/22	17:59	G	Water	N		X	X	2	pH = 6.42
9	AES-FB-041122 7	4/11/22	18:00	G	Water	N		X	X	2	---
	DWH 4/15/22 →										
											Note: pH = Field pH Measurement

Possible Hazard Identification
X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client X Disposal By Lab ☐ 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:	Company	Received by:	Date/Time:	Company
1		04/12/22 1145	DNA	Stephanie Hernandez	4/13/22 0955	EETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9 & 0.4

Eurofins TestAmerica, 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	Lab PM	Carrier Tracking No(s)	COC No:
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Richard Wright@Eurofinset com	State of Origin:	Page: Page 1 of 1
Company: DNA-Environment, LLC	PWSID			Job #: 500-215017
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: X Yes No			
Phone: 787-209-6386	PO #:			
Email: alberto melendez@dnaenv com	WO #:			
Project Name: CCR Groundwater Monitoring	Project #:			
Site: AES Puerto Rico LP Guayama Puerto Rico	SSOW#:			

Analysis Requested

500-215017 COC

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	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:

	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, SM4500_F_C-Fluoride, SM2540C-TDS	6020B - Total Metals 7470A-Total Mercury	Total Number of containers	Special Instructions/Note
				Preservation Code:				I	D		
1	AES-MW1-041122	4/11/22	09 39	G	Water	N		X	X	2	pH = 7 02
2	AES-MW2-041122	4/11/22	14 19	G	Water	N		X	X	2	pH = 6 91
3	AES-MW2-041122 MS	4/11/22	15 42	G	Water	N	Y	X	X	2	---
4	AES-MW2-041122 MSD	4/11/22	16 23	G	Water	N	Y	X	X	2	---
5	AES-MW3-041122	4/11/22	12 55	G	Water	N		X	X	2	pH = 6 75
6	AES-MW4-041122	4/11/22	15 28	G	Water	N		X	X	2	pH = 6 95
7	AES-MW4-DUP-041122	4/11/22	15 49	G	Water	N		X	X	2	---
8	AES-MW5-041122	4/11/22	17 59	G	Water	N		X	X	2	pH = 6 42
9	AES-FB-041122	4/11/22	18 00	G	Water	N		X	X	2	---
											Note pH = Field pH Measurement

Possible Hazard Identification
☐ X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ 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	Company	Received by	Date/Time	Company
1		04/12/22 11:45	DNA	Stephanie Hernandez	4/13/22 0955	EETA
2	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
3	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		0.9 ; 0.4

Do Not Lift Using This Tag

Do Not Lift Using This Tag

Align FedEx Pouch Here

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ

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

SHIP DATE: 12APR22
TOTWGT: 118.00 LB
CAD: 006998633/SSFE2300
DIMS: 24x13x13 IN

BILL CREDIT CARD
NO EEI 30.37(a)

TO SAMPLE RECEIVING
EUROFINS TEST AMERICA, CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484 (US)
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

E

J221022010502uv

1 of 2

TRK# 0402 8161 1808 2933

MASTER

XN JOTA

WED - 13 APR 10:30A
INTL PRIORITY

60484
IL-US ORD

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ

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

SHIP DATE: 12APR22
TOTWGT: 118.00 LB
CAD: 006998633/SSFE2300

DIMS: 24x13x13 IN
BILL CREDIT CARD
EIN/VAT:

Part # 156297-435

TO SAMPLE RECEIVING
EUROFINS TEST AMERICA, CHICAGO
2417 BOND STREET

University Park, IL 60484 (US

UNITED STATES, US

500-215017 Wayb

AWB

XN JOTA

PKG:YOUR PKG

TRK# 8161 1808 2933 Form 0402
1 of 2

WED - 13 APR 10:30A
INTL PRIORITY

REF:
DESC1:SAMPLES - WATER SAMPLES
DESC2:
DESC3:
DESC4:
EEI: NO EEI 30.37(a)

COUNTRY MFG: US
CARRIAGE VALUE: 15.00 USD
CUSTOMS VALUE: 15.00 USD

SIGN: ALBERTO MELENDEZ
T/C: 0 975100006
D/T: R

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Login Sample Receipt Checklist

Client: DNA-Environment, LLC

Job Number: 500-215017-1

Login Number: 215017
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

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	0.4
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	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-215017-2
Client Project/Site: CCR GW Monitoring, AES Puerto Rico, LP
Revision: 2

For:
DNA-Environment, LLC
35 Calle Juan C Borbon
Ste 67-227
Guaynabo, Puerto Rico 00969-5375

Attn: Alberto Melendez

Authorized for release by:
5/31/2022 3:20:06 PM

Richard Wright, Senior Project Manager
(708)746-0045
Richard.Wright@et.eurofinsus.com

Table of Contents

Job ID: 500-215017-2

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-215017-2

Revision
Revised Report - The Job Narrative has been revised for clarity. (All sample results are consistent with the original report dated 5/18/2022.)

Receipt
The samples were received on 4/13/2022 9:55 AM. Unless otherwise noted below, the samples arrived in good condition.

RAD
Methods 903.0, 9315: Radium-226 prep batch 561012:

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 for the following samples: AES-MW1-041122 (500-215017-1), AES-MW2-041122 (500-215017-2), AES-MW2-041122 (500-215017-2[MS]), AES-MW2-041122 (500-215017-2[MSD]), AES-MW3-041122 (500-215017-3), AES-MW4-041122 (500-215017-4), AES-MW4-DUP-041122 (500-215017-5), AES-MW5-041122 (500-215017-6), AES-FB-041122 (500-215017-7), (LCS 160-561012/1-A) and (MB 160-561012/12-A)

Methods 904.0, 9320: Radium-228 prep batch 561013:

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 for the following samples:

AES-MW1-041122 (500-215017-1), AES-MW2-041122 (500-215017-2), AES-MW2-041122 (500-215017-2[MS]), AES-MW2-041122 (500-215017-2[MSD]), AES-MW3-041122 (500-215017-3), AES-MW4-041122 (500-215017-4), AES-MW4-DUP-041122 (500-215017-5), AES-MW5-041122 (500-215017-6), AES-FB-041122 (500-215017-7), (LCS 160-561013/1-A) and (MB 160-561013/12-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: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041122 — Lab Sample ID: 500-215017-1

No Detections.

Client Sample ID: AES-MW2-041122 — Lab Sample ID: 500-215017-2

No Detections.

Client Sample ID: AES-MW3-041122 — Lab Sample ID: 500-215017-3

No Detections.

Client Sample ID: AES-MW4-041122 — Lab Sample ID: 500-215017-4

No Detections.

Client Sample ID: AES-MW4-DUP-041122 — Lab Sample ID: 500-215017-5

No Detections.

Client Sample ID: AES-MW5-041122 — Lab Sample ID: 500-215017-6

No Detections.

Client Sample ID: AES-FB-041122 — Lab Sample ID: 500-215017-7

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL 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:

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

Sample Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-215017-1	AES-MW1-041122	Water	04/11/22 09:39	04/13/22 09:55
500-215017-2	AES-MW2-041122	Water	04/11/22 14:19	04/13/22 09:55
500-215017-3	AES-MW3-041122	Water	04/11/22 12:55	04/13/22 09:55
500-215017-4	AES-MW4-041122	Water	04/11/22 15:28	04/13/22 09:55
500-215017-5	AES-MW4-DUP-041122	Water	04/11/22 15:49	04/13/22 09:55
500-215017-6	AES-MW5-041122	Water	04/11/22 17:59	04/13/22 09:55
500-215017-7	AES-FB-041122	Water	04/11/22 18:00	04/13/22 09:55

Client Sample Results

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041122
Lab Sample ID: 500-215017-1
Date Collected: 04/11/22 09:39
Matrix: Water
Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0478	U	0.0702	0.0703	1.00	0.120	pCi/L	04/18/22 15:40	05/10/22 21:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.2*		*40 - 110*	*04/18/22 15:40*	*05/10/22 21:05*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.220	U	0.238	0.239	1.00	0.390	pCi/L	04/18/22 15:59	04/29/22 12:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.2*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:21*	*1*
Y Carrier	*86.4*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:21*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.267	U	0.248	0.249	5.00	0.390	pCi/L		05/12/22 22:21	1

Client Sample Results

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW2-041122
Lab Sample ID: 500-215017-2
Date Collected: 04/11/22 14:19
Matrix: Water
Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00502	U	0.0602	0.0602	1.00	0.123	pCi/L	04/18/22 15:40	05/10/22 21:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.4*		*40 - 110*	*04/18/22 15:40*	*05/10/22 21:05*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0512	U	0.208	0.208	1.00	0.385	pCi/L	04/18/22 15:59	04/29/22 12:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.4*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:21*	*1*
Y Carrier	*87.9*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:21*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0562	U	0.217	0.217	5.00	0.385	pCi/L		05/12/22 22:21	1

Client Sample ID: AES-MW3-041122
Lab Sample ID: 500-215017-3

Date Collected: 04/11/22 12:55
Matrix: Water

Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0503	U	0.0507	0.0509	1.00	0.0777	pCi/L	04/18/22 15:40	05/11/22 09:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*40 - 110*	*04/18/22 15:40*	*05/11/22 09:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0253	U	0.190	0.190	1.00	0.339	pCi/L	04/18/22 15:59	04/29/22 12:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:22*	*1*
Y Carrier	*88.2*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:22*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0756	U	0.197	0.197	5.00	0.339	pCi/L		05/12/22 22:21	1

Client Sample ID: AES-MW4-041122
Lab Sample ID: 500-215017-4

Date Collected: 04/11/22 15:28
Matrix: Water

Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.151		0.105	0.106	1.00	0.141	pCi/L	04/18/22 15:40	05/11/22 09:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.6*		*40 - 110*	*04/18/22 15:40*	*05/11/22 09:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.428	U	0.368	0.370	1.00	0.584	pCi/L	04/18/22 15:59	04/29/22 12:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.6*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:22*	*1*
Y Carrier	*84.1*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:22*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.580	U	0.383	0.385	5.00	0.584	pCi/L		05/12/22 22:21	1

Client Sample ID: AES-MW4-DUP-041122
Lab Sample ID: 500-215017-5

Date Collected: 04/11/22 15:49
Matrix: Water

Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00775	U	0.0839	0.0839	1.00	0.175	pCi/L	04/18/22 15:40	05/11/22 10:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*75.4*		*40 - 110*	*04/18/22 15:40*	*05/11/22 10:54*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.240	U	0.366	0.366	1.00	0.615	pCi/L	04/18/22 15:59	04/29/22 12:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*75.4*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:22*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:22*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.232	U	0.375	0.375	5.00	0.615	pCi/L		05/12/22 22:21	1

Client Sample Results

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-041122
Lab Sample ID: 500-215017-6
Date Collected: 04/11/22 17:59
Matrix: Water
Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0339	U	0.0717	0.0718	1.00	0.128	pCi/L	04/18/22 15:40	05/11/22 10:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*04/18/22 15:40*	*05/11/22 10:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.108	U	0.209	0.209	1.00	0.357	pCi/L	04/18/22 15:59	04/29/22 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:23*	*1*
Y Carrier	*86.0*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.142	U	0.221	0.221	5.00	0.357	pCi/L		05/12/22 22:21	1

Client Sample ID: AES-FB-041122
Lab Sample ID: 500-215017-7

Date Collected: 04/11/22 18:00
Matrix: Water

Date Received: 04/13/22 09:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0197	U	0.0479	0.0479	1.00	0.108	pCi/L	04/18/22 15:40	05/11/22 10:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*04/18/22 15:40*	*05/11/22 10:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0406	U	0.186	0.186	1.00	0.347	pCi/L	04/18/22 15:59	04/29/22 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:23*	*1*
Y Carrier	*86.7*		*40 - 110*	*04/18/22 15:59*	*04/29/22 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0603	U	0.192	0.192	5.00	0.347	pCi/L		05/12/22 22:21	1

Definitions/Glossary

Client: DNA-Environment, LLC
Job ID: 500-215017-2
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: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Rad

Prep Batch: 561012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	PrecSep-21	
500-215017-2	AES-MW2-041122	Total/NA	Water	PrecSep-21	
500-215017-3	AES-MW3-041122	Total/NA	Water	PrecSep-21	
500-215017-4	AES-MW4-041122	Total/NA	Water	PrecSep-21	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	PrecSep-21	
500-215017-6	AES-MW5-041122	Total/NA	Water	PrecSep-21	
500-215017-7	AES-FB-041122	Total/NA	Water	PrecSep-21	
MB 160-561012/12-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-561012/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	PrecSep-21	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	PrecSep-21	

Prep Batch: 561013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215017-1	AES-MW1-041122	Total/NA	Water	PrecSep_0	
500-215017-2	AES-MW2-041122	Total/NA	Water	PrecSep_0	
500-215017-3	AES-MW3-041122	Total/NA	Water	PrecSep_0	
500-215017-4	AES-MW4-041122	Total/NA	Water	PrecSep_0	
500-215017-5	AES-MW4-DUP-041122	Total/NA	Water	PrecSep_0	
500-215017-6	AES-MW5-041122	Total/NA	Water	PrecSep_0	
500-215017-7	AES-FB-041122	Total/NA	Water	PrecSep_0	
MB 160-561013/12-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-561013/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-215017-2 MS	AES-MW2-041122	Total/NA	Water	PrecSep_0	
500-215017-2 MSD	AES-MW2-041122	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-561012/12-A
Matrix: Water
Analysis Batch: 564967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 561012

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01952	U	0.0827	0.0827	1.00	0.152	pCi/L	04/18/22 15:40	05/11/22 10:55	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.2*		*40 - 110*	*04/18/22 15:40*	*05/11/22 10:55*	*1*

Lab Sample ID: LCS 160-561012/1-A
Matrix: Water
Analysis Batch: 564844

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 561012

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.23		1.06	1.00	0.118	pCi/L	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 564844

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA
Prep Batch: 561012

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	-0.00502	U	11.3	11.06		1.14	1.00	0.110	pCi/L	98	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*94.8*		*40 - 110*

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 565165

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA
Prep Batch: 561012

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	-0.00502	U	11.2	9.741		1.01	1.00	0.0989	pCi/L	87	60 - 140	0.61	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*95.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-561013/12-A
Matrix: Water
Analysis Batch: 562970

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 561013

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3539	U	0.233	0.235	1.00	0.355	pCi/L	04/18/22 15:59	04/29/22 12:23	1

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

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110	04/18/22 15:59	04/29/22 12:23	1
Y Carrier	88.2		40 - 110	04/18/22 15:59	04/29/22 12:23	1

Lab Sample ID: LCS 160-561013/1-A
Matrix: Water
Analysis Batch: 562836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 561013

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.67	8.032		0.950	1.00	0.352	pCi/L	93	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	89.7		40 - 110

Lab Sample ID: 500-215017-2 MS
Matrix: Water
Analysis Batch: 562836

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA
Prep Batch: 561013

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	-0.0512	U	8.60	8.768		1.03	1.00	0.368	pCi/L	102	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	94.8		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: 500-215017-2 MSD
Matrix: Water
Analysis Batch: 562836

Client Sample ID: AES-MW2-041122
Prep Type: Total/NA
Prep Batch: 561013

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	-0.0512	U	8.58	8.684		1.03	1.00	0.409	pCi/L	101	60 - 140	0.04	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	95.1		40 - 110
Y Carrier	86.4		40 - 110

Lab Chronicle

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-041122
Lab Sample ID: 500-215017-1
Date Collected: 04/11/22 09:39
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	564844	05/10/22 21:05	SCB	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 12:21	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Client Sample ID: AES-MW2-041122
Lab Sample ID: 500-215017-2
Date Collected: 04/11/22 14:19
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	564844	05/10/22 21:05	SCB	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 12:21	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Client Sample ID: AES-MW3-041122
Lab Sample ID: 500-215017-3
Date Collected: 04/11/22 12:55
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	565165	05/11/22 09:23	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562970	04/29/22 12:22	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Client Sample ID: AES-MW4-041122
Lab Sample ID: 500-215017-4
Date Collected: 04/11/22 15:28
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	565165	05/11/22 09:23	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562970	04/29/22 12:22	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Lab Chronicle

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-041122
Lab Sample ID: 500-215017-5
Date Collected: 04/11/22 15:49
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	564967	05/11/22 10:54	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562970	04/29/22 12:22	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Client Sample ID: AES-MW5-041122
Lab Sample ID: 500-215017-6
Date Collected: 04/11/22 17:59
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	564967	05/11/22 10:55	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562970	04/29/22 12:23	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Client Sample ID: AES-FB-041122
Lab Sample ID: 500-215017-7
Date Collected: 04/11/22 18:00
Matrix: Water
Date Received: 04/13/22 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561012	04/18/22 15:40	LPS	TAL SL
Total/NA	Analysis	9315		1	564967	05/11/22 10:55	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561013	04/18/22 15:59	LPS	TAL SL
Total/NA	Analysis	9320		1	562970	04/29/22 12:23	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	565384	05/12/22 22:21	EMH	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: DNA-Environment, LLC
Job ID: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Laboratory: Eurofins St. Louis

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87689	06-30-22

Eurofins TestAmerica, 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 / Ivan Cardona	Lab PM: Wright, Richard	Carrier Tracking No(s):	COC No:
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Richard.Wright@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: DNA-Environment, LLC	PWSID:			Job #: 500-215017

