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ANNUAL SITE
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APPENDICES



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Acronyms and Abbreviations

Term	Definition	Term	Definition
C		N	
CaCO ₃	calcium carbonate	ND	not detected
CINT	Center for Integrated Nanotechnologies	NE	not established
D		NTU	nephelometric turbidity unit
DE	data excluded	P	
DU	duplicate sample	pH	potential of hydrogen
E		PQL	practical quantitation limit
E. coli = Escherichia coli		S	
L		SA	sample
Lc	critical level	SU	standard unit
LC/MS/MS	liquid chromatography/mass spectrometry/mass spectrometry		
M			
MCL	maximum contaminant level		
MDA	minimal detectable activity or minimum measured activity		
MDL	method detection limit		
MPN	most probable number		
MS4	Municipal Separate Storm Sewer System		

Units of Measure

Unit	Definition	Unit	Definition
°C	degrees Celsius	mg/sa	milligrams per sample
°F	degrees Fahrenheit	mrem	millirem
cm	centimeter	mrem/yr	millirems per year
g	gram	ng/L	nanograms per liter
µg/kg	micrograms per kilogram	pCi/g	picocuries per gram
µg/L	micrograms per liter	pCi/L	picocuries per liter
µm	micrometer	pCi/sa	picocuries per sample
mg/kg	milligrams per kilogram	pg/L	picogram per liter
mg/L	milligrams per liter		

Appendix A. Summary of Groundwater Monitoring in 2023



Road wash on No Sweat Boulevard

Table A-1. Sample collection events for groundwater quality monitoring at SNL/NM, January through December 2023

Sampling Event	Groundwater Monitoring Program	Chemical Waste Landfill	Mixed Waste Landfill	TA-V Groundwater Area of Concern	Tijeras Arroyo Groundwater Area of Concern	Burn Site Groundwater Area of Concern
January	√	√				
February	√			√		
March	√			√	√	
April				√		√
May			√		√	√
June			√		√	
July		√		√		
August				√	√	
September				√	√	
October				√		√
November			√		√	√
December					√	

Table A-2. SNL/NM groundwater monitoring analytical results, 2023

Analyte	Number of Detects	Number of Non-Detects	Minimum Detected Value	Maximum Detected Value	Mean Detected Value	MCL
Summary of Field Water Quality Parameters Prior to Sample Collection (units as indicated below)						
pH in SU	136	0	6.07	7.89	7.41	NE
Specific Conductivity in $\mu\text{mhos/cm}$	136	0	277.7	3945	690.6	NE
Temperature in $^{\circ}\text{C}$	136	0	10.88	27.62	19.10	NE
Turbidity in NTU	136	0	0.02	6.32	0.91	NE
Detected Organic Compounds in $\mu\text{g/L}$						
Acetone	1	119	2.05	2.05	2.05	NE
Chloroform	16	130	0.360	1.10	0.709	80.0 ^a
Dichloroethane, 1,1-	10	131	0.380	7.75	5.315	NE
Dichloroethene, 1,1-	11	135	1.08	3.45	2.27	7.0
Dichloroethene, cis-1,2-	29	112	0.350	6.71	2.224	70.0
Tetrachloroethene	12	134	0.540	11.9	6.210	5.0
Toluene	10	131	0.400	1.16	0.863	1000
Trichlorobenzene, 1,2,4-	1	130	0.490	0.490	0.490	70.0
Trichloroethene	65	86	0.410	22.4	5.294	5.0
Detected Inorganic Parameters in mg/L						
Alkalinity as CaCO_3	74	0	81.4	1020	212.3	NE
Bromide	74	0	0.144	2.93	0.590	NE
Chloride	74	0	10.6	491	62.0	NE
Fluoride	74	0	0.141	2.55	0.998	4.0
Nitrate plus nitrite	150	0	0.120	33.8	8.288	10.0
Sulfate	74	0	16.8	2100	144.9	NE
Total Organic Halogens	9	12	0.00370	0.172	0.03430	NE
Total Phenols	4	17	0.00397	0.0421	0.01827	NE
Detected Metals in mg/L						
Aluminum	10	64	0.0239	0.237	0.1251	NE
Antimony	3	71	0.00118	0.00184	0.00144	0.006
Arsenic	43	31	0.00201	0.00936	0.00300	0.010
Barium	74	0	0.00915	0.236	0.06893	2.0
Beryllium	4	70	0.000250	0.00756	0.004290	0.004
Cadmium	2	82	0.000367	0.000436	0.000402	0.005
Calcium	74	0	36.7	341	89.4	NE
Chromium	6	88	0.00341	0.0321	0.00994	0.100
Cobalt	6	68	0.000330	0.00953	0.003690	NE
Copper	25	49	0.000301	0.000895	0.000503	NE
Iron	33	41	0.0344	0.217	0.0718	NE
Magnesium	74	0	3.55	67	20.25	NE
Manganese	16	58	0.0010	1.43	0.1890	NE
Molybdenum	40	0	0.000712	0.0170	0.003756	NE
Nickel	16	78	0.000600	0.0232	0.004020	NE
Potassium	74	0	1.21	29.5	3.79	NE
Selenium	55	19	0.00155	0.0320	0.00478	0.050

Appendix A. Summary of Groundwater Monitoring in 2023

Analyte	Number of Detects	Number of Non-Detects	Minimum Detected Value	Maximum Detected Value	Mean Detected Value	MCL
Sodium	74	0	14.3	1060	80.1	NE
Thallium	2	72	0.00124	0.00125	0.00125	0.002
Uranium	59	0	0.00101	0.00925	0.00385	0.030
Vanadium	54	20	0.00412	0.0107	0.00717	NE
Zinc	21	53	0.00340	0.164	0.03310	NE
Detected Radiological Parameters in pCi/L						
Alpha, gross (corrected)	84	0	-6.63	12.27	1.16	15.0 ^b
Beta, gross	81	3	1.68	21.7	5.03	4 mrem/yr
Potassium-40	4	77	44.5	86.5	58.5	NE
Radium-226	14	7	0.249	2.72	0.900	5.0 ^c
Radium-228	10	11	0.449	1.26	0.713	5.0 ^c
Radon-222	10	0	87.7	450	247.1	4000
Uranium-233/234	28	0	0.46	36.1	10.91	NE
Uranium-235/236	22	6	0.0425	0.703	0.2456	NE
Uranium-238	28	0	0.068	6.62	2.242	NE

Note: The number of active wells sampled was 76, the number of analyses performed was 11,042, and the percent of non-detected results was 84 percent.

^aThe 80.0 µg/L MCL is for combined trihalomethanes.