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: X Yes No
Phone: 787-209-6386	PO #:
Email: alberto.melendez@dnaenv.com	WO #:
Project Name: CCR Groundwater Monitoring	Project #:
Site: AES Puerto Rico LP, Guayama, Puerto Rico	SSOW#:

Analysis Requested

Preservation Codes:
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)
Other:

	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)	9315_Ra226; 9320_Ra228, & Radium 226 and 228 combined														Total Number of containers	Special Instructions/Note:
				Preservation Code:				D															
1	AES-MW1-041122	4/11/22	09:39	G	Water	N		X	X													2	pH = 7.02
2	AES-MW2-041122	4/11/22	14:19	G	Water	N		X	X													2	pH = 6.91
3	AES-MW2-041122 MS 2	4/11/22	15:42	G	Water	N	Y	X	X													2	---
4	AES-MW2-041122 MSD 2	4/11/22	16:23	G	Water	N	Y	X	X													2	---
5	AES-MW3-041122 3	4/11/22	12:55	G	Water	N		X	X													2	pH = 6.75
6	AES-MW4-041122 4	4/11/22	15:28	G	Water	N		X	X													2	pH = 6.95
7	AES-MW4-DUP-041122 5	4/11/22	15:49	G	Water	N		X	X													2	---
8	AES-MW5-041122 6	4/11/22	17:59	G	Water	N		X	X													2	pH = 6.42
9	AES-FB-041122 7	4/11/22	18:00	G	Water	N		X	X													2	---
	DMB 4/15/22																						
																							Note: pH = Field pH Measurement

Possible Hazard Identification
X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ 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: 04/12/22 11:45	Company: DNA	Received by: Stephanie Hernandez Date/Time: 4/13/22 0955 Company: EE TA
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: unchilled

Eurofins TestAmerica, 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 / Ivan Cardona	Lab PM: Wright Richard	Carrier Tracking No(s):	COC No:
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Richard Wright@Eurofinset com	State of Origin:	Page: Page 1 of 1
Company: DNA-Environment LLC	PWSID			Job #: 500-215017

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: X Yes No	
Phone: 787-209-6386	PO #:	
Email: alberto melendez@dnaenv com	WO #:	
Project Name: CCR Groundwater Monitonng	Project #:	
Site: AES Puerto Rico LP Guayama Puerto Rico	SSOW#:	

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	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:

	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)	9315_Ra226, 9320_Ra228, & Radium 226 and 228 combined												Total Number of containers	Special Instructions/Note
				Preservation Code:				D													
1	AES-MW1-041122	4/11/22	09 39	G	Water	N		X	X											2	pH = 7 02
2	AES-MW2-041122	4/11/22	14 19	G	Water	N		X	X											2	pH = 6 91
3	AES-MW2-041122 MS	4/11/22	15 42	G	Water	N	Y	X	X											2	---
4	AES-MW2-041122 MSD	4/11/22	16 23	G	Water	N	Y	X	X											2	---
5	AES-MW3-041122	4/11/22	12 55	G	Water	N		X	X											2	pH = 6 75
6	AES-MW4-041122	4/11/22	15 28	G	Water	N		X	X											2	pH = 6 95
7	AES-MW4-DUP-041122	4/11/22	15 49	G	Water	N		X	X											2	---
8	AES-MW5-041122	4/11/22	17 59	G	Water	N		X	X											2	pH = 6 42
9	AES-FB-041122	4/11/22	18 00	G	Water	N		X	X											2	---
																					Note pH = Field pH Measurement

Possible Hazard Identification
☐ X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ X Disposal By Lab ☐ 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:	Company	Received by:	Date/Time:	Company
1		04/12/22 11:45	DNA	Stephanie Hernandez	4/13/22 0955	EETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: unchilled

ORIGIN ID:NRRA (787) 209-6386
ALBERTO MELENDEZ

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

SHIP DATE: 12APR22
ACTWGT: 53.00 LB
CAD: 006998633/SSFE2300
DIMS: 24x13x13 IN

BILL CREDIT CARD

Part # 158207-435 FEDEX EXP 10/21

RT 519
ST 19

5
10:30 A
9547
04 13

TO SAMPLE RECEIVING
EUROFINS TEST AMERICA, CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484 (US)
(708) 534-5200
INV:
PO: REF:
DEPT:

FedEx Express

J221D2201050202en

2 of 2
MPS# 2719 3623 9547
0683
Mstr# 8161 1808 2933

WED - 13 APR 10:30A
INTL PRIORITY

0402

XN JOTA

60484
IL-US ORD

Page 23 of 30

5/31/2022 (Rev. 2)

Align Open End of FedEx Pouch Here

5 14 13 12 11 10 9 8 7 6 5 4 3 2 1

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 (Sub Contract Lab)	Sampler:	Lab PM: Wright, Richard	Carrier Tracking No(s):	COC No: 500-159450.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Richard.Wright@et.eurofinsus.com	State of Origin: Puerto Rico	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Florida		Job #: 500-215017-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 5/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR GW Monitoring, AES Puerto Rico, LP	Project #: 50017042			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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)

Other:

Sample Identification - Client ID (Lab ID)	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)	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Ra226Ra228_GFPC/ Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X				X	
AES-MW1-041122 (500-215017-1)	4/11/22	09:39 Atlantic		Water			X	X	X	2	
AES-MW2-041122 (500-215017-2)	4/11/22	14:19 Atlantic		Water			X	X	X	2	
AES-MW2-041122 (500-215017-2MS)	4/11/22	15:42 Atlantic	MS	Water			X	X		2	
AES-MW2-041122 (500-215017-2MSD)	4/11/22	16:23 Atlantic	MSD	Water			X	X		2	
AES-MW3-041122 (500-215017-3)	4/11/22	12:55 Atlantic		Water			X	X	X	2	
AES-MW4-041122 (500-215017-4)	4/11/22	15:28 Atlantic		Water			X	X	X	2	
AES-MW4-DUP-041122 (500-215017-5)	4/11/22	15:49 Atlantic		Water			X	X	X	2	
AES-MW5-041122 (500-215017-6)	4/11/22	17:59 Atlantic		Water			X	X	X	2	
AES-FB-041122 (500-215017-7)	4/11/22	18:00 Atlantic		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon out 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 attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Chicago.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Allen Scott	4/13/22 1500	PDTA	FED EX		
Relinquished by:	FED EX	Date/Time:	Company	Received by: Sierra Worthington	Date/Time: 4-14-22 1310	Company ETAS
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: DNA-Environment, LLC

Job Number: 500-215017-2

Login Number: 215017
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

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	0.4
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: 500-215017-2

Login Number: 215017
List Number: 3
Creator: James, Jeff A

List Source: Eurofins Chicago

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.	N/A	Unchilled (RAD Samples)
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: 500-215017-2

Login Number: 215017
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 04/15/22 12:08 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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: 500-215017-2

Login Number: 215017
List Number: 3
Creator: James, Jeff A

List Source: Eurofins Chicago

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.	N/A	Unchilled (RAD Samples)
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: 500-215017-2

Login Number: 215017
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 04/15/22 12:08 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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: 500-215017-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
500-215017-1	AES-MW1-041122	87.2
500-215017-2	AES-MW2-041122	90.4
500-215017-2 MS	AES-MW2-041122	94.8
500-215017-2 MSD	AES-MW2-041122	95.1
500-215017-3	AES-MW3-041122	95.8
500-215017-4	AES-MW4-041122	73.6
500-215017-5	AES-MW4-DUP-041122	75.4
500-215017-6	AES-MW5-041122	94.6
500-215017-7	AES-FB-041122	92.4
LCS 160-561012/1-A	Lab Control Sample	98.8
MB 160-561012/12-A	Method Blank	89.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
500-215017-1	AES-MW1-041122	87.2	86.4
500-215017-2	AES-MW2-041122	90.4	87.9
500-215017-2 MS	AES-MW2-041122	94.8	87.5
500-215017-2 MSD	AES-MW2-041122	95.1	86.4
500-215017-3	AES-MW3-041122	95.8	88.2
500-215017-4	AES-MW4-041122	73.6	84.1
500-215017-5	AES-MW4-DUP-041122	75.4	87.1
500-215017-6	AES-MW5-041122	94.6	86.0
500-215017-7	AES-FB-041122	92.4	86.7
LCS 160-561013/1-A	Lab Control Sample	98.8	89.7
MB 160-561013/12-A	Method Blank	89.2	88.2

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

LABORATORY ANALYTICAL REPORTS: OCTOBER 2022 SAMPLING EVENT

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

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

Generated 11/17/2022 4:12:26 PM

JOB DESCRIPTION

CCR GW Monitoring, AES Puerto Rico, LP

JOB NUMBER

500-223793-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

myEOL

Table of Contents

Job ID: 500-223793-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-223793-1

Receipt
The samples were received on 10/14/2022 8:20 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 0.8º C.

Metals
Method 6020B: The initial low level continuing calibration verification (ICVL) associated with batch 500-682493 recovered above the upper control limit for Beryllium. The samples associated with this ICVL were non-detects for the affected analyte; 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 9056A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 500-682998 were outside control limits for Sulfate. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was 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: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101122 — Lab Sample ID: 500-223793-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00029	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.042		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.23		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	110		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.00056	J	0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0026	J	0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.016		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Fluoride	0.58		0.10	0.030	mg/L	1		4500 F C-2011	Total/NA
Sulfate	190		5.0	2.4	mg/L	25		9056A	Total/NA
Total Dissolved Solids	1100		50	26	mg/L	1		SM 2540C	Total/NA
Chloride	330		20	10	mg/L	10		SM 4500 Cl- E	Total/NA
Field pH	7.27				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW2-101122 — Lab Sample ID: 500-223793-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00026	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.11		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.18		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	90		0.20	0.044	mg/L	1		6020B	Total Recoverable
Selenium	0.024		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Fluoride	0.51		0.10	0.030	mg/L	1		4500 F C-2011	Total/NA
Sulfate	81	F1	2.0	0.95	mg/L	10		9056A	Total/NA
Total Dissolved Solids	600		50	26	mg/L	1		SM 2540C	Total/NA
Chloride	110		20	10	mg/L	10		SM 4500 Cl- E	Total/NA
Field pH	7.35				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW3-101122 — Lab Sample ID: 500-223793-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0012		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.072		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.88		0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00019	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	390		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.0026		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.0030	J	0.010	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Client Sample ID: AES-MW3-101122 (Continued) — Lab Sample ID: 500-223793-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.11		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.061		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Fluoride	2.1		1.0	0.30	mg/L	10		4500 F C-2011	Total/NA
Sulfate	1900		100	48	mg/L	500		9056A	Total/NA
Total Dissolved Solids	8900		250	130	mg/L	1		SM 2540C	Total/NA
Chloride	4300		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Field pH	8.16				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-101122 — Lab Sample ID: 500-223793-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.0028	J	0.0030	0.0013	mg/L	1		6020B	Total Recoverable
Arsenic	0.0018		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.036		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.85		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	540		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.0098		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.13		0.010	0.0025	mg/L	1		6020B	Total Recoverable
Molybdenum	1.2		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.62		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Fluoride	0.95		0.50	0.15	mg/L	5		4500 F C-2011	Total/NA
Sulfate	6300		200	95	mg/L	1000		9056A	Total/NA
Total Dissolved Solids	16000		2500	1300	mg/L	1		SM 2540C	Total/NA
Chloride	4600		600	300	mg/L	300		SM 4500 Cl- E	Total/NA
Field pH	8.53				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-MW4-DUP-101122 — Lab Sample ID: 500-223793-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.0031		0.0030	0.0013	mg/L	1		6020B	Total Recoverable
Arsenic	0.0019		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.040		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.0		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	570		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.011		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lithium	0.14		0.010	0.0025	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101122 (Continued)
Lab Sample ID: 500-223793-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	1.3		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.69		0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Fluoride	0.90		0.50	0.15	mg/L	5		4500 F C-2011	Total/NA
Sulfate	8000		200	95	mg/L	1000		9056A	Total/NA
Total Dissolved Solids	17000		2500	1300	mg/L	1		SM 2540C	Total/NA
Chloride	4500		600	300	mg/L	300		SM 4500 Cl- E	Total/NA

Client Sample ID: AES-MW5-101122
Lab Sample ID: 500-223793-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0043		0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.028		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.36		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	560		2.0	0.44	mg/L	10		6020B	Total Recoverable
Cobalt	0.0029		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Molybdenum	0.0057		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Selenium	0.0015	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Fluoride	0.39		0.10	0.030	mg/L	1		4500 F C-2011	Total/NA
Sulfate	2000		100	48	mg/L	500		9056A	Total/NA
Total Dissolved Solids	8300		2500	1300	mg/L	1		SM 2540C	Total/NA
Chloride	3500		200	100	mg/L	100		SM 4500 Cl- E	Total/NA
Field pH	8.28				SU	1		Field Sampling	Total/NA

Client Sample ID: AES-FB-101122
Lab Sample ID: 500-223793-7

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
4500 F C-2011	Fluoride (Ion-selective Electrode)	SM	ELLE
9056A	Anions, Ion Chromatography	SW846	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 Cl- E	Chloride, Total	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

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-223793-1	AES-MW1-101122	Water	10/11/22 09:29	10/14/22 08:20
500-223793-2	AES-MW2-101122	Water	10/11/22 10:44	10/14/22 08:20
500-223793-3	AES-MW3-101122	Water	10/11/22 12:24	10/14/22 08:20
500-223793-4	AES-MW4-101122	Water	10/11/22 13:53	10/14/22 08:20
500-223793-5	AES-MW4-DUP-101122	Water	10/11/22 14:15	10/14/22 08:20
500-223793-6	AES-MW5-101122	Water	10/11/22 15:31	10/14/22 08:20
500-223793-7	AES-FB-101122	Water	10/11/22 15:33	10/14/22 08:20

Client Sample Results

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101122
Lab Sample ID: 500-223793-1
Date Collected: 10/11/22 09:29
Matrix: Water
Date Received: 10/14/22 08:20

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		10/28/22 09:05	10/28/22 18:31	1
Arsenic	**0.00029**	**J**	0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 18:31	1
Barium	**0.042**		0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 18:31	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:16	1
Boron	**0.23**		0.050	0.013	mg/L		10/28/22 09:05	10/28/22 18:31	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 18:31	1
Calcium	**110**		0.20	0.044	mg/L		10/28/22 09:05	10/28/22 18:31	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 18:31	1
Cobalt	**0.00056**	**J**	0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 18:31	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 18:31	1
Lithium	0.0025	U	0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:16	1
Molybdenum	**0.0026**	**J**	0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 18:31	1
Selenium	**0.016**		0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 18:31	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 18:31	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 07:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	**0.58**		0.10	0.030	mg/L			10/31/22 10:36	1
Sulfate (SW846 9056A)	**190**		5.0	2.4	mg/L			11/03/22 16:07	25
Total Dissolved Solids (SM 2540C)	**1100**		50	26	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	**330**		20	10	mg/L			10/17/22 11:00	10

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.27**				SU			10/11/22 07:29	1

Client Sample ID: AES-MW2-101122
Lab Sample ID: 500-223793-2

Date Collected: 10/11/22 10:44
Matrix: Water
Date Received: 10/14/22 08:20

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		10/28/22 09:05	10/28/22 18:41	1
Arsenic	**0.00026**	**J**	0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 18:41	1
Barium	**0.11**		0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 18:41	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:26	1
Boron	**0.18**		0.050	0.013	mg/L		10/28/22 09:05	10/28/22 18:41	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 18:41	1
Calcium	**90**		0.20	0.044	mg/L		10/28/22 09:05	10/28/22 18:41	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 18:41	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 18:41	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 18:41	1
Lithium	0.0025	U	0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:26	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 18:41	1
Selenium	**0.024**		0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 18:41	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 18:41	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 07:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	**0.51**		0.10	0.030	mg/L			10/31/22 10:38	1
Sulfate (SW846 9056A)	**81**	**F1**	2.0	0.95	mg/L			11/03/22 16:20	10
Total Dissolved Solids (SM 2540C)	**600**		50	26	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	**110**		20	10	mg/L			10/17/22 10:57	10

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.35**				SU			10/11/22 08:44	1

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-101122
Lab Sample ID: 500-223793-3
Date Collected: 10/11/22 12:24
Matrix: Water
Date Received: 10/14/22 08:20

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		10/28/22 09:05	10/28/22 18:58	1
Arsenic	**0.0012**		0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 18:58	1
Barium	**0.072**		0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 18:58	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:43	1
Boron	**0.88**		0.050	0.013	mg/L		10/28/22 09:05	10/28/22 18:58	1
Cadmium	**0.00019**	**J**	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 18:58	1
Calcium	**390**		2.0	0.44	mg/L		10/28/22 09:05	11/01/22 15:02	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 18:58	1
Cobalt	**0.0026**		0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 18:58	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 18:58	1
Lithium	**0.0030**	**J**	0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:43	1
Molybdenum	**0.11**		0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 18:58	1
Selenium	**0.061**		0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 18:58	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 18:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 08:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	**2.1**		1.0	0.30	mg/L			10/31/22 10:45	10
Sulfate (SW846 9056A)	**1900**		100	48	mg/L			11/03/22 17:28	500
Total Dissolved Solids (SM 2540C)	**8900**		250	130	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	**4300**		200	100	mg/L			10/17/22 11:01	100

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**8.16**				SU			10/11/22 10:24	1

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-101122
Lab Sample ID: 500-223793-4
Date Collected: 10/11/22 13:53
Matrix: Water
Date Received: 10/14/22 08:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0028**	**J**	0.0030	0.0013	mg/L		10/28/22 09:05	10/28/22 19:02	1
Arsenic	**0.0018**		0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 19:02	1
Barium	**0.036**		0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 19:02	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:47	1
Boron	**0.85**		0.050	0.013	mg/L		10/28/22 09:05	10/28/22 19:02	1
Cadmium	**0.00022**	**J**	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 19:02	1
Calcium	**540**		2.0	0.44	mg/L		10/28/22 09:05	11/01/22 15:05	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 19:02	1
Cobalt	**0.0098**		0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 19:02	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 19:02	1
Lithium	**0.13**		0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:47	1
Molybdenum	**1.2**		0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 19:02	1
Selenium	**0.62**		0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 19:02	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 19:02	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 08:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	**0.95**		0.50	0.15	mg/L			10/31/22 10:48	5
Sulfate (SW846 9056A)	**6300**		200	95	mg/L			11/05/22 02:43	1000
Total Dissolved Solids (SM 2540C)	**16000**		2500	1300	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	**4600**		600	300	mg/L			10/17/22 11:18	300

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**8.53**				SU			10/11/22 11:53	1

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101122
Lab Sample ID: 500-223793-5
Date Collected: 10/11/22 14:15
Matrix: Water
Date Received: 10/14/22 08:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0031**		0.0030	0.0013	mg/L		10/28/22 09:05	10/28/22 19:05	1
Arsenic	**0.0019**		0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 19:05	1
Barium	**0.040**		0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 19:05	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:50	1
Boron	**1.0**		0.050	0.013	mg/L		10/28/22 09:05	10/28/22 19:05	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 19:05	1
Calcium	**570**		2.0	0.44	mg/L		10/28/22 09:05	11/01/22 15:09	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 19:05	1
Cobalt	**0.011**		0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 19:05	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 19:05	1
Lithium	**0.14**		0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:50	1
Molybdenum	**1.3**		0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 19:05	1
Selenium	**0.69**		0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 19:05	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 19:05	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 08:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	**0.90**		0.50	0.15	mg/L			10/31/22 10:50	5
Sulfate (SW846 9056A)	**8000**		200	95	mg/L			11/05/22 02:30	1000
Total Dissolved Solids (SM 2540C)	**17000**		2500	1300	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	**4500**		600	300	mg/L			10/17/22 11:18	300

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-101122
Lab Sample ID: 500-223793-6
Date Collected: 10/11/22 15:31
Matrix: Water
Date Received: 10/14/22 08:20

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		10/28/22 09:05	10/28/22 19:09	1
Arsenic	**0.0043**		0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 19:09	1
Barium	**0.028**		0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 19:09	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:53	1
Boron	**0.36**		0.050	0.013	mg/L		10/28/22 09:05	10/28/22 19:09	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 19:09	1
Calcium	**560**		2.0	0.44	mg/L		10/28/22 09:05	11/01/22 15:12	10
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 19:09	1
Cobalt	**0.0029**		0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 19:09	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 19:09	1
Lithium	0.0025	U	0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:53	1
Molybdenum	**0.0057**		0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 19:09	1
Selenium	**0.0015**	**J**	0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 19:09	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 19:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 08:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	**0.39**		0.10	0.030	mg/L			10/31/22 12:44	1
Sulfate (SW846 9056A)	**2000**		100	48	mg/L			11/03/22 18:09	500
Total Dissolved Solids (SM 2540C)	**8300**		2500	1300	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	**3500**		200	100	mg/L			10/17/22 11:02	100

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**8.28**				SU			10/11/22 13:31	1

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-101122
Lab Sample ID: 500-223793-7
Date Collected: 10/11/22 15:33
Matrix: Water
Date Received: 10/14/22 08:20

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		10/28/22 09:05	10/28/22 19:12	1
Arsenic	0.00023	U	0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 19:12	1
Barium	0.00073	U	0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 19:12	1
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 15:57	1
Boron	0.013	U	0.050	0.013	mg/L		10/28/22 09:05	10/28/22 19:12	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 19:12	1
Calcium	0.044	U	0.20	0.044	mg/L		10/28/22 09:05	10/28/22 19:12	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 19:12	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 19:12	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 19:12	1
Lithium	0.0025	U	0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 15:57	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 19:12	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 19:12	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 19:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 08:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	0.030	U	0.10	0.030	mg/L			10/31/22 11:00	1
Sulfate (SW846 9056A)	0.095	U	0.20	0.095	mg/L			11/03/22 18:23	1
Total Dissolved Solids (SM 2540C)	26	U	50	26	mg/L			10/17/22 13:00	1
Chloride (SM 4500 Cl- E)	1.0	U	2.0	1.0	mg/L			10/17/22 11:02	1

Qualifiers

Metals

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

Metals

Prep Batch: 681836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total Recoverable	Water	3005A	
500-223793-2	AES-MW2-101122	Total Recoverable	Water	3005A	
500-223793-3	AES-MW3-101122	Total Recoverable	Water	3005A	
500-223793-4	AES-MW4-101122	Total Recoverable	Water	3005A	
500-223793-5	AES-MW4-DUP-101122	Total Recoverable	Water	3005A	
500-223793-6	AES-MW5-101122	Total Recoverable	Water	3005A	
500-223793-7	AES-FB-101122	Total Recoverable	Water	3005A	
MB 500-681836/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-681836/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-223793-2 MS	AES-MW2-101122	Total Recoverable	Water	3005A	
500-223793-2 MSD	AES-MW2-101122	Total Recoverable	Water	3005A	
500-223793-2 DU	AES-MW2-101122	Total Recoverable	Water	3005A	

Prep Batch: 681885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	7470A	
500-223793-2	AES-MW2-101122	Total/NA	Water	7470A	
500-223793-3	AES-MW3-101122	Total/NA	Water	7470A	
500-223793-4	AES-MW4-101122	Total/NA	Water	7470A	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	7470A	
500-223793-6	AES-MW5-101122	Total/NA	Water	7470A	
500-223793-7	AES-FB-101122	Total/NA	Water	7470A	
MB 500-681885/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-681885/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	7470A	
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	7470A	
500-223793-2 DU	AES-MW2-101122	Total/NA	Water	7470A	

Analysis Batch: 682191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total Recoverable	Water	6020B	681836
500-223793-2	AES-MW2-101122	Total Recoverable	Water	6020B	681836
500-223793-3	AES-MW3-101122	Total Recoverable	Water	6020B	681836
500-223793-4	AES-MW4-101122	Total Recoverable	Water	6020B	681836
500-223793-5	AES-MW4-DUP-101122	Total Recoverable	Water	6020B	681836
500-223793-6	AES-MW5-101122	Total Recoverable	Water	6020B	681836
500-223793-7	AES-FB-101122	Total Recoverable	Water	6020B	681836
MB 500-681836/1-A	Method Blank	Total Recoverable	Water	6020B	681836
LCS 500-681836/2-A	Lab Control Sample	Total Recoverable	Water	6020B	681836
500-223793-2 MS	AES-MW2-101122	Total Recoverable	Water	6020B	681836
500-223793-2 MSD	AES-MW2-101122	Total Recoverable	Water	6020B	681836
500-223793-2 DU	AES-MW2-101122	Total Recoverable	Water	6020B	681836

Analysis Batch: 682192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	7470A	681885
500-223793-2	AES-MW2-101122	Total/NA	Water	7470A	681885
500-223793-3	AES-MW3-101122	Total/NA	Water	7470A	681885
500-223793-4	AES-MW4-101122	Total/NA	Water	7470A	681885
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	7470A	681885
500-223793-6	AES-MW5-101122	Total/NA	Water	7470A	681885

Metals (Continued)

Analysis Batch: 682192 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-7	AES-FB-101122	Total/NA	Water	7470A	681885
MB 500-681885/12-A	Method Blank	Total/NA	Water	7470A	681885
LCS 500-681885/13-A	Lab Control Sample	Total/NA	Water	7470A	681885
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	7470A	681885
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	7470A	681885
500-223793-2 DU	AES-MW2-101122	Total/NA	Water	7470A	681885

Analysis Batch: 682493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total Recoverable	Water	6020B	681836
500-223793-2	AES-MW2-101122	Total Recoverable	Water	6020B	681836
500-223793-3	AES-MW3-101122	Total Recoverable	Water	6020B	681836
500-223793-3	AES-MW3-101122	Total Recoverable	Water	6020B	681836
500-223793-4	AES-MW4-101122	Total Recoverable	Water	6020B	681836
500-223793-4	AES-MW4-101122	Total Recoverable	Water	6020B	681836
500-223793-5	AES-MW4-DUP-101122	Total Recoverable	Water	6020B	681836
500-223793-5	AES-MW4-DUP-101122	Total Recoverable	Water	6020B	681836
500-223793-6	AES-MW5-101122	Total Recoverable	Water	6020B	681836
500-223793-6	AES-MW5-101122	Total Recoverable	Water	6020B	681836
500-223793-7	AES-FB-101122	Total Recoverable	Water	6020B	681836
MB 500-681836/1-A	Method Blank	Total Recoverable	Water	6020B	681836
LCS 500-681836/2-A	Lab Control Sample	Total Recoverable	Water	6020B	681836
500-223793-2 MS	AES-MW2-101122	Total Recoverable	Water	6020B	681836
500-223793-2 MSD	AES-MW2-101122	Total Recoverable	Water	6020B	681836
500-223793-2 DU	AES-MW2-101122	Total Recoverable	Water	6020B	681836

General Chemistry

Analysis Batch: 312297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	4500 F C-2011	
500-223793-2	AES-MW2-101122	Total/NA	Water	4500 F C-2011	
500-223793-3	AES-MW3-101122	Total/NA	Water	4500 F C-2011	
500-223793-4	AES-MW4-101122	Total/NA	Water	4500 F C-2011	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	4500 F C-2011	
500-223793-6	AES-MW5-101122	Total/NA	Water	4500 F C-2011	
500-223793-7	AES-FB-101122	Total/NA	Water	4500 F C-2011	
MB 410-312297/3	Method Blank	Total/NA	Water	4500 F C-2011	
MB 410-312297/31	Method Blank	Total/NA	Water	4500 F C-2011	
LCS 410-312297/32	Lab Control Sample	Total/NA	Water	4500 F C-2011	
LCS 410-312297/4	Lab Control Sample	Total/NA	Water	4500 F C-2011	
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	4500 F C-2011	
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	4500 F C-2011	

Analysis Batch: 368843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	SM 2540C	
500-223793-2	AES-MW2-101122	Total/NA	Water	SM 2540C	
500-223793-3	AES-MW3-101122	Total/NA	Water	SM 2540C	
500-223793-4	AES-MW4-101122	Total/NA	Water	SM 2540C	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 368843 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-6	AES-MW5-101122	Total/NA	Water	SM 2540C	
500-223793-7	AES-FB-101122	Total/NA	Water	SM 2540C	
MB 310-368843/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-368843/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-223793-2 DU	AES-MW2-101122	Total/NA	Water	SM 2540C	

Analysis Batch: 679947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-2	AES-MW2-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-3	AES-MW3-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-4	AES-MW4-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-6	AES-MW5-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-7	AES-FB-101122	Total/NA	Water	SM 4500 Cl- E	
MB 500-679947/129	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-679947/130	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	SM 4500 Cl- E	
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 682998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	9056A	
500-223793-2	AES-MW2-101122	Total/NA	Water	9056A	
500-223793-3	AES-MW3-101122	Total/NA	Water	9056A	
500-223793-6	AES-MW5-101122	Total/NA	Water	9056A	
500-223793-7	AES-FB-101122	Total/NA	Water	9056A	
MB 500-682998/3	Method Blank	Total/NA	Water	9056A	
LCS 500-682998/4	Lab Control Sample	Total/NA	Water	9056A	
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	9056A	
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	9056A	

Analysis Batch: 683270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-4	AES-MW4-101122	Total/NA	Water	9056A	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	9056A	
MB 500-683270/33	Method Blank	Total/NA	Water	9056A	
LCS 500-683270/34	Lab Control Sample	Total/NA	Water	9056A	

Field Service / Mobile Lab

Analysis Batch: 679677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	Field Sampling	
500-223793-2	AES-MW2-101122	Total/NA	Water	Field Sampling	
500-223793-3	AES-MW3-101122	Total/NA	Water	Field Sampling	
500-223793-4	AES-MW4-101122	Total/NA	Water	Field Sampling	
500-223793-6	AES-MW5-101122	Total/NA	Water	Field Sampling	

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-681836/1-A
Matrix: Water
Analysis Batch: 682191

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	U	0.0030	0.0013	mg/L		10/28/22 09:05	10/28/22 18:24	1
Arsenic	0.00023	U	0.0010	0.00023	mg/L		10/28/22 09:05	10/28/22 18:24	1
Barium	0.00073	U	0.0025	0.00073	mg/L		10/28/22 09:05	10/28/22 18:24	1
Boron	0.013	U	0.050	0.013	mg/L		10/28/22 09:05	10/28/22 18:24	1
Cadmium	0.00017	U	0.00050	0.00017	mg/L		10/28/22 09:05	10/28/22 18:24	1
Calcium	0.044	U	0.20	0.044	mg/L		10/28/22 09:05	10/28/22 18:24	1
Chromium	0.0011	U	0.0050	0.0011	mg/L		10/28/22 09:05	10/28/22 18:24	1
Cobalt	0.00040	U	0.0010	0.00040	mg/L		10/28/22 09:05	10/28/22 18:24	1
Lead	0.00019	U	0.00050	0.00019	mg/L		10/28/22 09:05	10/28/22 18:24	1
Molybdenum	0.0025	U	0.0050	0.0025	mg/L		10/28/22 09:05	10/28/22 18:24	1
Selenium	0.00098	U	0.0025	0.00098	mg/L		10/28/22 09:05	10/28/22 18:24	1
Thallium	0.00057	U	0.0010	0.00057	mg/L		10/28/22 09:05	10/28/22 18:24	1

Lab Sample ID: MB 500-681836/1-A
Matrix: Water
Analysis Batch: 682493

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.00053	U ^1+	0.0010	0.00053	mg/L		10/28/22 09:05	11/01/22 14:55	1
Calcium	0.044	U	0.20	0.044	mg/L		10/28/22 09:05	11/01/22 14:55	1
Lithium	0.0025	U	0.010	0.0025	mg/L		10/28/22 09:05	11/01/22 14:55	1

Lab Sample ID: LCS 500-681836/2-A
Matrix: Water
Analysis Batch: 682191

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.495		mg/L		99	80 - 120
Arsenic	0.100	0.0940		mg/L		94	80 - 120
Barium	0.500	0.489		mg/L		98	80 - 120
Boron	1.00	1.02		mg/L		102	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Calcium	10.0	9.30		mg/L		93	80 - 120
Chromium	0.200	0.202		mg/L		101	80 - 120
Cobalt	0.500	0.509		mg/L		102	80 - 120
Lead	0.100	0.0991		mg/L		99	80 - 120
Molybdenum	1.00	0.988		mg/L		99	80 - 120
Selenium	0.100	0.0963		mg/L		96	80 - 120
Thallium	0.100	0.0976		mg/L		98	80 - 120

Lab Sample ID: LCS 500-681836/2-A
Matrix: Water
Analysis Batch: 682493

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.0500	0.0546	^1+	mg/L		109	80 - 120
Calcium	10.0	10.2		mg/L		102	80 - 120
Lithium	0.100	0.105		mg/L		105	80 - 120

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

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 682191

Client Sample ID: AES-MW2-101122
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.0013	U	0.500	0.500		mg/L		100	75 - 125
Arsenic	0.00026	J	0.100	0.0963		mg/L		96	75 - 125
Barium	0.11		0.500	0.593		mg/L		96	75 - 125
Boron	0.18		1.00	1.14		mg/L		96	75 - 125
Cadmium	0.00017	U	0.0500	0.0496		mg/L		99	75 - 125
Calcium	90		10.0	103	4	mg/L		131	75 - 125
Chromium	0.0011	U	0.200	0.196		mg/L		98	75 - 125
Cobalt	0.00040	U	0.500	0.485		mg/L		97	75 - 125
Lead	0.00019	U	0.100	0.0998		mg/L		100	75 - 125
Molybdenum	0.0025	U	1.00	0.977		mg/L		98	75 - 125
Selenium	0.024		0.100	0.126		mg/L		102	75 - 125
Thallium	0.00057	U	0.100	0.0979		mg/L		98	75 - 125

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 682493

Client Sample ID: AES-MW2-101122
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.00053	U ^1+	0.0500	0.0498	^1+	mg/L		100	75 - 125
Lithium	0.0025	U	0.100	0.105		mg/L		105	75 - 125