^bThe 15.0 pCi/L MCL is for corrected gross alpha activity.

^cThe 5.0 pCi/L MCL is for combined radium-226 and radium-228.

4 mrem/yr = any combination of beta- and/or gamma-emitting radionuclides (as dose rate)

CaCO₃ = calcium as carbon carbonate

corrected = gross alpha results reported as corrected values (uranium activities subtracted out)

MCL = maximum contaminant level. Established by the U.S. Environmental Protection Agency Primary Drinking Water Regulations (40 CFR 141.11[b]), National Primary Drinking Water Standards (EPA March 2018)

N = nitrogen

NE = not established

NTU = nephelometric turbidity unit

pH = potential of hydrogen (negative logarithm of the hydrogen ion concentration)

SU = standard unit

Table A-3. Exceedances for SNL/NM groundwater monitoring wells and springs sampled, 2023

Analyte	Well	Exceedance	Date
Beryllium MCL = 0.004 mg/L	Coyote Springs	0.00752 mg/L ^a	February 2023
	Coyote Springs (duplicate)	0.00756 mg/L ^a	February 2023
Nitrate plus nitrite (as nitrogen) MCL = 10.0 mg/L	CYN-MW9	33.6 mg/L	May 2023
		33.8 mg/L	October 2023
	CYN-MW9 (duplicate)	33.3 mg/L	May 2023
	CYN-MW10	20.9 mg/L	May 2023
		25.8 mg/L	October 2023
	CYN-MW12	16.6 mg/L	May 2023
		15.8 mg/L	October 2023
	CYN-MW13	26.2 mg/L	May 2023
		26.7 mg/L	November 2023
	CYN-MW13 (duplicate)	27.1 mg/L	November 2023
	CYN-MW14A	12.3 mg/L	May 2023
		12.1 mg/L	October 2023
	LWDS-MW1	12.1 mg/L	March 2023
		13.0 mg/L	August 2023
	TA2-W-19	12.7 mg/L	March 2023
		12.4 mg/L	June 2023
		12.7 mg/L	September 2023
		12.2 mg/L	November 2023
	TA2-W-19 (duplicate)	12.4 mg/L	November 2023
	TA2-W-28	17.9 mg/L	March 2023
		18.9 mg/L	June 2023
		18.7 mg/L	September 2023
		18.2 mg/L	November 2023
	TA2-W-28 (duplicate)	19.5 mg/L	June 2023
	TAV-MW10	12.8 mg/L	February 2023
		12.6 mg/L	September 2023
	TAV-MW10 (duplicate)	12.6 mg/L	September 2023
	TJA-2	12.0 mg/L	March 2023
12.5 mg/L		June 2023	
12.3 mg/L		September 2023	
12.5 mg/L		November 2023	
TJA-4	30.5 mg/L	March 2023	
	30.3 mg/L	June 2023	
	30.3 mg/L	September 2023	
	31.3 mg/L	November 2023	
TJA-5	14.5 mg/L	September 2023	
TJA-5 (duplicate)	13.4 mg/L	September 2023	
TJA-7	21.9 mg/L	March 2023	
	20.8 mg/L	June 2023	
	20.7 mg/L	September 2023	
	21.5 mg/L	November 2023	

Appendix A. Summary of Groundwater Monitoring in 2023

Analyte	Well	Exceedance	Date
Tetrachloroethene MCL = 5.0 µg/L	TA2-W-26	11.9 µg/L	March 2023
		10.4 µg/L	June 2023
		5.48 µg/L	September 2023
		7.78 µg/L	December 2023
	TA2-W-26 (duplicate)	10.6 µg/L	March 2023
		10.7 µg/L	June 2023
		5.40 µg/L	September 2023
		7.42 µg/L	December 2023
Trichloroethene MCL = 5.0 µg/L	LWDS-MW1	13.3 µg/L	March 2023
		7.71 µg/L	August 2023
	TA2-W-26	22.4 µg/L	March 2023
		21.5 µg/L	June 2023
		13.9 µg/L	September 2023
		16.8 µg/L	December 2023
	TA2-W-26 (duplicate)	20.7 µg/L	March 2023
		21.4 µg/L	June 2023
		13.9 µg/L	September 2023
		16.5 µg/L	December 2023
	TAV-MW4	5.70 µg/L	February 2023
		6.58 µg/L	August 2023
	TAV-MW4 (duplicate)	5.89 µg/L	February 2023
	TAV-MW6	7.68 µg/L	February 2023
		10.3 µg/L	August 2023
	TAV-MW6 (duplicate)	7.40 µg/L	February 2023
	TAV-MW8	5.37 µg/L	February 2023
		5.37 µg/L	August 2023
	TAV-MW10	10.6 µg/L	February 2023
		9.21 µg/L	September 2023
	TAV-MW10 (duplicate)	9.21 µg/L	September 2023
	TAV-MW14	5.15 µg/L	February 2023
	TJA-7	5.52 µg/L	June 2023
5.43 µg/L		November 2023	

^aAnalytical result for filtered groundwater sample. All other analytical results are for unfiltered groundwater samples.
MCL = maximum contaminant level

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Appendix B. Terrestrial Surveillance Analytical Results in 2023