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 682191

Client Sample ID: AES-MW2-101122
Prep Type: Total Recoverable
Prep Batch: 681836

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	0.503		mg/L		101	75 - 125	1	20
Arsenic	0.00026	J	0.100	0.0973		mg/L		97	75 - 125	1	20
Barium	0.11		0.500	0.594		mg/L		96	75 - 125	0	20
Boron	0.18		1.00	1.14		mg/L		96	75 - 125	0	20
Cadmium	0.00017	U	0.0500	0.0510		mg/L		102	75 - 125	3	20
Calcium	90		10.0	105	4	mg/L		148	75 - 125	2	20
Chromium	0.0011	U	0.200	0.197		mg/L		99	75 - 125	0	20
Cobalt	0.00040	U	0.500	0.486		mg/L		97	75 - 125	0	20
Lead	0.00019	U	0.100	0.100		mg/L		100	75 - 125	0	20
Molybdenum	0.0025	U	1.00	0.996		mg/L		100	75 - 125	2	20
Selenium	0.024		0.100	0.130		mg/L		106	75 - 125	4	20
Thallium	0.00057	U	0.100	0.0986		mg/L		99	75 - 125	1	20

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 682493

Client Sample ID: AES-MW2-101122
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	0.00053	U ^1+	0.0500	0.0506	^1+	mg/L		101	75 - 125	2	20
Lithium	0.0025	U	0.100	0.106		mg/L		106	75 - 125	1	20

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

Lab Sample ID: 500-223793-2 DU
Matrix: Water
Analysis Batch: 682191

Client Sample ID: AES-MW2-101122
Prep Type: Total Recoverable
Prep Batch: 681836

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	0.00026	J	0.00023	U	mg/L		NC	20
Barium	0.11		0.114		mg/L		2	20
Boron	0.18		0.186		mg/L		4	20
Cadmium	0.00017	U	0.00017	U	mg/L		NC	20
Calcium	90		88.5		mg/L		2	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
Molybdenum	0.0025	U	0.0025	U	mg/L		NC	20
Selenium	0.024		0.0245		mg/L		1	20
Thallium	0.00057	U	0.00057	U	mg/L		NC	20

Lab Sample ID: 500-223793-2 DU
Matrix: Water
Analysis Batch: 682493

Client Sample ID: AES-MW2-101122
Prep Type: Total Recoverable
Prep Batch: 681836

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Beryllium	0.00053	U ^1+	0.00053	U ^1+	mg/L		NC	20
Lithium	0.0025	U	0.0025	U	mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-681885/12-A
Matrix: Water
Analysis Batch: 682192

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 681885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	U	0.00020	0.000098	mg/L		10/28/22 11:50	10/31/22 07:02	1

Lab Sample ID: LCS 500-681885/13-A
Matrix: Water
Analysis Batch: 682192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.00198		mg/L		99	80 - 120

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 682192

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 681885

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000098	U	0.00100	0.00105		mg/L		105	75 - 125

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 682192

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 681885

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.000098	U	0.00100	0.00102		mg/L		102	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 500-223793-2 DU
Matrix: Water
Analysis Batch: 682192

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 681885

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.000098	U	0.000098	U	mg/L		NC	20

Method: 4500 F C-2011 - Fluoride (Ion-selective Electrode)

Lab Sample ID: MB 410-312297/3
Matrix: Water
Analysis Batch: 312297

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.030	U	0.10	0.030	mg/L			10/31/22 10:01	1

Lab Sample ID: MB 410-312297/31
Matrix: Water
Analysis Batch: 312297

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.030	U	0.10	0.030	mg/L			10/31/22 11:31	1

Lab Sample ID: LCS 410-312297/32
Matrix: Water
Analysis Batch: 312297

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.999	0.970		mg/L		97	97 - 110

Lab Sample ID: LCS 410-312297/4
Matrix: Water
Analysis Batch: 312297

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.999	0.970		mg/L		97	97 - 110

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 312297

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.51		0.999	1.49		mg/L		98	97 - 110

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 312297

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.51		0.999	1.54		mg/L		103	97 - 110	3	5

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 500-682998/3
Matrix: Water
Analysis Batch: 682998

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.095	U	0.20	0.095	mg/L			11/03/22 12:01	1

Lab Sample ID: LCS 500-682998/4
Matrix: Water
Analysis Batch: 682998

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	5.00	5.11		mg/L		102	80 - 120

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 682998

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	81	F1	25.0	95.9	F1	mg/L		61	80 - 120

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 682998

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	81	F1	25.0	95.0	F1	mg/L		57	80 - 120	1	15

Lab Sample ID: MB 500-683270/33
Matrix: Water
Analysis Batch: 683270

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.095	U	0.20	0.095	mg/L			11/04/22 21:03	1

Lab Sample ID: LCS 500-683270/34
Matrix: Water
Analysis Batch: 683270

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	5.00	5.25		mg/L		105	80 - 120

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

Lab Sample ID: MB 310-368843/1
Matrix: Water
Analysis Batch: 368843

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	26	U	50	26	mg/L			10/17/22 13:00	1

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

Lab Sample ID: LCS 310-368843/2
Matrix: Water
Analysis Batch: 368843

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			1000	972		mg/L		97	90 - 110		

Lab Sample ID: 500-223793-2 DU
Matrix: Water
Analysis Batch: 368843

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	600			608		mg/L				1	20

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-679947/129
Matrix: Water
Analysis Batch: 679947

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			10/17/22 10:57	1

Lab Sample ID: LCS 500-679947/130
Matrix: Water
Analysis Batch: 679947

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			20.0	21.3		mg/L		107	85 - 115		

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 679947

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	110		20.0	137	4	mg/L		125	75 - 125		

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 679947

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	110		20.0	136	4	mg/L		119	75 - 125	1	20

Lab Chronicle

Client: DNA-Environment LLC
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-223793-1

Client Sample ID: AES-MW1-101122

Lab Sample ID: 500-223793-1

Date Collected: 10/11/22 09:29
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:16
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 18:31
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 07:12
Total/NA	Analysis	4500 F C-2011		1	312297	USAE	ELLE	10/31/22 10:36
Total/NA	Analysis	9056A		25	682998	RES	EET CHI	11/03/22 16:07
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		10	679947	LP	EET CHI	10/17/22 11:00
Total/NA	Analysis	Field Sampling		1	679677	JVB	EET CHI	10/11/22 07:29

Client Sample ID: AES-MW2-101122

Lab Sample ID: 500-223793-2

Date Collected: 10/11/22 10:44
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:26
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 18:41
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 07:14
Total/NA	Analysis	4500 F C-2011		1	312297	USAE	ELLE	10/31/22 10:38
Total/NA	Analysis	9056A		10	682998	RES	EET CHI	11/03/22 16:20
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		10	679947	LP	EET CHI	10/17/22 10:57
Total/NA	Analysis	Field Sampling		1	679677	JVB	EET CHI	10/11/22 08:44

Client Sample ID: AES-MW3-101122

Lab Sample ID: 500-223793-3

Date Collected: 10/11/22 12:24
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		10	682493	FXG	EET CHI	11/01/22 15:02
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:43
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 18:58
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 08:02
Total/NA	Analysis	4500 F C-2011		10	312297	USAE	ELLE	10/31/22 10:45
Total/NA	Analysis	9056A		500	682998	RES	EET CHI	11/03/22 17:28

Client Sample ID: AES-MW3-101122
Lab Sample ID: 500-223793-3
Date Collected: 10/11/22 12:24
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		100	679947	LP	EET CHI	10/17/22 11:01
Total/NA	Analysis	Field Sampling		1	679677	JVB	EET CHI	10/11/22 10:24

Client Sample ID: AES-MW4-101122
Lab Sample ID: 500-223793-4
Date Collected: 10/11/22 13:53
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		10	682493	FXG	EET CHI	11/01/22 15:05
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:47
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 19:02
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 08:05
Total/NA	Analysis	4500 F C-2011		5	312297	USAE	ELLE	10/31/22 10:48
Total/NA	Analysis	9056A		1000	683270	RES	EET CHI	11/05/22 02:43
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		300	679947	LP	EET CHI	10/17/22 11:18
Total/NA	Analysis	Field Sampling		1	679677	JVB	EET CHI	10/11/22 11:53

Client Sample ID: AES-MW4-DUP-101122
Lab Sample ID: 500-223793-5
Date Collected: 10/11/22 14:15
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		10	682493	FXG	EET CHI	11/01/22 15:09
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:50
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 19:05
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 08:12
Total/NA	Analysis	4500 F C-2011		5	312297	USAE	ELLE	10/31/22 10:50
Total/NA	Analysis	9056A		1000	683270	RES	EET CHI	11/05/22 02:30
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		300	679947	LP	EET CHI	10/17/22 11:18

Lab Chronicle

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW5-101122
Lab Sample ID: 500-223793-6
Date Collected: 10/11/22 15:31
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		10	682493	FXG	EET CHI	11/01/22 15:12
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:53
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 19:09
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 08:14
Total/NA	Analysis	4500 F C-2011		1	312297	USAE	ELLE	10/31/22 12:44
Total/NA	Analysis	9056A		500	682998	RES	EET CHI	11/03/22 18:09
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		100	679947	LP	EET CHI	10/17/22 11:02
Total/NA	Analysis	Field Sampling		1	679677	JVB	EET CHI	10/11/22 13:31

Client Sample ID: AES-FB-101122
Lab Sample ID: 500-223793-7
Date Collected: 10/11/22 15:33
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682493	FXG	EET CHI	11/01/22 15:57
Total Recoverable	Prep	3005A			681836	BDE	EET CHI	10/28/22 09:05 - 10/28/22 09:35 [1]
Total Recoverable	Analysis	6020B		1	682191	FXG	EET CHI	10/28/22 19:12
Total/NA	Prep	7470A			681885	MJG	EET CHI	10/28/22 11:50 - 10/28/22 13:50 [1]
Total/NA	Analysis	7470A		1	682192	MJG	EET CHI	10/31/22 08:16
Total/NA	Analysis	4500 F C-2011		1	312297	USAE	ELLE	10/31/22 11:00
Total/NA	Analysis	9056A		1	682998	RES	EET CHI	11/03/22 18:23
Total/NA	Analysis	SM 2540C		1	368843	ENB7	EET CF	10/17/22 13:00
Total/NA	Analysis	SM 4500 Cl- E		1	679947	LP	EET CHI	10/17/22 11:02

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

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
ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: DNA-Environment LLC
Job ID: 500-223793-1
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	04-29-22 *
Georgia (DW)	State	939	04-30-23
Hawaii	State	NA	04-29-23
Illinois	NELAP	IL00035	04-30-23
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	04-30-22 *
North Carolina (WW/SW)	State	291	12-31-22
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	04-30-22 *

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)	09-29-23
Georgia	State	IA100001 (OR)	11-01-22
Illinois	NELAP	200024	11-02-22
Iowa	State	007	11-02-22
Kansas	NELAP	E-10341	01-31-23
Minnesota	NELAP	019-999-319	12-31-22
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-23
Oregon	NELAP	IA100001	11-01-22

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-22
A2LA	ISO/IEC 17025	0001.01	11-30-22
Alaska	State	PA00009	07-01-23
Alaska (UST)	State	17-027	02-28-23
Arizona	State	AZ0780	03-12-23
Arkansas DEQ	State	88-00660	11-09-22
California	State	2792	11-09-22
Colorado	State	PA00009	11-09-22
Connecticut	State	PH-0746	11-09-22
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23
Delaware (DW)	State	N/A	01-31-23
Florida	NELAP	E87997	11-09-22
Georgia (DW)	State	C048	01-31-23

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

Accreditation/Certification Summary

Client: DNA-Environment LLC
Job ID: 500-223793-1
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	N/A	01-31-23
Illinois	NELAP	200027	11-09-22
Iowa	State	361	11-09-22
Kansas	NELAP	E-10151	10-31-22
Kentucky (DW)	State	KY90088	12-31-22
Kentucky (UST)	State	1.01	11-30-22
Kentucky (WW)	State	KY90088	11-09-22
Louisiana (All)	NELAP	02055	11-09-22
Maine	State	2019012	03-12-23
Maryland	State	100	06-30-23
Massachusetts	State	M-PA009	11-10-22
Michigan	State	9930	01-31-23
Minnesota	NELAP	042-999-487	12-31-22
Mississippi	State	022	01-31-23
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-23
Montana (UST)	State	<cert No.>	02-01-23
Nebraska	State	NE-OS-32-17	11-09-22
New Hampshire	NELAP	2730	11-09-22
New Jersey	NELAP	PA011	11-09-22
New York	NELAP	10670	11-09-22
North Carolina (DW)	State	42705	07-31-23
North Carolina (WW/SW)	State	521	10-31-22
North Dakota	State	R-205	01-31-23
Oklahoma	NELAP	R-205	11-09-22
Oregon	NELAP	PA200001	11-09-22
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	11-09-22
Rhode Island	State	LAO00338	11-09-22
South Carolina	State	89002	01-31-23
Tennessee	State	02838	01-31-23
Texas	NELAP	T104704194-22-43	11-09-22
USDA	US Federal Programs	P330-19-00197	08-09-23
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	11-09-22
Washington	State	C457	11-09-22
West Virginia (DW)	State	9906 C	12-31-22
West Virginia DEP	State	055	11-06-22
Wyoming	State	8TMS-L	01-31-23
Wyoming (UST)	A2LA	1.01	11-30-22

Eurofins TestAmerica, 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: Wright, Richard	Carrier Tracking No(s):	COC No:
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Richard.Wright@ET.eurofinsUS.com	State of Origin: PR	Page: Page 1 of 1
Company: DNA-Environment, LLC	PWSID:			Job #: 500-223793
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: X Yes No. Federal CCR Rule			
Phone: 787-209-6386	PO #:			
Email: alberto.melendez@dnaenv.com	WO #:			
Project Name: CCR Groundwater Monitoring	Project #: 50017042			
Site: AES Puerto Rico LP, Guayama, Puerto Rico	SSOW#:			

Analysis Requested

500-223793 COC

Preservation Codes:
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)
Other:

	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, SM4500_F_C-Fluoride, SM2540C-TDS	6020B - Total Metals, 7470A-Total Mercury	Total Number of containers	Special Instructions/Note:
				Preservation Code:				I	D		
1	AES-MW1-101122	10/11/22	09:29	G	Water	N		X	X	2	pH = 7.27
2	AES-MW2-101122	10/11/22	10:44	G	Water	N		X	X	2	pH = 7.35
11	AES-MW2-101122 MS	10/11/22	11:14	G	Water	N	Y	X	X	2	---
11	AES-MW2-101122 MSD	10/11/22	11:44	G	Water	N	Y	X	X	2	---
3	AES-MW3-101122	10/11/22	12:24	G	Water	N		X	X	2	pH = 8.16
4	AES-MW4-101122	10/11/22	13:53	G	Water	N		X	X	2	pH = 8.53
5	AES-MW4-DUP-101122	10/11/22	14:15	G	Water	N		X	X	2	---
6	AES-MW5-101122	10/11/22	15:31	G	Water	N		X	X	2	pH = 8.28
7	AES-FB-101122	10/11/22	15:33	G	Water	N		X	X	2	---
											Note: pH = Field pH Measurement

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ 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:	Company	Received by:	Date/Time:	Company
	10/12/22 12:15 PM	DNA	Stephanie Hernandez	10/14/22 0820	EEHA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3 + 0.8

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: 12OCT22
TOTWGT: 113.00 LB
CAD: 6998634/SSFE2322
DIMS: 23x13x13 IN

BILL CREDIT CARD
NO EEI 30.37(a)

Part # 156297-4834/4835/4836/4837 REV 10/21

TO **RECEIVING DEPT**
EUROFINS TEST AMERICA
2417 BOND STREET

UNIVERSITY PARK IL 60484 **(US)**
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

1 of 2

TRK# 0402 **8172 3438 0327**

MASTER

THU - 13 OCT 8:30A
INTL FIRST

X1 JOTA

60484
IL-US **ORD**

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: 12OCT22
ACTWGT: 53.00 LB
CAD: 6998634/SSFE2322
DIMS: 23x13x13 IN

BILL CREDIT CARD

TO **RECEIVING DEPT**
EUROFINS TEST AMERICA
2417 BOND STREET

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

500-223793 Waybi

2 of 2

MPS# 0683 **2790 5641 8141**

Mstr# 8172 3438 0327 0402

THU - 13 OCT 8:30A
INTL FIRST

X1 JOTA

60484
IL-US **ORD**

eurofins | Environment Testing America

500-223793 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	ETA Chicago		
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE 10/15/22	TIME 1100	Received By: LR

Delivery Type: ☐ UPS ☒ FedEx SAS ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID:
Multiple Coolers?	☐ Yes	☒ No	*If yes:* Cooler # _____ of _____
Cooler Custody Seals Present?	☒ Yes	☐ No	*If yes:* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☒ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: D | 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):	Corrected Temp (°C):

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:	250 ml PT NT	250 ml PT NT
Uncorrected Temp (°C):	2.2	1.1
Corrected Temp (°C):	2.2	1.1

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ 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

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Wright, Richard	Carrier Tracking No(s):	COC No: 500-166144 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Richard Wright@et.eurofinsus com	State of Origin: Puerto Rico	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP - Florida		Job #: 500-223793-1
Address: 3019 Venture Way, ,	Due Date Requested: 11/2/2022			
City: Cedar Falls	TAT Requested (days):			
State Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR GW Monitoring, AES Puerto Rico, LP	Project #: 50017042			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
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, Y - Trizma, Z - other (specify), Other

Sample Identification - Client ID (Lab ID)	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)	2540C_Calcd/ Total Dissolved Solids	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
AES-MW1-101122 (500-223793-1)	10/11/22	09.29 Atlantic		Water			X	1	
AES-MW2-101122 (500-223793-2)	10/11/22	10 44 Atlantic		Water			X	1	
AES-MW2-101122 (500-223793-2MS)	10/11/22	11 14 Atlantic	MS	Water			X	1	
AES-MW2-101122 (500-223793-2MSD)	10/11/22	11 44 Atlantic	MSD	Water			X	1	
AES-MW3-101122 (500-223793-3)	10/11/22	12.24 Atlantic		Water			X	1	
AES-MW4-101122 (500-223793-4)	10/11/22	13.53 Atlantic		Water			X	1	
AES-MW4-DUP-101122 (500-223793-5)	10/11/22	14 15 Atlantic		Water			X	1	
AES-MW5-101122 (500-223793-6)	10/11/22	15.31 Atlantic		Water			X	1	
AES-FB-101122 (500-223793-7)	10/11/22	15 33 Atlantic		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon out 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 attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Chicago.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hemenway	10/14/22 1630	EEHA		10/15/22 1100	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

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: Wright, Richard	Carrier Tracking No(s):	COC No: 500-166659.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Richard.Wright@et.eurofinsus.com	State of Origin: Puerto Rico	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 500-223793-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 11/2/2022			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: CCR GW Monitoring, AES Puerto Rico, LP	Project #: 50017042			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	4500_F_C	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
AES-MW1-101122 (500-223793-1)	10/11/22	09:29 Atlantic		Water			X	1	
AES-MW2-101122 (500-223793-2)	10/11/22	10:44 Atlantic		Water			X	1	
AES-MW2-101122 (500-223793-2MS)	10/11/22	11:14 Atlantic	MS	Water			X	1	
AES-MW2-101122 (500-223793-2MSD)	10/11/22	11:44 Atlantic	MSD	Water			X	1	
AES-MW3-101122 (500-223793-3)	10/11/22	12:24 Atlantic		Water			X	1	
AES-MW4-101122 (500-223793-4)	10/11/22	13:53 Atlantic		Water			X	1	
AES-MW4-DUP-101122 (500-223793-5)	10/11/22	14:15 Atlantic		Water			X	1	
AES-MW5-101122 (500-223793-6)	10/11/22	15:31 Atlantic		Water			X	1	
AES-FB-101122 (500-223793-7)	10/11/22	15:33 Atlantic		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon out 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 attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Chicago.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hernandez	10/27/22 1000	EETA			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/28/22 1000	Company EETA

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.6/0.4

Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-223793-1

Login Number: 223793
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

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	0.8
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: 500-223793-1

Login Number: 223793
List Number: 3
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

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 (RAD samples)
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: 500-223793-1

Login Number: 223793
List Number: 4
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls
List Creation: 10/17/22 08:07 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	

Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-223793-1

Login Number: 223793
List Number: 6
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 10/28/22 10:49 AM

Question	Answer	Comment
The cooler's custody seal is 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 (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

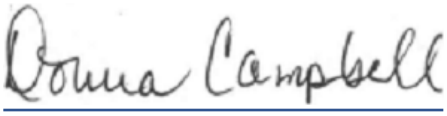
Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
Donna Campbell, Manager of Project Management
Donna.Campbell@et.eurofinsus.com
Designee for
Richard Wright, Senior Project Manager
Richard.Wright@et.eurofinsus.com
(708)746-0045

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 11/28/2022 11:52:08 AM Revision 1

JOB DESCRIPTION

CCR GW Monitoring, AES Puerto Rico, LP

JOB NUMBER

500-223793-2

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

myEOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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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Revision 1

Authorized for release by
Richard Wright, Senior Project Manager
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Case Narrative

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Job ID: 500-223793-2

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-223793-2

Revision
The report being provided is a revision of the original report sent on 11/22/2022. This revision corrects the narrative cooler temperature and remove the login checklist not pertaining to the Rad samples.

Receipt
The samples were received on 10/14/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition.

RAD
Methods 903.0, 9315: Radium-226 prep batch 160-586965:

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-MW1-101122 (500-223793-1), AES-MW2-101122 (500-223793-2), AES-MW2-101122 (500-223793-2[MS]), AES-MW2-101122 (500-223793-2[MSD]), AES-MW3-101122 (500-223793-3), AES-MW4-101122 (500-223793-4), AES-MW4-DUP-101122 (500-223793-5), AES-MW5-101122 (500-223793-6), AES-FB-101122 (500-223793-7), (LCS 160-586965/2-A) and (MB 160-586965/1-A) Methods 904.0, 9320: Radium-228 prep batch 160-586968:

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-MW1-101122 (500-223793-1), AES-MW2-101122 (500-223793-2), AES-MW2-101122 (500-223793-2[MS]), AES-MW2-101122 (500-223793-2[MSD]), AES-MW3-101122 (500-223793-3), AES-MW4-101122 (500-223793-4), AES-MW4-DUP-101122 (500-223793-5), AES-MW5-101122 (500-223793-6), AES-FB-101122 (500-223793-7), (LCS 160-586968/2-A) and (MB 160-586968/1-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: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101122 — Lab Sample ID: 500-223793-1

No Detections.

Client Sample ID: AES-MW2-101122 — Lab Sample ID: 500-223793-2

No Detections.

Client Sample ID: AES-MW3-101122 — Lab Sample ID: 500-223793-3

No Detections.

Client Sample ID: AES-MW4-101122 — Lab Sample ID: 500-223793-4

No Detections.

Client Sample ID: AES-MW4-DUP-101122 — Lab Sample ID: 500-223793-5

No Detections.

Client Sample ID: AES-MW5-101122 — Lab Sample ID: 500-223793-6

No Detections.

Client Sample ID: AES-FB-101122 — Lab Sample ID: 500-223793-7

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

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
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-223793-1	AES-MW1-101122	Water	10/11/22 09:29	10/14/22 08:20
500-223793-2	AES-MW2-101122	Water	10/11/22 10:44	10/14/22 08:20
500-223793-3	AES-MW3-101122	Water	10/11/22 12:24	10/14/22 08:20
500-223793-4	AES-MW4-101122	Water	10/11/22 13:53	10/14/22 08:20
500-223793-5	AES-MW4-DUP-101122	Water	10/11/22 14:15	10/14/22 08:20
500-223793-6	AES-MW5-101122	Water	10/11/22 15:31	10/14/22 08:20
500-223793-7	AES-FB-101122	Water	10/11/22 15:33	10/14/22 08:20

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101122
Lab Sample ID: 500-223793-1

Date Collected: 10/11/22 09:29
Matrix: Water

Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00516	U	0.0717	0.0717	1.00	0.146	pCi/L	10/24/22 10:19	11/18/22 14:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.5*		*40 - 110*	*10/24/22 10:19*	*11/18/22 14:08*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.333	U	0.271	0.273	1.00	0.416	pCi/L	10/24/22 11:03	11/15/22 09:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.5*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:29*	*1*
Y Carrier	*84.9*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:29*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.338	U	0.280	0.282	5.00	0.416	pCi/L		11/21/22 20:05	1

Client Sample ID: AES-MW2-101122
Lab Sample ID: 500-223793-2

Date Collected: 10/11/22 10:44
Matrix: Water
Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0480	U	0.0677	0.0678	1.00	0.115	pCi/L	10/24/22 10:19	11/18/22 14:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*10/24/22 10:19*	*11/18/22 14:08*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0188	U	0.262	0.262	1.00	0.482	pCi/L	10/24/22 11:03	11/15/22 09:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:29*	*1*
Y Carrier	*87.9*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:29*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0668	U	0.271	0.271	5.00	0.482	pCi/L		11/21/22 20:05	1

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW3-101122
Lab Sample ID: 500-223793-3
Date Collected: 10/11/22 12:24
Matrix: Water
Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0931	U	0.0966	0.0969	1.00	0.153	pCi/L	10/24/22 10:19	11/18/22 14:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*10/24/22 10:19*	*11/18/22 14:08*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0869	U	0.221	0.221	1.00	0.395	pCi/L	10/24/22 11:03	11/15/22 09:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:30*	*1*
Y Carrier	*86.0*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:30*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.180	U	0.241	0.241	5.00	0.395	pCi/L		11/21/22 20:05	1

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-101122
Lab Sample ID: 500-223793-4

Date Collected: 10/11/22 13:53
Matrix: Water
Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0338	U	0.121	0.121	1.00	0.226	pCi/L	10/24/22 10:19	11/18/22 16:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*10/24/22 10:19*	*11/18/22 16:29*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.319	0.320	1.00	0.514	pCi/L	10/24/22 11:03	11/15/22 09:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:30*	*1*
Y Carrier	*87.9*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:30*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.341	U	0.341	0.342	5.00	0.514	pCi/L		11/21/22 20:05	1

Client Sample ID: AES-MW4-DUP-101122
Lab Sample ID: 500-223793-5

Date Collected: 10/11/22 14:15
Matrix: Water
Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0233	U	0.0972	0.0972	1.00	0.188	pCi/L	10/24/22 10:19	11/18/22 16:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*10/24/22 10:19*	*11/18/22 16:29*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.528	U	0.396	0.399	1.00	0.606	pCi/L	10/24/22 11:03	11/15/22 09:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:30*	*1*
Y Carrier	*86.0*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:30*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.551	U	0.408	0.411	5.00	0.606	pCi/L		11/21/22 20:05	1

Client Sample ID: AES-MW5-101122
Lab Sample ID: 500-223793-6

Date Collected: 10/11/22 15:31
Matrix: Water
Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0718	U	0.0920	0.0922	1.00	0.153	pCi/L	10/24/22 10:19	11/18/22 16:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*10/24/22 10:19*	*11/18/22 16:29*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.427	U	0.323	0.326	1.00	0.497	pCi/L	10/24/22 11:03	11/15/22 09:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:27*	*1*
Y Carrier	*82.6*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:27*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.499**		0.336	0.339	5.00	0.497	pCi/L		11/21/22 20:05	1

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-FB-101122
Lab Sample ID: 500-223793-7
Date Collected: 10/11/22 15:33
Matrix: Water
Date Received: 10/14/22 08:20

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0882	U	0.0932	0.0936	1.00	0.148	pCi/L	10/24/22 10:19	11/18/22 16:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*10/24/22 10:19*	*11/18/22 16:29*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.322	U	0.316	0.318	1.00	0.509	pCi/L	10/24/22 11:03	11/15/22 09:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:27*	*1*
Y Carrier	*85.2*		*40 - 110*	*10/24/22 11:03*	*11/15/22 09:27*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.410	U	0.329	0.331	5.00	0.509	pCi/L		11/21/22 20:05	1

Definitions/Glossary

Client: DNA-Environment LLC
Job ID: 500-223793-2
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: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Rad

Prep Batch: 586965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	PrecSep-21	
500-223793-2	AES-MW2-101122	Total/NA	Water	PrecSep-21	
500-223793-3	AES-MW3-101122	Total/NA	Water	PrecSep-21	
500-223793-4	AES-MW4-101122	Total/NA	Water	PrecSep-21	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	PrecSep-21	
500-223793-6	AES-MW5-101122	Total/NA	Water	PrecSep-21	
500-223793-7	AES-FB-101122	Total/NA	Water	PrecSep-21	
MB 160-586965/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586965/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	PrecSep-21	
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	PrecSep-21	

Prep Batch: 586968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-223793-1	AES-MW1-101122	Total/NA	Water	PrecSep_0	
500-223793-2	AES-MW2-101122	Total/NA	Water	PrecSep_0	
500-223793-3	AES-MW3-101122	Total/NA	Water	PrecSep_0	
500-223793-4	AES-MW4-101122	Total/NA	Water	PrecSep_0	
500-223793-5	AES-MW4-DUP-101122	Total/NA	Water	PrecSep_0	
500-223793-6	AES-MW5-101122	Total/NA	Water	PrecSep_0	
500-223793-7	AES-FB-101122	Total/NA	Water	PrecSep_0	
MB 160-586968/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586968/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-223793-2 MS	AES-MW2-101122	Total/NA	Water	PrecSep_0	
500-223793-2 MSD	AES-MW2-101122	Total/NA	Water	PrecSep_0	

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-586965/1-A
Matrix: Water
Analysis Batch: 590568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586965

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.05421	U	0.0714	0.0715	1.00	0.170	pCi/L	10/24/22 10:19	11/18/22 14:04	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*10/24/22 10:19*	*11/18/22 14:04*	*1*

Lab Sample ID: LCS 160-586965/2-A
Matrix: Water
Analysis Batch: 590568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586965

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	8.481		0.965	1.00	0.174	pCi/L	75	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*105*		*40 - 110*

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 590569

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 586965

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.0480	U	11.3	9.611		1.07	1.00	0.133	pCi/L	85	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*98.3*		*40 - 110*

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 590569

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 586965

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.0480	U	11.4	10.27		1.19	1.00	0.177	pCi/L	90	60 - 140	0.29	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*94.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586968/1-A
Matrix: Water
Analysis Batch: 590176

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586968

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1415	U	0.244	0.244	1.00	0.419	pCi/L	10/24/22 11:03	11/15/22 09:28	1

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

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110	10/24/22 11:03	11/15/22 09:28	1
Y Carrier	85.6		40 - 110	10/24/22 11:03	11/15/22 09:28	1

Lab Sample ID: LCS 160-586968/2-A
Matrix: Water
Analysis Batch: 590176

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586968

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.44	8.268		1.11	1.00	0.382	pCi/L	98	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	85.2		40 - 110

Lab Sample ID: 500-223793-2 MS
Matrix: Water
Analysis Batch: 590176

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 586968

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.0188	U	8.38	8.873		1.18	1.00	0.449	pCi/L	106	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	98.3		40 - 110
Y Carrier	88.2		40 - 110

Lab Sample ID: 500-223793-2 MSD
Matrix: Water
Analysis Batch: 590176

Client Sample ID: AES-MW2-101122
Prep Type: Total/NA
Prep Batch: 586968

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.0188	U	8.49	8.921		1.22	1.00	0.502	pCi/L	105	60 - 140	0.02	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	94.1		40 - 110
Y Carrier	84.1		40 - 110

Lab Chronicle

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW1-101122
Lab Sample ID: 500-223793-1
Date Collected: 10/11/22 09:29
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 14:08
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590176	FLC	EET SL	11/15/22 09:29
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

Client Sample ID: AES-MW2-101122
Lab Sample ID: 500-223793-2
Date Collected: 10/11/22 10:44
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 14:08
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590176	FLC	EET SL	11/15/22 09:29
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

Client Sample ID: AES-MW3-101122
Lab Sample ID: 500-223793-3
Date Collected: 10/11/22 12:24
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 14:08
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590176	FLC	EET SL	11/15/22 09:30
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

Client Sample ID: AES-MW4-101122
Lab Sample ID: 500-223793-4
Date Collected: 10/11/22 13:53
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590567	FLC	EET SL	11/18/22 16:29
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590176	FLC	EET SL	11/15/22 09:30
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

Lab Chronicle

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Client Sample ID: AES-MW4-DUP-101122
Lab Sample ID: 500-223793-5
Date Collected: 10/11/22 14:15
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590567	FLC	EET SL	11/18/22 16:29
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590176	FLC	EET SL	11/15/22 09:30
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

Client Sample ID: AES-MW5-101122
Lab Sample ID: 500-223793-6
Date Collected: 10/11/22 15:31
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590567	FLC	EET SL	11/18/22 16:29
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590173	FLC	EET SL	11/15/22 09:27
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

Client Sample ID: AES-FB-101122
Lab Sample ID: 500-223793-7
Date Collected: 10/11/22 15:33
Matrix: Water
Date Received: 10/14/22 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586965	BMP	EET SL	10/24/22 10:19
Total/NA	Analysis	9315		1	590567	FLC	EET SL	11/18/22 16:29
Total/NA	Prep	PrecSep_0			586968	BMP	EET SL	10/24/22 11:03
Total/NA	Analysis	9320		1	590173	FLC	EET SL	11/15/22 09:27
Total/NA	Analysis	Ra226_Ra228		1	590898	FLC	EET SL	11/21/22 20:05

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

Accreditation/Certification Summary

Client: DNA-Environment LLC
Job ID: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Laboratory: Eurofins St. Louis

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87689	06-30-23

Eurofins TestAmerica, 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: Wright, Richard	Carrier Tracking No(s):	COC No:
Client Contact: Alberto Melendez	Phone: (787) 209-6386	E-Mail: Richard.Wright@ET.eurofinsUS.com	State of Origin: PR	Page: Page 1 of 1
Company: DNA-Environment, LLC	PWSID:			Job #: 500-223793
Address: 35 Calle Juan C Borbon STE 67-227	Due Date Requested:			
City: Guaynabo	TAT Requested (days): Regular TAT			
State, Zip: PR, 00969-5375	Compliance Project: X Yes No. Federal CCR Rule			
Phone: 787-209-6386	PO #:			
Email: alberto.melendez@dnaenv.com	WO #:			
Project Name: CCR Groundwater Monitoring	Project #: 50017042			
Site: AES Puerto Rico LP, Guayama, Puerto Rico	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - 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:

	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)	9315_Ra226, 9320_Ra228, Radium-226 & Radium-228	Total Number of containers	Special Instructions/Note:
				Preservation Code:				D		
1	AES-MW1-101122	10/11/22	09:29	G	Water	N		X	2	pH = 7.27
2	AES-MW2-101122	10/11/22	10:44	G	Water	N		X	2	pH = 7.35
11	AES-MW2-101122 MS	10/11/22	11:14	G	Water	N	Y	X	2	---
	AES-MW2-101122 MSD	10/11/22	11:44	G	Water	N	Y	X	2	---
3	AES-MW3-101122	10/11/22	12:24	G	Water	N		X	2	pH = 8.16
4	AES-MW4-101122	10/11/22	13:53	G	Water	N		X	2	pH = 8.53
5	AES-MW4-DUP-101122	10/11/22	14:15	G	Water	N		X	2	---
6	AES-MW5-101122	10/11/22	15:31	G	Water	N		X	2	pH = 8.28
7	AES-FB-101122	10/11/22	15:33	G	Water	N		X	2	---
										Note: pH = Field pH Measurement

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ 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:	Company	Received by:	Date/Time:	Company
	10/12/22 12:15pm	DNA	Stephanie Hernandez	10/14/22 0820	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: unchilled

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: 12OCT22
TOTWGT: 113.00 LB
CAD: 6998634/SSFE2322
DIMS: 23x13x13 IN

BILL CREDIT CARD
NO EEI 30.37(a)

Part # 156297-4834/4835/4836/4837 EXP 10/21

TO RECEIVING DEPT
EUROFINS TEST AMERICA
2417 BOND STREET

UNIVERSITY PARK IL 60484
(US)

(708) 534-5200
INV:
PO:
REF:
DEPT:

FedEx Express

1 of 2

TRK# 0402 8172 3438 0327

MASTER

X1 JOTA

THU - 13 OCT 8:30A
INTL FIRST

60484
IL-US ORD

using this tag.