Coyote Springs

Table B-1. Radiological results in soil, 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-1	Actinium-228	pCi/g	1.06	±0.168	0.0791	0.0375		None	SA	HASL 300
	Americium-241	pCi/g	-0.007	±0.0185	0.0297	0.0145	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.123	±0.0281	0.0232	0.0111		None	SA	HASL 300
	Tritium	pCi/L	47.8	±76.5	134	57	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0212	±0.0862	0.104	0.0508	U	BD	SA	HASL 300
	Uranium-238	pCi/g	1.02	±0.397	0.304	0.149		None	SA	HASL 300
S-6	Actinium-228	pCi/g	0.671	±0.12	0.0716	0.034		None	SA	HASL 300
	Americium-241	pCi/g	0.00688	±0.031	0.0525	0.0256	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0308	±0.0222	0.0166	0.00786		J	SA	HASL 300
	Tritium	pCi/L	64.1	±79.1	133	56.9	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0321	±0.104	0.092	0.0448	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.762	±0.697	0.454	0.222		J	SA	HASL 300
S-33	Actinium-228	pCi/g	0.886	±0.186	0.102	0.0481		None	SA	HASL 300
	Actinium-228	pCi/g	1.1	±0.161	0.0827	0.0395		None	DU	HASL 300
	Americium-241	pCi/g	0.0233	±0.0265	0.0352	0.0172	U	BD	SA	HASL 300
	Americium-241	pCi/g	-0.0162	±0.0401	0.0608	0.0298	U	BD	DU	HASL 300
	Cesium-137	pCi/g	0.231	±0.0409	0.0303	0.0145		None	SA	HASL 300
	Cesium-137	pCi/g	0.239	±0.034	0.0234	0.0113		None	DU	HASL 300
	Tritium	pCi/L	-32.7	±61.5	133	56.9	U	BD	SA	GL-RAD-A-002
	Tritium	pCi/L	44.7	±75.9	133	56.9	U	BD	DU	GL-RAD-A-002
	Uranium-235	pCi/g	0.145	±0.131	0.117	0.0568		J	SA	HASL 300
	Uranium-235	pCi/g	0.0255	±0.0854	0.116	0.0567	U	BD	DU	HASL 300
	Uranium-238	pCi/g	1.35	±0.477	0.344	0.168		NONE	SA	HASL 300
	Uranium-238	pCi/g	1.21	±0.608	0.541	0.265		J	DU	HASL 300
S-34	Actinium-228	pCi/g	1.3	±0.192	0.0869	0.0411		None	SA	HASL 300
	Americium-241	pCi/g	0.00908	±0.0209	0.0341	0.0167	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0259	±0.0191	0.0256	0.0122		J	SA	HASL 300
	Tritium	pCi/L	-40.7	±75	186	73.5	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0899	±0.107	0.116	0.0568	U	BD	SA	HASL 300

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-34	Uranium-238	pCi/g	1.57	±0.595	0.334	0.164		none	SA	HASL 300
S-45	Actinium-228	pCi/g	0.803	±0.173	0.11	0.0517		none	SA	HASL 300
	Americium-241	pCi/g	0.0187	±0.0436	0.0754	0.0366	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0451	±0.0237	0.0259	0.0122		J	SA	HASL 300
	Uranium-235	pCi/g	0.0216	±0.088	0.148	0.0717	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.965	±0.824	0.653	0.317		J	SA	HASL 300
S-46	Actinium-228	pCi/g	0.964	±0.187	0.104	0.0484		None	SA	HASL 300
	Americium-241	pCi/g	-0.0242	±0.0684	0.11	0.053	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.11	±0.0323	0.0298	0.0141		None	SA	HASL 300
	Tritium	pCi/L	-136	±29.2	186	73.4	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.185	±0.173	0.149	0.072		J	SA	HASL 300
	Uranium-238	pCi/g	1.26	±1.2	0.942	0.457		J	SA	HASL 300
S-49	Actinium-228	pCi/g	1.14	±0.206	0.11	0.0511		None	SA	HASL 300
	Americium-241	pCi/g	0.0121	±0.0257	0.0428	0.0209	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.265	±0.0443	0.0285	0.0133		None	SA	HASL 300
	Tritium	pCi/L	0.106	±87.6	185	73.5	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.015	±0.0876	0.146	0.0707	U	BD	SA	HASL 300
	Uranium-238	pCi/g	1.04	±0.584	0.414	0.202		J	SA	HASL 300
S-51	Actinium-228	pCi/g	0.871	±0.191	0.0965	0.0442		None	SA	HASL 300
	Americium-241	pCi/g	0.00306	±0.0235	0.0395	0.0192	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0177	±0.027	0.0322	0.0152	U	BD	SA	HASL 300
	Tritium	pCi/L	-1.6	±87.1	186	73.4	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	-0.0051	±0.0836	0.142	0.0686	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.793	±0.483	0.402	0.195		J	SA	HASL 300
S-53	Actinium-228	pCi/g	0.64	±0.149	0.0833	0.0391		None	SA	HASL 300
	Actinium-228	pCi/g	0.543	±0.175	0.104	0.0481		None	DU	HASL 300
	Americium-241	pCi/g	0.0225	±0.0384	0.0635	0.0309	U	BD	SA	HASL 300
	Americium-241	pCi/g	0.0383	±0.0432	0.0708	0.0342	U	BD	DU	HASL 300
	Cesium-137	pCi/g	0.00993	±0.029	0.0305	0.0144	U	BD	DU	HASL 300
	Cesium-137	pCi/g	0.0423	±0.0249	0.0226	0.0107		J	SA	HASL 300

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-53	Tritium	pCi/L	-100	±51.3	186	73.5	U	BD	SA	GL-RAD-A-002
	Tritium	pCi/L	-35.3	±76.8	186	73.4	U	BD	DU	GL-RAD-A-002
	Uranium-235	pCi/g	0.00341	±0.122	0.112	0.0542	U	BD	SA	HASL 300
	Uranium-235	pCi/g	-0.0032	±0.084	0.136	0.0658	U	BD	DU	HASL 300
	Uranium-238	pCi/g	0.98	±0.75	0.546	0.266		J	SA	HASL 300
	Uranium-238	pCi/g	1.14	±0.783	0.608	0.294		J	DU	HASL 300
S-55	Actinium-228	pCi/g	1.15	±0.208	0.121	0.0558		None	SA	HASL 300
	Americium-241	pCi/g	0.0317	±0.0361	0.0471	0.0229	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.225	±0.0587	0.0311	0.0144		None	SA	HASL 300
	Uranium-235	pCi/g	-0.0144	±0.0916	0.16	0.0773	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.975	±0.615	0.473	0.23		J	SA	HASL 300
S-57	Actinium-228	pCi/g	1.11	±0.19	0.0995	0.0463		None	SA	HASL 300
	Americium-241	pCi/g	-0.0037	±0.0433	0.0749	0.0364	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0209	±0.0188	0.0313	0.0149	U	BD	SA	HASL 300
	Tritium	pCi/L	-137	±29.2	186	73.4	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.334	±0.168	0.139	0.0673	X	R	SA	HASL 300
	Uranium-238	pCi/g	0.952	±1.05	0.69	0.336	X	R	SA	HASL 300
S-76	Actinium-228	pCi/g	0.818	±0.183	0.106	0.0497		None	SA	HASL 300
	Americium-241	pCi/g	0.0112	±0.0413	0.0723	0.0351	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0576	±0.0306	0.0304	0.0144		J	SA	HASL 300
	Tritium	pCi/L	-2.18	±87	186	73.5	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.155	±0.167	0.142	0.0686	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.7	±1.12	0.656	0.319		J	SA	HASL 300
S-77	Actinium-228	pCi/g	1.25	±0.218	0.105	0.0484		None	SA	HASL 300
	Americium-241	pCi/g	-0.0094	±0.0746	0.119	0.0578	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.311	±0.0495	0.0319	0.015		None	SA	HASL 300
	Tritium	pCi/L	214	±143	195	77.3		J	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0876	±0.174	0.167	0.0809	U	BD	SA	HASL 300
	Uranium-238	pCi/g	1.41	±1.05	1.03	0.501		J	SA	HASL 300
S-86	Actinium-228	pCi/g	1.18	±0.184	0.103	0.0494		None	SA	HASL 300