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: 12OCT22
ACTWGT: 53.00 LB
CAD: 6998634/SSFE2322
DIMS: 23x13x13 IN

BILL CREDIT CARD

Part # 156297-4834/4835/4836/4837 EXP 10/21

TO RECEIVING DEPT
EUROFINS TEST AMERICA
2417 BOND STREET

UNIVERSITY PARK IL 60484

500-223793 Waybi

(708) 534-5200
INV:
PO:
REF:
DEPT:

FedEx Express

2 of 2

MPS# 0683 2790 5641 8141

Mstr# 8172 3438 0327 0402

X1 JOTA

THU - 13 OCT 8:30A
INTL FIRST

60484
IL-US ORD

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 (Sub Contract Lab)	Sampler:	Lab PM: Wright, Richard	Carrier Tracking No(s):	COC No: 500-166150.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Richard.Wright@et.eurofinsus.com	State of Origin: Puerto Rico	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Florida		Job #: 500-223793-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR GW Monitoring, AES Puerto Rico, LP	Project #: 50017042			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
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, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	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)	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Ra226Ra228_GFPC/ Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
AES-MW1-101122 (500-223793-1)	10/11/22	09:29 Atlantic		Water			X	X	X	2	
AES-MW2-101122 (500-223793-2)	10/11/22	10:44 Atlantic		Water			X	X	X	2	
AES-MW2-101122 (500-223793-2MS)	10/11/22	11:14 Atlantic	MS	Water			X	X		2	
AES-MW2-101122 (500-223793-2MSD)	10/11/22	11:44 Atlantic	MSD	Water			X	X		2	
AES-MW3-101122 (500-223793-3)	10/11/22	12:24 Atlantic		Water			X	X	X	2	
AES-MW4-101122 (500-223793-4)	10/11/22	13:53 Atlantic		Water			X	X	X	2	
AES-MW4-DUP-101122 (500-223793-5)	10/11/22	14:15 Atlantic		Water			X	X	X	2	
AES-MW5-101122 (500-223793-6)	10/11/22	15:31 Atlantic		Water			X	X	X	2	
AES-FB-101122 (500-223793-7)	10/11/22	15:33 Atlantic		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon out 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 attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Chicago.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hammond FED EX	10/14/22 1630	EEIA	FED EX		
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time: OCT 17 2022 0845	Company EASTC

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: DNA-Environment LLC

Job Number: 500-223793-2

Login Number: 223793
List Number: 3
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

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 (RAD samples)
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: 500-223793-2

Login Number: 223793
List Number: 5
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 10/17/22 03:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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: 500-223793-2
Project/Site: CCR GW Monitoring, AES Puerto Rico, LP

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
500-223793-1	AES-MW1-101122	97.5
500-223793-2	AES-MW2-101122	100
500-223793-2 MS	AES-MW2-101122	98.3
500-223793-2 MSD	AES-MW2-101122	94.1
500-223793-3	AES-MW3-101122	103
500-223793-4	AES-MW4-101122	100
500-223793-5	AES-MW4-DUP-101122	101
500-223793-6	AES-MW5-101122	103
500-223793-7	AES-FB-101122	100
LCS 160-586965/2-A	Lab Control Sample	105
MB 160-586965/1-A	Method Blank	108

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
500-223793-1	AES-MW1-101122	97.5	84.9
500-223793-2	AES-MW2-101122	100	87.9
500-223793-2 MS	AES-MW2-101122	98.3	88.2
500-223793-2 MSD	AES-MW2-101122	94.1	84.1
500-223793-3	AES-MW3-101122	103	86.0
500-223793-4	AES-MW4-101122	100	87.9
500-223793-5	AES-MW4-DUP-101122	101	86.0
500-223793-6	AES-MW5-101122	103	82.6
500-223793-7	AES-FB-101122	100	85.2
LCS 160-586968/2-A	Lab Control Sample	105	85.2
MB 160-586968/1-A	Method Blank	108	85.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

APPENDIX C

STATISTICAL ANALYSIS REPORT

DNA-ENVIRONMENT, LLC
35 Calle Juan C. Borbon
STE 67-227
Guaynabo, PR 00969-5375

STATISTICAL ANALYSIS REPORT
AES PUERTO RICO LP, GUAYAMA, PUERTO RICO

This Statistical Analysis Report describes the procedures and findings of a statistical evaluation performed on groundwater data collected during the October 2021 and April 2022 assessment monitoring events 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 that have been 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 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 October 2021, and April 2022 semiannual groundwater sampling events.

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 to 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 the 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 to 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 statistical evaluation to update background levels. Background levels were last updated after the October 2020 sampling event and will be statistically reassessed when groundwater results from the second semiannual 2022 sampling event becomes 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 non-parametric 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

October 2021 Event – Second 2021 Semiannual Sampling Event

Descriptive Statistics

Attachment 1 provides the Sanitas™ output for all available data through October 2021, which shows 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.*, data 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 October 2021 sampling event did not identify outlier values (**Attachment 2**).

Attachment 3 provides a summary of the trend test results for upgradient wells. Statistically significant increasing trends were identified for fluoride in wells MW-1 and MW-2, and selenium in MW-2. A statistically decreasing trend was observed for cobalt in MW-2. However, all cobalt concentrations were below the practical quantitation limit (*i.e.*, estimated trace concentrations or non-detects).

[1] *See* Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.

Background Levels

Background levels were not updated following the October 2021 sampling event and remained as established from data through October 2020 (**Attachment 4**).

Groundwater Protection Standards

Attachment 4 provides a summary of background levels and GWPS determined for all available data through October 2021.

Confidence Intervals

Attachment 5 provides a comparison of the Lower Confidence Limit (LCL) for each downgradient well/constituent pair[2] 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 October 2021 sampling event, the CCR unit at AES-PR will remain in assessment monitoring.

April 2022 Event - First 2022 Semiannual Sampling Event

Descriptive Statistics

Attachment 6 provides the Sanitas™ output for all available data through April 2022, which shows 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 2022 sampling event did not identify outlier values (**Attachment 7**).

Attachment 8 provides a summary of the trend test results for upgradient wells. Statistically significant increasing trends were identified for fluoride in wells MW-1, and selenium in MW-2. Statistically decreasing trends were observed for cadmium and lead in MW-1 and MW-2.

[2] The arsenic data collected through October 2021 from MW-5 was truncated to include the eight most recent data points. This eliminated the autocorrelation observed in the dataset collected prior to 2018 as identified by the Rank von Neumann statistical test and provided a more conservative approach from a regulatory perspective to include higher arsenic concentrations in the recent dataset (the eight most recent data points did not show a statistically significant trend).

However, all cadmium and lead concentrations were either non-detect or below the practical quantitation limit (*i.e.*, estimated trace concentrations or non-detects).

Background Levels

Background levels were not updated following the April 2022 sampling event and remained as established from data through October 2020 (**Attachment 9**).

Groundwater Protection Standards

Attachment 9 provides a summary of background levels and GWPS determined for all available data through April 2022.

Confidence Intervals

Attachment 10 provides a comparison of the Lower Confidence Limit (LCL) for each downgradient well/constituent pair to the associated GWPS (*i.e.*, "Compliance" limit). From 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 April 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 Guidanc*e. Washington, DC: EPA. EPA 530/R-09-007.

ATTACHMENT 1

BOX PLOT SUMMARY: ALL CCR WELLS (OCTOBER 2021)

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 1:33 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	MW-1 (bg)	15	0.002367	0.0005815	0.0001501	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-2 (bg)	15	0.002367	0.0005815	0.0001501	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-3	15	0.002173	0.0006745	0.0001742	0.0025	0.001	0.003	80
Antimony (mg/L)	MW-4	15	0.002207	0.0006486	0.0001675	0.0025	0.001	0.003	73.33
Antimony (mg/L)	MW-5	15	0.009127	0.02515	0.006494	0.0025	0.001	0.1	93.33
Arsenic (mg/L)	MW-1 (bg)	16	0.0009488	0.0004199	0.000105	0.00084	0.00043	0.0018	37.5
Arsenic (mg/L)	MW-2 (bg)	16	0.0009519	0.0004002	0.0001001	0.00112	0.00031	0.0014	43.75
Arsenic (mg/L)	MW-3	16	0.002613	0.0007347	0.0001837	0.0025	0.0015	0.0038	0
Arsenic (mg/L)	MW-4	16	0.003444	0.001064	0.000266	0.0034	0.0021	0.0059	0
Arsenic (mg/L)	MW-5	16	0.008569	0.006632	0.001658	0.00625	0.0018	0.022	0
Barium (mg/L)	MW-1 (bg)	16	0.04738	0.01194	0.002985	0.0485	0.019	0.063	0
Barium (mg/L)	MW-2 (bg)	16	0.1174	0.02084	0.00521	0.11	0.089	0.16	0
Barium (mg/L)	MW-3	16	0.2569	0.1253	0.03131	0.225	0.11	0.66	0
Barium (mg/L)	MW-4	16	0.05019	0.008248	0.002062	0.051	0.035	0.061	0
Barium (mg/L)	MW-5	16	0.03619	0.005063	0.001266	0.034	0.03	0.05	6.25
Beryllium (mg/L)	MW-1 (bg)	14	0.002071	0.0007032	0.0001879	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-2 (bg)	14	0.002071	0.0007032	0.0001879	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-3	14	0.002021	0.0008047	0.0002151	0.0025	0.00029	0.0025	92.86
Beryllium (mg/L)	MW-4	14	0.002121	0.0006435	0.000172	0.0025	0.001	0.0025	92.86
Beryllium (mg/L)	MW-5	14	0.009143	0.02616	0.006991	0.0025	0.001	0.1	100
Cadmium (mg/L)	MW-1 (bg)	15	0.002033	0.0008121	0.0002097	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-2 (bg)	15	0.002033	0.0008121	0.0002097	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-3	15	0.00157	0.001044	0.0002695	0.0025	0.00019	0.0025	66.67
Cadmium (mg/L)	MW-4	15	0.001393	0.001076	0.0002779	0.00061	0.00018	0.0025	60
Cadmium (mg/L)	MW-5	15	0.008573	0.02531	0.006534	0.0025	0.000091	0.1	93.33
Chromium (mg/L)	MW-1 (bg)	14	0.002607	0.001172	0.0003133	0.0025	0.0007	0.005	85.71
Chromium (mg/L)	MW-2 (bg)	14	0.002743	0.001181	0.0003157	0.0025	0.001	0.005	92.86
Chromium (mg/L)	MW-3	14	0.004671	0.007662	0.002048	0.0025	0.001	0.031	85.71
Chromium (mg/L)	MW-4	14	0.002407	0.001022	0.0002731	0.0025	0.001	0.005	78.57
Chromium (mg/L)	MW-5	14	0.009714	0.02601	0.006951	0.0025	0.001	0.1	100
Cobalt (mg/L)	MW-1 (bg)	16	0.00097	0.0006255	0.0001564	0.000805	0.00046	0.0025	12.5
Cobalt (mg/L)	MW-2 (bg)	16	0.001647	0.001008	0.0002519	0.0025	0.00028	0.0025	56.25
Cobalt (mg/L)	MW-3	16	0.002384	0.000737	0.0001843	0.00225	0.00085	0.004	0
Cobalt (mg/L)	MW-4	16	0.001456	0.0003584	0.00008961	0.00165	0.00083	0.0018	0
Cobalt (mg/L)	MW-5	16	0.009125	0.02424	0.006059	0.003	0.0027	0.1	6.25
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	16	0.3131	0.1957	0.04892	0.341	-0.168	0.62	0
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	16	0.2637	0.2878	0.07194	0.213	-0.0965	0.839	0
Combined Radium 226 + 228 (pCi/L)	MW-3	16	0.4209	0.3833	0.09584	0.3445	-0.0595	1.49	0
Combined Radium 226 + 228 (pCi/L)	MW-4	16	0.31	0.3489	0.08722	0.296	-0.258	1.12	0
Combined Radium 226 + 228 (pCi/L)	MW-5	16	0.3189	0.2315	0.05787	0.313	-0.0397	0.723	0
Fluoride (mg/L)	MW-1 (bg)	16	0.6106	0.1269	0.03173	0.595	0.4	0.91	0
Fluoride (mg/L)	MW-2 (bg)	16	0.513	0.1378	0.03444	0.475	0.35	0.728	0
Fluoride (mg/L)	MW-3	16	1.765	0.3499	0.08747	1.8	0.87	2.3	0
Fluoride (mg/L)	MW-4	16	1.241	2.342	0.5854	0.65	0.23	10	6.25
Fluoride (mg/L)	MW-5	16	0.5213	0.4101	0.1025	0.46	0.05	2	12.5
Lead (mg/L)	MW-1 (bg)	14	0.001105	0.0003049	0.00008149	0.0013	0.0005	0.0013	92.86
Lead (mg/L)	MW-2 (bg)	14	0.001143	0.0002928	0.00007825	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-3	14	0.001143	0.0002928	0.00007825	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-4	14	0.001002	0.0004067	0.0001087	0.0013	0.0003	0.0013	78.57
Lead (mg/L)	MW-5	14	0.008214	0.02642	0.007061	0.0013	0.0005	0.1	100

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 1:33 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Lithium (mg/L)	MW-1 (bg)	16	0.003043	0.002046	0.0005115	0.00345	0.00054	0.005	56.25
Lithium (mg/L)	MW-2 (bg)	16	0.003067	0.002023	0.0005056	0.00355	0.00052	0.005	62.5
Lithium (mg/L)	MW-3	16	0.008656	0.008221	0.002055	0.00705	0.0014	0.034	0
Lithium (mg/L)	MW-4	16	0.7519	0.2432	0.06079	0.76	0.28	1.1	0
Lithium (mg/L)	MW-5	16	0.01033	0.02394	0.005986	0.0045	0.0014	0.1	12.5
Mercury (mg/L)	MW-1 (bg)	14	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-2 (bg)	14	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-3	14	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-4	14	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-5	14	0.0002	0	0	0.0002	0.0002	0.0002	100
Molybdenum (mg/L)	MW-1 (bg)	16	0.007347	0.006209	0.001552	0.004	0.00076	0.015	56.25
Molybdenum (mg/L)	MW-2 (bg)	16	0.007793	0.006676	0.001669	0.005	0.00085	0.015	56.25
Molybdenum (mg/L)	MW-3	16	0.225	0.1201	0.03002	0.205	0.064	0.53	0
Molybdenum (mg/L)	MW-4	16	0.51	0.1633	0.04081	0.44	0.35	0.98	0
Molybdenum (mg/L)	MW-5	16	0.02348	0.07376	0.01844	0.00515	0.0022	0.3	18.75
Selenium (mg/L)	MW-1 (bg)	15	0.006033	0.003006	0.0007761	0.0059	0.0014	0.015	0
Selenium (mg/L)	MW-2 (bg)	16	0.001207	0.00121	0.0003025	0.00065	0.00035	0.0045	37.5
Selenium (mg/L)	MW-3	16	0.1894	0.1396	0.03491	0.15	0.026	0.57	0
Selenium (mg/L)	MW-4	16	0.00685	0.003369	0.0008423	0.00605	0.0012	0.013	0
Selenium (mg/L)	MW-5	16	0.007688	0.01214	0.003034	0.0036	0.00046	0.05	25
Thallium (mg/L)	MW-1 (bg)	14	0.0005714	0.0001816	0.00004853	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-2 (bg)	14	0.0005714	0.0001816	0.00004853	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-3	14	0.0005714	0.0001816	0.00004853	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-4	14	0.0005714	0.0001816	0.00004853	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-5	14	0.004107	0.01321	0.003531	0.0005	0.0005	0.05	100

ATTACHMENT 2

OUTLIER ANALYSIS SUMMARY: BACKGROUND WELLS (OCTOBER 2021)

Outlier Analysis - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 1:33 PM

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	30	0.002367	0.0005713	unknown	ShapiroWilk
Arsenic (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.0009503	0.0004035	normal	ShapiroWilk
Barium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.08241	0.03932	normal	ShapiroWilk
Beryllium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	28	0.002071	0.0006901	unknown	ShapiroWilk
Cadmium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	30	0.002033	0.000798	unknown	ShapiroWilk
Chromium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	28	0.002675	0.001157	unknown	ShapiroWilk
Cobalt (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.001309	0.000894	normal	ShapiroWilk
Combined Radium 226 + 228 (pCi/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.2884	0.2434	normal	ShapiroWilk
Fluoride (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.5618	0.1394	normal	ShapiroWilk
Lead (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	28	0.001124	0.0002939	unknown	ShapiroWilk
Lithium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.003055	0.002001	normal	ShapiroWilk
Mercury (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	28	0.0002	0	unknown	ShapiroWilk
Molybdenum (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	32	0.00757	0.006346	normal	ShapiroWilk
Selenium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	31	0.003683	0.003204	normal	ShapiroWilk
Thallium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	28	0.0005714	0.0001782	unknown	ShapiroWilk

ATTACHMENT 3

TREND TEST SUMMARY: BACKGROUND WELLS (OCTOBER 2021)

Trend Test - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 1:33 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	**MW-2 (bg)**	**-0.0003784**	**-64**	**-58**	**Yes**	**16**	**56.25**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	**MW-1 (bg)**	**0.07537**	**62**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	**MW-2 (bg)**	**0.08318**	**70**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Selenium (mg/L)	**MW-2 (bg)**	**0.0005214**	**59**	**58**	**Yes**	**16**	**37.5**	**n/a**	**n/a**	**0.01**	**NP**

Trend Test - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 1:33 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	MW-1 (bg)	0	4	53	No	15	100	n/a	n/a	0.01	NP
Antimony (mg/L)	MW-2 (bg)	0	4	53	No	15	100	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-1 (bg)	0	-1	-58	No	16	37.5	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-2 (bg)	-0.00007522	-30	-58	No	16	43.75	n/a	n/a	0.01	NP
Barium (mg/L)	MW-1 (bg)	-0.003656	-41	-58	No	16	0	n/a	n/a	0.01	NP
Barium (mg/L)	MW-2 (bg)	0.007228	36	58	No	16	0	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-1 (bg)	0	-40	-48	No	14	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-2 (bg)	0	-40	-48	No	14	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	MW-1 (bg)	0	-48	-53	No	15	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	MW-2 (bg)	0	-48	-53	No	15	100	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-1 (bg)	0	0	48	No	14	85.71	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-2 (bg)	0	9	48	No	14	92.86	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-1 (bg)	0.00008879	35	58	No	16	12.5	n/a	n/a	0.01	NP
Cobalt (mg/L)	**MW-2 (bg)**	**-0.0003784**	**-64**	**-58**	**Yes**	**16**	**56.25**	**n/a**	**n/a**	**0.01**	**NP**
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	-0.01346	-10	-58	No	16	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	0.002396	4	58	No	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	**MW-1 (bg)**	**0.07537**	**62**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	**MW-2 (bg)**	**0.08318**	**70**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Lead (mg/L)	MW-1 (bg)	-0.00009481	-47	-48	No	14	92.86	n/a	n/a	0.01	NP
Lead (mg/L)	MW-2 (bg)	0	-44	-48	No	14	100	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-1 (bg)	-0.0001829	-40	-58	No	16	56.25	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-2 (bg)	-0.0001315	-41	-58	No	16	62.5	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-1 (bg)	0	0	48	No	14	100	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-2 (bg)	0	0	48	No	14	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-1 (bg)	0	14	58	No	16	56.25	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-2 (bg)	0	-3	-58	No	16	56.25	n/a	n/a	0.01	NP
Selenium (mg/L)	MW-1 (bg)	-0.0003025	-23	-53	No	15	0	n/a	n/a	0.01	NP
Selenium (mg/L)	**MW-2 (bg)**	**0.0005214**	**59**	**58**	**Yes**	**16**	**37.5**	**n/a**	**n/a**	**0.01**	**NP**
Thallium (mg/L)	MW-1 (bg)	0	24	48	No	14	100	n/a	n/a	0.01	NP
Thallium (mg/L)	MW-2 (bg)	0	24	48	No	14	100	n/a	n/a	0.01	NP

ATTACHMENT 4

BACKGROUND LEVELS AND GROUNDWATER PROTECTION STANDARDS (OCTOBER 2021)

Background Levels and Groundwater Protection Stantands Corresponding to the October 2021 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		0.001	0.006
Arsenic	mg/L	0.010		0.0018	0.010
Barium	mg/L	2		0.1633	2
Beryllium	mg/L	0.004		0.001	0.004
Cadmium	mg/L	0.005		0.001	0.005
Chromium	mg/L	0.1		0.0039	0.1
Cobalt	mg/L		0.006	0.0025	0.006
Fluoride	mg/L	4.0		0.8696	4.0
Lead	mg/L		0.015	0.0013	0.015
Lithium	mg/L		0.040	0.005	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		0.013	0.05
Thallium	mg/L	0.002		0.0005	0.002
Radium 266 and 228 combined	pCi/L	5		0.8573	5

Notes:
mg/L = milligram per Liter
MCL = Maximum Contaminant Level
GWPS = Groundwater Protection Standard
[1] *See* Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.
[2] Background levels were last updated through October 2020 data and computed as the Upper Tolerance Limit from the pooled background dataset.

ATTACHMENT 5

CONFIDENCE INTERVAL SUMMARY (OCTOBER 2021):

DETERMINATION OF STATISTICALLY SIGNIFICANT LEVEL

Confidence Interval - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 3:29 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	**MW-4**	**0.8585**	**0.6453**	**0.04**	**Yes**	**16**	**0.7519**	**0.2432**	**0**	**None**	**No**	**0.05**	**Param.**
Molybdenum (mg/L)	**MW-3**	**0.2776**	**0.1724**	**0.1**	**Yes**	**16**	**0.225**	**0.1201**	**0**	**None**	**No**	**0.05**	**Param.**
Molybdenum (mg/L)	**MW-4**	**0.5531**	**0.4352**	**0.1**	**Yes**	**16**	**0.51**	**0.1633**	**0**	**None**	**ln(x)**	**0.05**	**Param.**
Selenium (mg/L)	**MW-3**	**0.2267**	**0.1179**	**0.05**	**Yes**	**16**	**0.1894**	**0.1396**	**0**	**None**	**sqrt(x)**	**0.05**	**Param.**

Confidence Interval - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2021_Statistics_AES.mdb Printed 1/4/2022, 3:29 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-3	0.0025	0.0017	0.006	No	15	0.002173	0.0006745	80	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-4	0.0025	0.0019	0.006	No	15	0.002207	0.0006486	73.33	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-5	0.003	0.0025	0.006	No	15	0.009127	0.02515	93.33	None	No	0.05	NP (NDs)
Barium (mg/L)	MW-3	0.2903	0.2005	2	No	16	0.2569	0.1253	0	None	x^(1/3)	0.05	Param.
Barium (mg/L)	MW-4	0.0538	0.04657	2	No	16	0.05019	0.008248	0	None	No	0.05	Param.
Barium (mg/L)	MW-5	0.03813	0.03392	2	No	16	0.03619	0.005063	6.25	None	x^(1/3)	0.05	Param.
Beryllium (mg/L)	MW-3	0.0025	0.001	0.004	No	14	0.002021	0.0008047	92.86	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-4	0.0025	0.0017	0.004	No	14	0.002121	0.0006435	92.86	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-5	0.0025	0.001	0.004	No	14	0.009143	0.02616	100	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-3	0.0025	0.0005	0.005	No	15	0.00157	0.001044	66.67	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-4	0.0025	0.00036	0.005	No	15	0.001393	0.001076	60	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-5	0.0025	0.0005	0.005	No	15	0.008573	0.02531	93.33	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-3	0.005	0.0024	0.1	No	14	0.004671	0.007662	85.71	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-4	0.0035	0.002	0.1	No	14	0.002407	0.001022	78.57	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-5	0.005	0.0025	0.1	No	14	0.009714	0.02601	100	None	No	0.05	NP (NDs)
Cobalt (mg/L)	MW-3	0.002707	0.002061	0.006	No	16	0.002384	0.000737	0	None	No	0.05	Param.
Cobalt (mg/L)	MW-4	0.0017	0.0011	0.006	No	16	0.001456	0.0003584	0	None	No	0.05	NP (normality)
Cobalt (mg/L)	MW-5	0.0034	0.0029	0.006	No	16	0.006	0.01174	6.25	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-3	0.462	0.253	5	No	16	0.4209	0.3833	0	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-4	0.4629	0.1571	5	No	16	0.31	0.3489	0	None	No	0.05	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	0.4203	0.2174	5	No	16	0.3189	0.2315	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-3	1.918	1.612	4	No	16	1.765	0.3499	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-4	0.68	0.61	4	No	16	1.241	2.342	6.25	None	No	0.05	NP (normality)
Fluoride (mg/L)	MW-5	0.49	0.42	4	No	16	0.5213	0.4101	12.5	None	No	0.05	NP (normality)
Lead (mg/L)	MW-3	0.0013	0.001	0.015	No	14	0.001143	0.0002928	100	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-4	0.0013	0.0005	0.015	No	14	0.001002	0.0004067	78.57	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-5	0.0013	0.001	0.015	No	14	0.008214	0.02642	100	None	No	0.05	NP (NDs)
Lithium (mg/L)	MW-3	0.00989	0.004757	0.04	No	16	0.008656	0.008221	0	None	x^(1/3)	0.05	Param.
Lithium (mg/L)	**MW-4**	**0.8585**	**0.6453**	**0.04**	**Yes**	**16**	**0.7519**	**0.2432**	**0**	**None**	**No**	**0.05**	**Param.**
Lithium (mg/L)	MW-5	0.0047	0.0038	0.04	No	16	0.007044	0.01152	12.5	None	No	0.05	NP (normality)
Mercury (mg/L)	MW-3	0.0002	0.0002	0.002	No	14	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-4	0.0002	0.0002	0.002	No	14	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-5	0.0002	0.0002	0.002	No	14	0.0002	0	100	None	No	0.05	NP (NDs)
Molybdenum (mg/L)	**MW-3**	**0.2776**	**0.1724**	**0.1**	**Yes**	**16**	**0.225**	**0.1201**	0	**None**	**No**	**0.05**	**Param.**
Molybdenum (mg/L)	**MW-4**	**0.5531**	**0.4352**	**0.1**	**Yes**	**16**	**0.51**	**0.1633**	**0**	**None**	**ln(x)**	**0.05**	**Param.**
Molybdenum (mg/L)	MW-5	0.0057	0.0025	0.1	No	16	0.01379	0.03638	18.75	None	No	0.05	NP (normality)
Selenium (mg/L)	**MW-3**	**0.2267**	**0.1179**	**0.05**	**Yes**	**16**	**0.1894**	**0.1396**	**0**	**None**	**sqrt(x)**	**0.05**	**Param.**
Selenium (mg/L)	MW-4	0.008327	0.005373	0.05	No	16	0.00685	0.003369	0	None	No	0.05	Param.
Selenium (mg/L)	MW-5	0.005353	0.002011	0.05	No	16	0.007688	0.01214	25	Kaplan-Meier	x^(1/3)	0.05	Param.
Thallium (mg/L)	MW-3	0.001	0.0005	0.002	No	14	0.0005714	0.0001816	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-4	0.001	0.0005	0.002	No	14	0.0005714	0.0001816	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-5	0.001	0.0005	0.002	No	14	0.004107	0.01321	100	None	No	0.05	NP (NDs)
Arsenic (mg/L)	MW-3	0.002935	0.00229	0.01	No	16	0.002613	0.0007347	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-4	0.00391	0.002977	0.01	No	16	0.003444	0.001064	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-5	0.01752	0.008727	0.01	No	8	0.01313	0.006566	0	None	No	0.05	Param.

ATTACHMENT 6

BOX PLOT SUMMARY: ALL CCR WELLS (APRIL 2022)

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 8:44 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	MW-1 (bg)	16	0.002406	0.0005836	0.0001459	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-2 (bg)	16	0.002406	0.0005836	0.0001459	0.0025	0.001	0.003	100
Antimony (mg/L)	MW-3	16	0.002225	0.0006836	0.0001709	0.0025	0.001	0.003	81.25
Antimony (mg/L)	MW-4	16	0.002256	0.0006572	0.0001643	0.0025	0.001	0.003	75
Antimony (mg/L)	MW-5	16	0.008744	0.02435	0.006087	0.0025	0.001	0.1	93.75
Barium (mg/L)	MW-1 (bg)	17	0.04653	0.01207	0.002928	0.047	0.019	0.063	0
Barium (mg/L)	MW-2 (bg)	17	0.1176	0.02019	0.004896	0.11	0.089	0.16	0
Barium (mg/L)	MW-3	17	0.2475	0.1273	0.03086	0.22	0.098	0.66	0
Barium (mg/L)	MW-4	17	0.04935	0.008696	0.002109	0.047	0.035	0.061	0
Barium (mg/L)	MW-5	17	0.03618	0.004902	0.001189	0.034	0.03	0.05	5.882
Beryllium (mg/L)	MW-1 (bg)	15	0.002	0.0007319	0.000189	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-2 (bg)	15	0.002	0.0007319	0.000189	0.0025	0.001	0.0025	100
Beryllium (mg/L)	MW-3	15	0.001953	0.000819	0.0002115	0.0025	0.00029	0.0025	93.33
Beryllium (mg/L)	MW-4	15	0.002047	0.0006844	0.0001767	0.0025	0.001	0.0025	93.33
Beryllium (mg/L)	MW-5	15	0.0086	0.02529	0.006531	0.0025	0.001	0.1	100
Cadmium (mg/L)	MW-1 (bg)	16	0.001937	0.0008732	0.0002183	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-2 (bg)	16	0.001937	0.0008732	0.0002183	0.0025	0.0005	0.0025	100
Cadmium (mg/L)	MW-3	16	0.001489	0.001059	0.0002648	0.00175	0.00019	0.0025	62.5
Cadmium (mg/L)	MW-4	16	0.001337	0.001064	0.0002659	0.00059	0.00018	0.0025	62.5
Cadmium (mg/L)	MW-5	16	0.008049	0.02454	0.006135	0.0025	0.000091	0.1	87.5
Chromium (mg/L)	MW-1 (bg)	15	0.002527	0.001172	0.0003026	0.0025	0.0007	0.005	80
Chromium (mg/L)	MW-2 (bg)	15	0.002893	0.001279	0.0003301	0.0025	0.001	0.005	93.33
Chromium (mg/L)	MW-3	15	0.004433	0.007441	0.001921	0.0025	0.001	0.031	80
Chromium (mg/L)	MW-4	15	0.00258	0.001191	0.0003074	0.0025	0.001	0.005	80
Chromium (mg/L)	MW-5	15	0.0094	0.02509	0.006478	0.0025	0.001	0.1	100
Cobalt (mg/L)	MW-1 (bg)	17	0.0007994	0.0002512	0.00006092	0.00075	0.00046	0.00125	11.76
Cobalt (mg/L)	MW-2 (bg)	17	0.001054	0.0005834	0.0001415	0.00125	0.00028	0.0028	52.94
Cobalt (mg/L)	MW-3	17	0.002356	0.0007232	0.0001754	0.0022	0.00085	0.004	0
Cobalt (mg/L)	MW-4	17	0.00147	0.0003521	0.00008539	0.0017	0.00083	0.0018	0
Cobalt (mg/L)	MW-5	17	0.005865	0.01138	0.00276	0.003	0.0027	0.05	5.882
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	17	0.3104	0.1898	0.04603	0.333	-0.168	0.62	0
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	17	0.2449	0.2892	0.07015	0.196	-0.0965	0.839	0
Combined Radium 226 + 228 (pCi/L)	MW-3	17	0.4005	0.3805	0.09228	0.315	-0.0595	1.49	0
Combined Radium 226 + 228 (pCi/L)	MW-4	17	0.3259	0.3441	0.08345	0.341	-0.258	1.12	0
Combined Radium 226 + 228 (pCi/L)	MW-5	17	0.3085	0.2282	0.05535	0.3	-0.0397	0.723	0
Fluoride (mg/L)	MW-1 (bg)	17	0.6118	0.123	0.02983	0.61	0.4	0.91	0
Fluoride (mg/L)	MW-2 (bg)	17	0.5058	0.1367	0.03315	0.43	0.35	0.728	0
Fluoride (mg/L)	MW-3	17	1.773	0.3403	0.08255	1.8	0.87	2.3	0
Fluoride (mg/L)	MW-4	17	1.214	2.27	0.5506	0.65	0.23	10	5.882
Fluoride (mg/L)	MW-5	17	0.5171	0.3975	0.0964	0.46	0.05	2	11.76
Lead (mg/L)	MW-1 (bg)	15	0.001065	0.0003328	0.00008592	0.0013	0.0005	0.0013	93.33
Lead (mg/L)	MW-2 (bg)	15	0.0011	0.0003273	0.00008452	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-3	15	0.0011	0.0003273	0.00008452	0.0013	0.0005	0.0013	100
Lead (mg/L)	MW-4	15	0.0009687	0.0004128	0.0001066	0.0013	0.0003	0.0013	80
Lead (mg/L)	MW-5	15	0.0077	0.02554	0.006593	0.0013	0.0005	0.1	100
Lithium (mg/L)	MW-1 (bg)	17	0.003452	0.002602	0.0006311	0.005	0.00054	0.01	58.82
Lithium (mg/L)	MW-2 (bg)	17	0.003475	0.002581	0.000626	0.005	0.00052	0.01	64.71
Lithium (mg/L)	MW-3	17	0.008324	0.008077	0.001959	0.0068	0.0014	0.034	0
Lithium (mg/L)	MW-4	17	0.7365	0.2439	0.05915	0.75	0.28	1.1	0
Lithium (mg/L)	MW-5	17	0.009894	0.02325	0.005639	0.0044	0.0014	0.1	11.76