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-86	Americium-241	pCi/g	0.0224	±0.095	0.163	0.0799	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.111	±0.0288	0.0263	0.0126		None	SA	HASL 300
	Tritium	pCi/L	-38.3	±76	187	73.7	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	-0.0415	±0.105	0.154	0.0756	U	BD	SA	HASL 300
	Uranium-238	pCi/g	2.03	±1.65	1.25	0.611		J	SA	HASL 300
S-90	Actinium-228	pCi/g	0.938	±0.163	0.0926	0.0438		None	SA	HASL 300
	Americium-241	pCi/g	-0.0314	±0.0963	0.169	0.0821	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0236	±0.0269	0.024	0.0114	U	BD	SA	HASL 300
	Tritium	pCi/L	11.7	±90.8	186	73.4	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0431	±0.137	0.126	0.0613	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.928	±1.71	1.26	0.612	U	BD	SA	HASL 300
S-92	Actinium-228	pCi/g	0.82	±0.15	0.0771	0.0364		None	SA	HASL 300
	Americium-241	pCi/g	0.0116	±0.0495	0.0906	0.0441	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0912	± .0297	0.0213	0.0102		None	SA	HASL 300
	Tritium	pCi/L	-137	±29.2	186	73.4	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.104	±0.112	0.0991	0.0483	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.33	±1.15	0.713	0.348		J	SA	HASL 300
P-4	Actinium-228	pCi/g	0.964	±0.198	0.113	0.0521		None	SA	HASL 300
	Americium-241	pCi/g	0.00339	±0.0243	0.0426	0.0207	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0579	±0.0429	0.03	0.014		J	SA	HASL 300
	Uranium-235	pCi/g	0.168	±0.169	0.141	0.068	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.21	±0.671	0.42	0.204		J	SA	HASL 300
P-5	Actinium-228	pCi/g	0.617	±0.113	0.0665	0.0316		None	SA	HASL 300
	Americium-241	pCi/g	-0.0009	±0.0319	0.0571	0.0278	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.11	±0.0262	0.0176	0.00839		None	SA	HASL 300
	Uranium-235	pCi/g	0.0787	±0.103	0.086	0.0419	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.266	±0.827	0.488	0.238	U	BD	SA	HASL 300
P-16	Actinium-228	pCi/g	1.6	±0.206	0.0775	0.0368		NONE	SA	HASL 300
	Americium-241	pCi/g	0.00091	±0.0627	0.111	0.0542	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0789	±0.0237	0.0224	0.0108		None	SA	HASL 300

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
P-16	Tritium	pCi/L	-33.4	±61.3	133	56.8	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0712	±0.0718	0.12	0.059	U	BD	SA	HASL 300
	Uranium-238	pCi/g	2.01	±1.36	0.884	0.433		J	SA	HASL 300
P-19	Actinium-228	pCi/g	1.12	±0.173	0.0882	0.0423		None	SA	HASL 300
	Americium-241	pCi/g	-0.0008	±0.053	0.1	0.0491	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.247	±0.0394	0.0213	0.0102		None	SA	HASL 300
	Tritium	pCi/L	27.9	±72.9	134	57	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0441	±0.107	0.118	0.0576	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.812	±1.12	0.821	0.402	U	BD	SA	HASL 300
P-58	Actinium-228	pCi/g	0.849	±0.177	0.0866	0.0412		None	SA	HASL 300
	Americium-241	pCi/g	0.0694	±0.0573	0.0854	0.0417	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0798	±0.0257	0.0222	0.0106		None	SA	HASL 300
	Tritium	pCi/L	-20.3	±64	133	56.9	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.144	±0.122	0.119	0.0581	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.04	±0.898	0.687	0.336		J	SA	HASL 300
P-59	Actinium-228	pCi/g	0.894	±0.144	0.0655	0.0312		None	SA	HASL 300
	Americium-241	pCi/g	0.00974	±0.0287	0.05	0.0245	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.272	±0.0335	0.0184	0.00886		None	SA	HASL 300
	Tritium	pCi/L	-6.93	±66.5	133	56.9	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.139	±0.127	0.102	0.05	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.11	±0.653	0.439	0.215		J	SA	HASL 300
P-63	Actinium-228	pCi/g	1.24	±0.171	0.0779	0.037		None	SA	HASL 300
	Americium-241	pCi/g	-0.0422	±0.0578	0.0841	0.0412	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.157	±0.0256	0.0204	0.00973		None	SA	HASL 300
	Tritium	pCi/L	-42.9	±59.7	134	57.2	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.151	±0.132	0.107	0.052	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.29	±0.938	0.709	0.347		J	SA	HASL 300
P-64	Actinium-228	pCi/g	1.73	±0.225	0.0956	0.0455		None	DU	HASL 300
	Actinium-228	pCi/g	1.66	±0.225	0.0914	0.0433		None	SA	HASL 300
	Americium-241	pCi/g	-0.0081	±0.0937	0.154	0.0753	U	BD	DU	HASL 300

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
P-64	Americium-241	pCi/g	-0.112	±0.107	0.164	0.0799	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.114	±0.0299	0.0279	0.0134		None	SA	HASL 300
	Cesium-137	pCi/g	0.0932	±0.0287	0.0277	0.0133		None	DU	HASL 300
	Tritium	pCi/L	-6.74	±66.7	134	57	U	BD	SA	GL-RAD-A-002
	Tritium	pCi/L	10.9	±69.7	133	56.8	U	BD	DU	GL-RAD-A-002
	Uranium-235	pCi/g	0.166	±0.175	0.15	0.0737	X	R	DU	HASL 300
	Uranium-235	pCi/g	0.0647	±0.16	0.149	0.073	U	BD	SA	HASL 300
	Uranium-238	pCi/g	1.06	±1.56	1.33	0.65	U	BD	SA	HASL 300
	Uranium-238	pCi/g	1.98	±1.51	1.21	0.594		J	DU	HASL 300
P-81	Actinium-228	pCi/g	0.802	±0.145	0.0812	0.0383		None	SA	HASL 300
	Americium-241	pCi/g	0.0413	±0.0858	0.147	0.0718	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.422	±0.0472	0.0234	0.0112		None	SA	HASL 300
	Uranium-235	pCi/g	0.0453	±0.0694	0.125	0.0611	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.968	±1.26	1.1	0.538	U	BD	SA	HASL 300
P-82	Actinium-228	pCi/g	0.98	±0.199	0.101	0.0462		None	SA	HASL 300
	Americium-241	pCi/g	0.00458	±0.0257	0.0428	0.0208	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0767	±0.0271	0.0252	0.0117		None	SA	HASL 300
	Uranium-235	pCi/g	0.0348	±0.0877	0.145	0.0703	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.787	±0.554	0.418	0.204		J	SA	HASL 300
P-95	Actinium-228	pCi/g	0.751	±0.137	0.0852	0.0406		None	SA	HASL 300
	Americium-241	pCi/g	0.046	±0.0704	0.126	0.0614	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0811	±0.0247	0.0232	0.0111		None	SA	HASL 300
	Uranium-235	pCi/g	0.0271	±0.0639	0.105	0.0514	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.458	±1.4	0.957	0.466	U	BD	SA	HASL 300

^a Blank cells indicate that the laboratory did not qualify the data.

Laboratory Data Qualifier

U = The analyte was absent or below the method detection limit.

X = The data was rejected due to the peak not meeting identification criteria.

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Data Validation Qualifier

BD = The associated value was below the detection limit as used in radiochemistry to identify results that are not statistically different from zero.

J = The associated numerical value was an estimated quantity.

None = There was no data validation assigned.

R = The data are unusable and rejected (compound may or may not be present).

Sample Type

DU = duplicate sample

SA = sample

Analytical Method

GL-RAD-A-002 (GL-RAD-A-002 2010)

HASL 300 (DOE 1997)

Table B-2. Radiological results in sediment, 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-72	Actinium-228	pCi/g	1.05	±0.183	0.107	0.0496		None	SA	HASL 300
	Americium-241	pCi/g	-0.0295	±0.0684	0.114	0.0551	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.076	±0.037	0.0298	0.014		J	SA	HASL 300
	Tritium	pCi/L	42.6	±99	186	73.4	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.00981	±0.1	0.16	0.0776	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.778	±1.17	0.953	0.462	U	BD	SA	HASL 300
S-74N	Actinium-228	pCi/g	1.79	±0.243	0.109	0.0514		None	DU	HASL 300
	Actinium-228	pCi/g	1.73	±0.21	0.0784	0.0377		None	SA	HASL 300
	Americium-241	pCi/g	0.0516	±0.0649	0.0917	0.0448	U	BD	DU	HASL 300
	Americium-241	pCi/g	0.00843	±0.0229	0.0396	0.0196	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.00105	±0.0181	0.029	0.0138	U	BD	DU	HASL 300
	Cesium-137	pCi/g	0.00314	±0.0147	0.023	0.0112	U	BD	SA	HASL 300
	Uranium-235	pCi/g	0.0542	±0.134	0.112	0.055	U	BD	SA	HASL 300
	Uranium-235	pCi/g	0.163	±0.198	0.163	0.0792	X	R	DU	HASL 300
	Uranium-238	pCi/g	2.05	±0.858	0.382	0.189		None	SA	HASL 300
	Uranium-238	pCi/g	1.99	±1.05	0.804	0.393		J	DU	HASL 300
S-75	Actinium-228	pCi/g	0.87	±0.172	0.0983	0.0457		None	SA	HASL 300
	Americium-241	pCi/g	0.014	±0.0231	0.0393	0.0191	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0236	±0.0238	0.0273	0.0128	U	BD	SA	HASL 300
	Tritium	pCi/L	-35.9	±76.9	187	73.8	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	-0.0215	±0.0773	0.129	0.0625	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.639	±0.499	0.378	0.184		J	SA	HASL 300
S-85	Actinium-228	pCi/g	0.612	±0.151	0.0941	0.0431		None	SA	HASL 300
	Americium-241	pCi/g	-0.052	±0.0551	0.0786	0.038	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0184	±0.0183	0.0313	0.0147	U	BD	SA	HASL 300
	Tritium	pCi/L	-40.6	±75.1	186	73.5	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.0995	±0.161	0.139	0.0672	U	BD	SA	HASL 300
	Uranium-238	pCi/g	0.709	±1.12	0.658	0.318	X	R	SA	HASL 300
S-91	Actinium-228	pCi/g	1.29	±0.186	0.0687	0.0328		None	SA	HASL 300

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Units	Activity	Total Propagated Uncertainty	Minimum Detectable Activity	Critical Level	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-91	Americium-241	pCi/g	0.00616	±0.0127	0.0254	0.0125	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0437	±0.0197	0.0187	0.00898		J	SA	HASL 300
	Uranium-235	pCi/g	0.148	±0.128	0.0848	0.0414	X	R	SA	HASL 300
	Uranium-238	pCi/g	1.17	±0.442	0.244	0.12		None	SA	HASL 300
P-73	Actinium-228	pCi/g	1.34	±0.189	0.0918	0.0434		None	SA	HASL 300
	Americium-241	pCi/g	0.000622	±0.0174	0.0307	0.0151	U	BD	SA	HASL 300
	Cesium-137	pCi/g	0.0241	±0.0219	0.028	0.0135	U	BD	SA	HASL 300
	Tritium	pCi/L	37.1	±74.4	133	56.9	U	BD	SA	GL-RAD-A-002
	Uranium-235	pCi/g	0.00977	±0.0715	0.115	0.0563	U	BD	SA	HASL 300
	Uranium-238	pCi/g	1.22	±0.539	0.302	0.148		None	SA	HASL 300

^a Blank cells indicate that the laboratory did not qualify the data.

Laboratory Data Qualifier

U = The analyte was absent or below the method detection limit.

X = The data was rejected due to the peak not meeting identification criteria.

Data Validation Qualifier

BD = The associated value was below the detection limit as used in radiochemistry to identify results that are not statistically different from zero.

J = The associated numerical value was an estimated quantity.

None = There was no data validation assigned.

R = The data are unusable and rejected (compound may or may not be present).