Box & Whiskers Plot

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 8:44 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Mercury (mg/L)	MW-1 (bg)	15	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-2 (bg)	15	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-3	15	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-4	15	0.0002	0	0	0.0002	0.0002	0.0002	100
Mercury (mg/L)	MW-5	15	0.0002	0	0	0.0002	0.0002	0.0002	100
Molybdenum (mg/L)	MW-1 (bg)	17	0.007209	0.006039	0.001465	0.005	0.00076	0.015	58.82
Molybdenum (mg/L)	MW-2 (bg)	17	0.007629	0.006499	0.001576	0.005	0.00085	0.015	58.82
Molybdenum (mg/L)	MW-3	17	0.2188	0.119	0.02887	0.2	0.064	0.53	0
Molybdenum (mg/L)	MW-4	17	0.5388	0.1978	0.04797	0.44	0.35	1	0
Molybdenum (mg/L)	MW-5	17	0.02229	0.07159	0.01736	0.005	0.0022	0.3	17.65
Selenium (mg/L)	MW-1 (bg)	16	0.005775	0.003082	0.0007706	0.0058	0.0014	0.015	0
Selenium (mg/L)	MW-2 (bg)	17	0.001209	0.001172	0.0002842	0.00065	0.00035	0.0045	41.18
Selenium (mg/L)	MW-3	17	0.1825	0.1382	0.03351	0.14	0.026	0.57	0
Selenium (mg/L)	MW-4	17	0.006894	0.003267	0.0007924	0.0061	0.0012	0.013	0
Selenium (mg/L)	MW-5	17	0.007406	0.01181	0.002864	0.0034	0.00046	0.05	23.53
Thallium (mg/L)	MW-1 (bg)	15	0.0006	0.000207	0.00005345	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-2 (bg)	15	0.0006	0.000207	0.00005345	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-3	15	0.0006	0.000207	0.00005345	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-4	15	0.0006	0.000207	0.00005345	0.0005	0.0005	0.001	100
Thallium (mg/L)	MW-5	15	0.0039	0.01275	0.003293	0.0005	0.0005	0.05	100
Arsenic (mg/L)	MW-1 (bg)	17	0.0009518	0.0004068	0.00009865	0.00087	0.00043	0.0018	41.18
Arsenic (mg/L)	MW-2 (bg)	17	0.0009206	0.0004084	0.00009906	0.00094	0.00031	0.0014	41.18
Arsenic (mg/L)	MW-3	17	0.002518	0.0008118	0.0001969	0.0024	0.001	0.0038	0
Arsenic (mg/L)	MW-4	17	0.003359	0.001088	0.0002639	0.0033	0.002	0.0059	0
Arsenic (mg/L)	MW-5	9	0.012	0.007008	0.002336	0.0088	0.003	0.022	0

ATTACHMENT 7

OUTLIER ANALYSIS SUMMARY: BACKGROUND WELLS (APRIL 2022)

Outlier Analysis - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 8:45 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	32	0.002406	0.0005741	unknown	ShapiroWilk
Arsenic (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.0009362	0.0004017	normal	ShapiroWilk
Barium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.08206	0.03961	normal	ShapiroWilk
Beryllium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	30	0.002	0.0007192	unknown	ShapiroWilk
Cadmium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	32	0.001937	0.000859	unknown	ShapiroWilk
Chromium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	30	0.00271	0.001219	unknown	ShapiroWilk
Cobalt (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.001331	0.0009133	normal	ShapiroWilk
Combined Radium 226 + 228 (pCi/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.2777	0.2432	normal	ShapiroWilk
Fluoride (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.5588	0.1389	normal	ShapiroWilk
Lead (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	30	0.001082	0.0003248	normal	ShapiroWilk
Lithium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.003464	0.002552	normal	ShapiroWilk
Mercury (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	30	0.0002	0	unknown	ShapiroWilk
Molybdenum (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	34	0.007419	0.006181	normal	ShapiroWilk
Selenium (mg/L)	MW-1,MW-2	No	n/a	n/a w/combined bg	NP	NaN	33	0.003593	0.003123	normal	ShapiroWilk
Thallium (mg/L)	MW-1,MW-2	n/a	n/a	n/a w/combined bg	NP	NaN	30	0.0006	0.0002034	unknown	ShapiroWilk

ATTACHMENT 8

TREND TEST SUMMARY: BACKGROUND WELLS (APRIL 2022)

Trend Test - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 8:45 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cadmium (mg/L)	**MW-1 (bg)**	**-0.0003035**	**-61**	**-58**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.01**	**NP**
Cadmium (mg/L)	**MW-2 (bg)**	**-0.0003035**	**-61**	**-58**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	**MW-1 (bg)**	**0.05771**	**66**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Lead (mg/L)	**MW-1 (bg)**	**-0.00009847**	**-59**	**-53**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.01**	**NP**
Lead (mg/L)	**MW-2 (bg)**	**-0.00009481**	**-56**	**-53**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.01**	**NP**
Selenium (mg/L)	**MW-2 (bg)**	**0.0004464**	**69**	**63**	**Yes**	**17**	**41.18**	**n/a**	**n/a**	**0.01**	**NP**

Trend Test - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 8:45 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	MW-1 (bg)	0	17	58	No	16	100	n/a	n/a	0.01	NP
Antimony (mg/L)	MW-2 (bg)	0	17	58	No	16	100	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-1 (bg)	0	1	63	No	17	41.18	n/a	n/a	0.01	NP
Arsenic (mg/L)	MW-2 (bg)	-0.00009622	-44	-63	No	17	41.18	n/a	n/a	0.01	NP
Barium (mg/L)	MW-1 (bg)	-0.003749	-53	-63	No	17	0	n/a	n/a	0.01	NP
Barium (mg/L)	MW-2 (bg)	0.004842	39	63	No	17	0	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-1 (bg)	0	-50	-53	No	15	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	MW-2 (bg)	0	-50	-53	No	15	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	**MW-1 (bg)**	**-0.0003035**	**-61**	**-58**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.01**	**NP**
Cadmium (mg/L)	**MW-2 (bg)**	**-0.0003035**	**-61**	**-58**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.01**	**NP**
Chromium (mg/L)	MW-1 (bg)	0	-10	-53	No	15	80	n/a	n/a	0.01	NP
Chromium (mg/L)	MW-2 (bg)	0	21	53	No	15	93.33	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-1 (bg)	0.0000585	25	63	No	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-2 (bg)	-0.0001287	-48	-63	No	17	52.94	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-1 (bg)	-0.01633	-16	-63	No	17	0	n/a	n/a	0.01	NP
Combined Radium 226 + 228 (pCi/L)	MW-2 (bg)	-0.02516	-10	-63	No	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	**MW-1 (bg)**	**0.05771**	**66**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	MW-2 (bg)	0.06608	60	63	No	17	0	n/a	n/a	0.01	NP
Lead (mg/L)	**MW-1 (bg)**	**-0.00009847**	**-59**	**-53**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.01**	**NP**
Lead (mg/L)	**MW-2 (bg)**	**-0.00009481**	**-56**	**-53**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.01**	**NP**
Lithium (mg/L)	MW-1 (bg)	0	-24	-63	No	17	58.82	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-2 (bg)	0	-25	-63	No	17	64.71	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-1 (bg)	0	0	53	No	15	100	n/a	n/a	0.01	NP
Mercury (mg/L)	MW-2 (bg)	0	0	53	No	15	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-1 (bg)	0	16	63	No	17	58.82	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-2 (bg)	0	-3	-63	No	17	58.82	n/a	n/a	0.01	NP
Selenium (mg/L)	MW-1 (bg)	-0.0006054	-36	-58	No	16	0	n/a	n/a	0.01	NP
Selenium (mg/L)	**MW-2 (bg)**	**0.0004464**	**69**	**63**	**Yes**	**17**	**41.18**	**n/a**	**n/a**	**0.01**	**NP**
Thallium (mg/L)	MW-1 (bg)	0	36	53	No	15	100	n/a	n/a	0.01	NP
Thallium (mg/L)	MW-2 (bg)	0	36	53	No	15	100	n/a	n/a	0.01	NP

ATTACHMENT 9

BACKGROUND LEVELS AND GROUNDWATER PROTECTION STANDARDS (APRIL 2022)

Background Levels and Groundwater Protection Stantands Corresponding to the April 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		0.001	0.006
Arsenic	mg/L	0.010		0.0018	0.010
Barium	mg/L	2		0.1633	2
Beryllium	mg/L	0.004		0.001	0.004
Cadmium	mg/L	0.005		0.001	0.005
Chromium	mg/L	0.1		0.0039	0.1
Cobalt	mg/L		0.006	0.0025	0.006
Fluoride	mg/L	4.0		0.8696	4.0
Lead	mg/L		0.015	0.0013	0.015
Lithium	mg/L		0.040	0.005	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		0.013	0.05
Thallium	mg/L	0.002		0.0005	0.002
Radium 266 and 228 combined	pCi/L	5		0.8573	5

Notes:
mg/L = milligram per Liter
MCL = Maximum Contaminant Level
GWPS = Groundwater Protection Standard
[1] *See* Federal Register/Vol. 83, No. 146/Monday, July 30, 2018/Rules and Regulations.
[2] Background levels were last updated through October 2020 data and computed as the Upper Tolerance Limit from the pooled background dataset.

ATTACHMENT 10

CONFIDENCE INTERVAL SUMMARY (APRIL 2022):

DETERMINATION OF STATISTICALLY SIGNIFICANT LEVEL

Confidence Interval - Significant Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 9:34 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	**MW-4**	**0.8397**	**0.6332**	**0.04**	**Yes**	**17**	**0.7365**	**0.2439**	**0**	**None**	**No**	**0.05**	**Param.**
Molybdenum (mg/L)	**MW-3**	**0.2539**	**0.1617**	**0.1**	**Yes**	**17**	**0.2188**	**0.119**	**0**	**None**	**sqrt(x)**	**0.05**	**Param.**
Molybdenum (mg/L)	**MW-4**	**0.55**	**0.41**	**0.1**	**Yes**	**17**	**0.5388**	**0.1978**	**0**	**None**	**No**	**0.05**	**NP (normality)**
Selenium (mg/L)	**MW-3**	**0.2165**	**0.114**	**0.05**	**Yes**	**17**	**0.1825**	**0.1382**	**0**	**None**	**sqrt(x)**	**0.05**	**Param.**

Confidence Interval - All Results

AES Puerto Rico Client: AES Puerto Rico, LP Data: 2022_Statistics_AES.mdb Printed 6/23/2022, 9:34 AM

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	16	0.002225	0.0006836	81.25	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-4	0.0025	0.0022	0.006	No	16	0.002256	0.0006572	75	None	No	0.05	NP (NDs)
Antimony (mg/L)	MW-5	0.003	0.0025	0.006	No	16	0.008744	0.02435	93.75	None	No	0.05	NP (NDs)
Barium (mg/L)	MW-3	0.2844	0.191	2	No	17	0.2475	0.1273	0	None	sqrt(x)	0.05	Param.
Barium (mg/L)	MW-4	0.05304	0.04567	2	No	17	0.04935	0.008696	0	None	No	0.05	Param.
Barium (mg/L)	MW-5	0.03799	0.03405	2	No	17	0.03618	0.004902	5.882	None	x^(1/3)	0.05	Param.
Beryllium (mg/L)	MW-3	0.0025	0.001	0.004	No	15	0.001953	0.000819	93.33	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-4	0.0025	0.0017	0.004	No	15	0.002047	0.0006844	93.33	None	No	0.05	NP (NDs)
Beryllium (mg/L)	MW-5	0.0025	0.001	0.004	No	15	0.0086	0.02529	100	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-3	0.0025	0.0005	0.005	No	16	0.001489	0.001059	62.5	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-4	0.0025	0.00036	0.005	No	16	0.001337	0.001064	62.5	None	No	0.05	NP (NDs)
Cadmium (mg/L)	MW-5	0.0025	0.0005	0.005	No	16	0.008049	0.02454	87.5	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-3	0.005	0.0024	0.1	No	15	0.004433	0.007441	80	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-4	0.0035	0.002	0.1	No	15	0.00258	0.001191	80	None	No	0.05	NP (NDs)
Chromium (mg/L)	MW-5	0.005	0.0025	0.1	No	15	0.0094	0.02509	100	None	No	0.05	NP (NDs)
Cobalt (mg/L)	MW-3	0.002662	0.00205	0.006	No	17	0.002356	0.0007232	0	None	No	0.05	Param.
Cobalt (mg/L)	MW-4	0.0017	0.0011	0.006	No	17	0.00147	0.0003521	0	None	No	0.05	NP (normality)
Cobalt (mg/L)	MW-5	0.0034	0.0029	0.006	No	17	0.005865	0.01138	5.882	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-3	0.462	0.231	5	No	17	0.4005	0.3805	0	None	No	0.05	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-4	0.4716	0.1802	5	No	17	0.3259	0.3441	0	None	No	0.05	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	0.4051	0.2118	5	No	17	0.3085	0.2282	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-3	1.917	1.629	4	No	17	1.773	0.3403	0	None	No	0.05	Param.
Fluoride (mg/L)	MW-4	0.76	0.63	4	No	17	1.214	2.27	5.882	None	No	0.05	NP (normality)
Fluoride (mg/L)	MW-5	0.49	0.42	4	No	17	0.5171	0.3975	11.76	None	No	0.05	NP (normality)
Lead (mg/L)	MW-3	0.0013	0.001	0.015	No	15	0.0011	0.0003273	100	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-4	0.0013	0.0005	0.015	No	15	0.0009687	0.0004128	80	None	No	0.05	NP (NDs)
Lead (mg/L)	MW-5	0.0013	0.001	0.015	No	15	0.0077	0.02554	100	None	No	0.05	NP (NDs)
Lithium (mg/L)	MW-3	0.009382	0.004605	0.04	No	17	0.008324	0.008077	0	None	x^(1/3)	0.05	Param.
Lithium (mg/L)	**MW-4**	**0.8397**	**0.6332**	**0.04**	**Yes**	**17**	**0.7365**	**0.2439**	**0**	**None**	**No**	**0.05**	**Param.**
Lithium (mg/L)	MW-5	0.0047	0.0038	0.04	No	17	0.006806	0.0112	11.76	None	No	0.05	NP (normality)
Mercury (mg/L)	MW-3	0.0002	0.0002	0.002	No	15	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-4	0.0002	0.0002	0.002	No	15	0.0002	0	100	None	No	0.05	NP (NDs)
Mercury (mg/L)	MW-5	0.0002	0.0002	0.002	No	15	0.0002	0	100	None	No	0.05	NP (NDs)
Molybdenum (mg/L)	**MW-3**	**0.2539**	**0.1617**	**0.1**	**Yes**	**17**	**0.2188**	**0.119**	**0**	**None**	**sqrt(x)**	**0.05**	**Param.**
Molybdenum (mg/L)	**MW-4**	**0.55**	**0.41**	**0.1**	**Yes**	**17**	**0.5388**	**0.1978**	**0**	**None**	**No**	**0.05**	**NP (normality)**
Molybdenum (mg/L)	MW-5	0.0057	0.0025	0.1	No	17	0.01318	0.03532	17.65	None	No	0.05	NP (normality)
Selenium (mg/L)	**MW-3**	**0.2165**	**0.114**	**0.05**	**Yes**	**17**	**0.1825**	**0.1382**	**0**	**None**	**sqrt(x)**	**0.05**	**Param.**
Selenium (mg/L)	MW-4	0.008278	0.005511	0.05	No	17	0.006894	0.003267	0	None	No	0.05	Param.
Selenium (mg/L)	MW-5	0.005166	0.002062	0.05	No	17	0.007406	0.01181	23.53	Kaplan-Meier	x^(1/3)	0.05	Param.
Thallium (mg/L)	MW-3	0.001	0.0005	0.002	No	15	0.0006	0.000207	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-4	0.001	0.0005	0.002	No	15	0.0006	0.000207	100	None	No	0.05	NP (NDs)
Thallium (mg/L)	MW-5	0.001	0.0005	0.002	No	15	0.0039	0.01275	100	None	No	0.05	NP (NDs)
Arsenic (mg/L)	MW-3	0.002861	0.002174	0.01	No	17	0.002518	0.0008118	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-4	0.00382	0.002898	0.01	No	17	0.003359	0.001088	0	None	No	0.05	Param.
Arsenic (mg/L)	MW-5	0.01634	0.007656	0.01	No	9	0.012	0.007008	0	None	No	0.05	Param.