Sample Type

DU = duplicate sample

SA = sample

Analytical Method

GL-RAD-A-002 (GL-RAD-A-002 2010)

HASL 300 (DOE 1997)

Table B-3. Dosimeter measurements, 2023

Location Number	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	Exposure (ambient dose mrem)	Exposure (ambient dose mrem)	Exposure (ambient dose mrem)	Exposure (ambient dose mrem)
C-10	15.8	16.3	15.9	23
C-21	14.7	21.1	21.1	23.3
C-22	15.1	15.6	12	21
C-23	10.7	7.5	12.3	13.3
C-25	13.7	12	11.8	11.9
C-26	19.3	16.8	14.3	20.8
C-30	19.3	15.5	19.8	20.1
S-1	17.8	16.1	16.2	18
S-6	16.7	12.3	9.8	12.3
S-7	18.3	17	14.8	17.8
S-20	19.3	17.6	19.5	19.7
S-45	14.2	16.9	14.3	18.3
S-46	17.3	19.7	12.9	15.4
S-48	17.4	16.5	16.7	17.5
P-4	14.7	9.2	15.4	15.4
P-5	15.4	14.8	14.2	17.8
P-16	23.9	21.3	20.8	24.6
P-19	17.6	13.6	18.5	18.2
P-39	13.6	16.5	14.3	15.5
P-40	15.2	11.4	16.8	15.1
P-81	16.7	18.7	19.3	19

Table B-4. Nonradiological results in soil, 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
P-4	Aluminum	7,860	4.42	9.71		J	SA	SW846 3050B/6020B
	Antimony	0.313	0.313	1.9	U	None	SA	SW846 3050B/6010D
	Arsenic	2.1	0.328	0.971		None	SA	SW846 3050B/6020B
	Beryllium	0.366	0.0194	0.0971		None	SA	SW846 3050B/6020B
	Cadmium	0.114	0.0194	0.194	J	None	SA	SW846 3050B/6020B
	Chromium	7.44	0.194	0.583	N	J	SA	SW846 3050B/6020B
	Copper	5.29	0.0641	0.388		None	SA	SW846 3050B/6020B
	Iron	7,850	64.1	194		J	SA	SW846 3050B/6020B
	Lead	6.92	0.0971	0.388		None	SA	SW846 3050B/6020B
	Magnesium	2,700	1.94	5.83		None	SA	SW846 3050B/6020B
	Nickel	6.05	0.0971	0.388		None	SA	SW846 3050B/6020B
	Selenium	0.719	0.35	0.971	J	None	SA	SW846 3050B/6020B
	Silver	0.0949	0.0949	0.474	U	0.474UJ	SA	SW846 3050B/6010D
	Thallium	0.136	0.136	0.388	U	None	SA	SW846 3050B/6020B
	Uranium	0.309	0.0128	0.0388		None	SA	SW846 3050B/6020B
Zinc	22.5	0.777	3.88		J	SA	SW846 3050B/6020B	
P-5	Aluminum	5,850	4.49	9.86		J	SA	SW846 3050B/6020B
	Antimony	0.313	0.313	1.89	U	None	SA	SW846 3050B/6010D
	Arsenic	1.38	0.333	0.986		None	SA	SW846 3050B/6020B
	Beryllium	0.302	0.0197	0.0986		None	SA	SW846 3050B/6020B
	Cadmium	0.0996	0.0197	0.197	J	None	SA	SW846 3050B/6020B
	Chromium	5.54	0.197	0.592	N	J	SA	SW846 3050B/6020B
	Copper	4.17	0.0651	0.394		None	SA	SW846 3050B/6020B
	Iron	5,760	65.1	197		J	SA	SW846 3050B/6020B
	Lead	6.21	0.0986	0.394		None	SA	SW846 3050B/6020B
	Magnesium	1,640	1.97	5.92		None	SA	SW846 3050B/6020B
	Nickel	4.08	0.0986	0.394		None	SA	SW846 3050B/6020B
	Selenium	0.604	0.355	0.986	J	None	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
P-5	Silver	0.0947	0.0947	0.473	U	0.473UJ	SA	SW846 3050B/6010D
	Thallium	0.138	0.138	0.394	U	None	SA	SW846 3050B/6020B
	Uranium	0.225	0.013	0.0394		None	SA	SW846 3050B/6020B
	Zinc	18.3	0.789	3.94		J	SA	SW846 3050B/6020B
P-16	Aluminum	14,000	44.3	97.3		J	SA	SW846 3050B/6020B
	Antimony	0.313	0.313	1.9	U	None	SA	SW846 3050B/6010D
	Arsenic	3.23	0.329	0.973		None	SA	SW846 3050B/6020B
	Beryllium	0.588	0.0195	0.0973		None	SA	SW846 3050B/6020B
	Cadmium	0.191	0.0195	0.195	J	None	SA	SW846 3050B/6020B
	Chromium	8.83	0.195	0.584	N	J	SA	SW846 3050B/6020B
	Copper	11	0.0642	0.389		None	SA	SW846 3050B/6020B
	Iron	16,600	64.2	195		J	SA	SW846 3050B/6020B
	Lead	10	0.0973	0.389		None	SA	SW846 3050B/6020B
	Magnesium	4,950	1.95	5.84		None	SA	SW846 3050B/6020B
	Nickel	9.16	0.0973	0.389		None	SA	SW846 3050B/6020B
	Selenium	2.7	0.35	0.973		None	SA	SW846 3050B/6020B
	Silver	0.0949	0.0949	0.474	U	0.474UJ	SA	SW846 3050B/6010D
	Thallium	0.153	0.136	0.389	J	None	SA	SW846 3050B/6020B
	Uranium	0.977	0.0128	0.0389		None	SA	SW846 3050B/6020B
Zinc	49.8	0.778	3.89		J	SA	SW846 3050B/6020B	
P-19	Aluminum	11,600	41.6	91.4		J	SA	SW846 3050B/6020B
	Antimony	0.327	0.327	1.98	U	None	SA	SW846 3050B/6010D
	Arsenic	2.66	0.309	0.914		None	SA	SW846 3050B/6020B
	Beryllium	0.43	0.0183	0.0914		None	SA	SW846 3050B/6020B
	Cadmium	0.188	0.0183	0.183		None	SA	SW846 3050B/6020B
	Chromium	15.5	0.183	0.548	N	J	SA	SW846 3050B/6020B
	Copper	12.2	0.0603	0.366		None	SA	SW846 3050B/6020B
	Iron	12,100	60.3	183		J	SA	SW846 3050B/6020B
	Lead	15.7	0.0914	0.366		None	SA	SW846 3050B/6020B
P-19	Magnesium	4,150	1.83	5.48		None	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Nickel	12.7	0.0914	0.366		None	SA	SW846 3050B/6020B
	Selenium	0.993	0.329	0.914		None	SA	SW846 3050B/6020B
	Silver	0.0992	0.0992	0.496	U	0.496UJ	SA	SW846 3050B/6010D
	Thallium	0.133	0.128	0.366	J	None	SA	SW846 3050B/6020B
	Uranium	0.404	0.0121	0.0366		None	SA	SW846 3050B/6020B
	Zinc	52	0.731	3.66		J	SA	SW846 3050B/6020B
P-58	Aluminum	7,880	4.47	9.82		J	SA	SW846 3050B/6020B
	Antimony	0.321	0.321	1.95	U	None	SA	SW846 3050B/6010D
	Arsenic	2.33	0.332	0.982		None	SA	SW846 3050B/6020B
	Beryllium	0.406	0.0196	0.0982		None	SA	SW846 3050B/6020B
	Cadmium	0.242	0.0196	0.196		J+	SA	SW846 3050B/6020B
	Chromium	6.74	0.196	0.589	N	J	SA	SW846 3050B/6020B
	Copper	8.14	0.0648	0.393		None	SA	SW846 3050B/6020B
	Iron	8,910	64.8	196		J	SA	SW846 3050B/6020B
	Lead	12.6	0.0982	0.393		None	SA	SW846 3050B/6020B
	Magnesium	3,900	1.96	5.89		None	SA	SW846 3050B/6020B
	Nickel	6.18	0.0982	0.393		None	SA	SW846 3050B/6020B
	Selenium	0.887	0.354	0.982	J	None	SA	SW846 3050B/6020B
	Silver	0.0973	0.0973	0.486	U	0.486UJ	SA	SW846 3050B/6010D
	Thallium	0.138	0.138	0.393	U	None	SA	SW846 3050B/6020B
	Uranium	0.556	0.013	0.0393		None	SA	SW846 3050B/6020B
Zinc	45.5	0.786	3.93		J	SA	SW846 3050B/6020B	
P-63	Aluminum	15,100	43.2	94.9		J	SA	SW846 3050B/6020B
	Antimony	0.325	0.325	1.97	U	None	SA	SW846 3050B/6010D
	Arsenic	2.9	0.321	0.949		None	SA	SW846 3050B/6020B
	Beryllium	0.601	0.019	0.0949		None	SA	SW846 3050B/6020B
	Cadmium	0.235	0.019	0.19		J+	SA	SW846 3050B/6020B
	Chromium	13.9	0.19	0.569	N	J	SA	SW846 3050B/6020B
P-63	Copper	8.94	0.0626	0.38		None	SA	SW846 3050B/6020B
	Iron	13,600	62.6	190		J	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Lead	10.3	0.0949	0.38		None	SA	SW846 3050B/6020B
	Magnesium	3,990	1.9	5.69		None	SA	SW846 3050B/6020B
	Nickel	11	0.0949	0.38		None	SA	SW846 3050B/6020B
	Selenium	1.15	0.342	0.949		None	SA	SW846 3050B/6020B
	Silver	0.0986	0.0986	0.493	U	0.493UJ	SA	SW846 3050B/6010D
	Thallium	0.133	0.133	0.38	U	None	SA	SW846 3050B/6020B
	Uranium	0.602	0.0125	0.038		None	SA	SW846 3050B/6020B
	Zinc	38.7	0.759	3.8		J	SA	SW846 3050B/6020B
P-64	Aluminum	9,310	4.47	9.82		J	SA	SW846 3050B/6020B
	Aluminum	10,400	41.4	91.1		J	DU	SW846 3050B/6020B
	Antimony	0.308	0.308	1.87	U	None	SA	SW846 3050B/6010D
	Antimony	0.299	0.299	1.81	U	None	DU	SW846 3050B/6010D
	Arsenic	2.62	0.332	0.982		None	SA	SW846 3050B/6020B
	Arsenic	2.25	0.308	0.911		None	DU	SW846 3050B/6020B
	Beryllium	0.46	0.0196	0.0982		None	SA	SW846 3050B/6020B
	Beryllium	0.442	0.0182	0.0911		None	DU	SW846 3050B/6020B
	Cadmium	0.148	0.0196	0.196	J	J+	SA	SW846 3050B/6020B
	Cadmium	0.133	0.0182	0.182	J	J+	DU	SW846 3050B/6020B
	Chromium	6.33	0.196	0.589	N	J	SA	SW846 3050B/6020B
	Chromium	6.02	0.182	0.546	N	J	DU	SW846 3050B/6020B
	Copper	10.3	0.0648	0.393		None	SA	SW846 3050B/6020B
	Copper	10.4	0.0601	0.364		None	DU	SW846 3050B/6020B
	Iron	17,400	64.8	196		J	SA	SW846 3050B/6020B
	Iron	16,000	60.1	182		J	DU	SW846 3050B/6020B
	Lead	6.21	0.0982	0.393		None	SA	SW846 3050B/6020B
	Lead	7.16	0.0911	0.364		None	DU	SW846 3050B/6020B
Magnesium	6,300	1.96	5.89		None	SA	SW846 3050B/6020B	
P-64	Magnesium	6,060	1.82	5.46		None	DU	SW846 3050B/6020B
	Nickel	7.45	0.0982	0.393		None	SA	SW846 3050B/6020B
	Nickel	7.13	0.0911	0.364		None	DU	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Selenium	2.97	0.354	0.982		None	SA	SW846 3050B/6020B
	Selenium	2.24	0.328	0.911		None	DU	SW846 3050B/6020B
	Silver	0.466	0.466	2.33	U	None	SA	SW846 3050B/6010D
	Silver	0.0907	0.0907	0.454	U	0.454UJ	DU	SW846 3050B/6010D
	Thallium	0.138	0.138	0.393	U	None	SA	SW846 3050B/6020B
	Thallium	0.128	0.128	0.364	U	None	DU	SW846 3050B/6020B
	Uranium	0.896	0.013	0.0393		None	SA	SW846 3050B/6020B
	Uranium	0.645	0.012	0.0364		None	DU	SW846 3050B/6020B
	Zinc	52.2	0.786	3.93		J	SA	SW846 3050B/6020B
	Zinc	53	0.729	3.64		J	DU	SW846 3050B/6020B
P-81	Aluminum	9,650	4.43	9.73	N	J	SA	SW846 3050B/6020B
	Antimony	0.314	0.314	1.9	U	None	SA	SW846 3050B/6010D
	Arsenic	1.64	0.329	0.973		None	SA	SW846 3050B/6020B
	Beryllium	0.45	0.0195	0.0973		None	SA	SW846 3050B/6020B
	Cadmium	0.173	0.0195	0.195	J	None	SA	SW846 3050B/6020B
	Chromium	8.28	0.195	0.584		None	SA	SW846 3050B/6020B
	Copper	6.79	0.0642	0.389		None	SA	SW846 3050B/6020B
	Iron	8,500	6.42	19.5	N	J	SA	SW846 3050B/6020B
	Lead	9.15	0.0973	0.389		None	SA	SW846 3050B/6020B
	Magnesium	2,350	1.95	5.84	N	None	SA	SW846 3050B/6020B
	Nickel	6.55	0.0973	0.389		None	SA	SW846 3050B/6020B
	Selenium	0.923	0.35	0.973	J	None	SA	SW846 3050B/6020B
	Silver	0.0951	0.0951	0.475	U	0.475UJ	SA	SW846 3050B/6010D
	Thallium	0.136	0.136	0.389	U	None	SA	SW846 3050B/6020B
Uranium	0.382	0.0128	0.0389		None	SA	SW846 3050B/6020B	
Zinc	25.6	0.778	3.89		None	SA	SW846 3050B/6020B	
P-82	Aluminum	9,410	4.36	9.58	N	J	SA	SW846 3050B/6020B
	Antimony	0.833	0.329	2	J	None	SA	SW846 3050B/6010D
	Arsenic	2.94	0.324	0.958		None	SA	SW846 3050B/6020B
	Beryllium	0.468	0.0192	0.0958		None	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Cadmium	0.147	0.0192	0.192	J	J+	SA	SW846 3050B/6020B
	Chromium	7.18	0.192	0.575		None	SA	SW846 3050B/6020B
	Copper	9.2	0.0632	0.383		None	SA	SW846 3050B/6020B
	Iron	9,450	6.32	19.2	N	J	SA	SW846 3050B/6020B
	Lead	14.8	0.0958	0.383		None	SA	SW846 3050B/6020B
	Magnesium	3,900	1.92	5.75	N	None	SA	SW846 3050B/6020B
	Nickel	6.95	0.0958	0.383		None	SA	SW846 3050B/6020B
	Selenium	1.26	0.345	0.958		None	SA	SW846 3050B/6020B
	Silver	0.0998	0.0998	0.499	U	0.499UJ	SA	SW846 3050B/6010D
	Thallium	0.134	0.134	0.383	U	None	SA	SW846 3050B/6020B
	Uranium	0.806	0.0126	0.0383		None	SA	SW846 3050B/6020B
	Zinc	35.6	0.766	3.83		None	SA	SW846 3050B/6020B
P-95	Aluminum	9,910	40.4	88.8	N	J	SA	SW846 3050B/6020B
	Antimony	0.315	0.315	1.91	U	None	SA	SW846 3050B/6010D
	Arsenic	2.06	0.3	0.888		None	SA	SW846 3050B/6020B
	Beryllium	0.44	0.0178	0.0888		None	SA	SW846 3050B/6020B
	Cadmium	0.194	0.0178	0.178		None	SA	SW846 3050B/6020B
	Chromium	9.03	0.178	0.533		None	SA	SW846 3050B/6020B
	Copper	6.97	0.0586	0.355		None	SA	SW846 3050B/6020B
	Iron	8,600	5.86	17.8	N	J	SA	SW846 3050B/6020B
	Lead	8.64	0.0888	0.355		None	SA	SW846 3050B/6020B
	Magnesium	3,040	1.78	5.33	N	None	SA	SW846 3050B/6020B
	Nickel	7.28	0.0888	0.355		None	SA	SW846 3050B/6020B
	Selenium	0.86	0.32	0.888	J	None	SA	SW846 3050B/6020B
	Silver	0.0956	0.0956	0.478	U	0.478UJ	SA	SW846 3050B/6010D
P-95	Thallium	0.124	0.124	0.355	U	None	SA	SW846 3050B/6020B
	Uranium	0.308	0.0117	0.0355		None	SA	SW846 3050B/6020B
	Zinc	26.4	0.71	3.55		None	SA	SW846 3050B/6020B
S-1	Aluminum	15,500	43.4	95.4	N	J	SA	SW846 3050B/6020B
	Antimony	0.304	0.304	1.84	U	None	SA	SW846 3050B/6010D

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Arsenic	2.83	0.323	0.954		None	SA	SW846 3050B/6020B
	Beryllium	0.685	0.0191	0.0954		None	SA	SW846 3050B/6020B
	Cadmium	0.302	0.0191	0.191		J+	SA	SW846 3050B/6020B
	Chromium	12.4	0.191	0.573		None	SA	SW846 3050B/6020B
	Copper	14.1	0.063	0.382		None	SA	SW846 3050B/6020B
	Iron	17,200	63	191	N	J	SA	SW846 3050B/6020B
	Lead	13.4	0.0954	0.382		None	SA	SW846 3050B/6020B
	Magnesium	5,710	1.91	5.73	N	None	SA	SW846 3050B/6020B
	Nickel	12.3	0.0954	0.382		None	SA	SW846 3050B/6020B
	Selenium	1.65	0.344	0.954		None	SA	SW846 3050B/6020B
	Silver	0.0921	0.0921	0.46	U	0.460UJ	SA	SW846 3050B/6010D
	Thallium	0.19	0.134	0.382	J	None	SA	SW846 3050B/6020B
	Uranium	0.778	0.0126	0.0382		None	SA	SW846 3050B/6020B
	Zinc	54.5	0.763	3.82		None	SA	SW846 3050B/6020B
S-6	Aluminum	7,510	4.42	9.71	N	J	SA	SW846 3050B/6020B
	Antimony	1.03	0.297	1.8	J	1.80U	SA	SW846 3050B/6010D
	Arsenic	1.9	0.328	0.971		None	SA	SW846 3050B/6020B
	Beryllium	0.334	0.0194	0.0971		None	SA	SW846 3050B/6020B
	Cadmium	0.156	0.0194	0.194	J	None	SA	SW846 3050B/6020B
	Chromium	6.48	0.194	0.583		None	SA	SW846 3050B/6020B
	Copper	14.9	0.0641	0.388		None	SA	SW846 3050B/6020B
	Iron	6,670	6.41	19.4	N	J	SA	SW846 3050B/6020B
	Lead	4.94	0.0971	0.388		None	SA	SW846 3050B/6020B
	Magnesium	2,240	1.94	5.83	N	None	SA	SW846 3050B/6020B
S-6	Nickel	9.41	0.0971	0.388		None	SA	SW846 3050B/6020B
	Selenium	0.644	0.35	0.971	J	None	SA	SW846 3050B/6020B
	Silver	0.0901	0.0901	0.45	U	None	SA	SW846 3050B/6010D
	Thallium	0.136	0.136	0.388	U	None	SA	SW846 3050B/6020B
	Uranium	0.36	0.0128	0.0388		None	SA	SW846 3050B/6020B
	Zinc	33.1	0.777	3.88		None	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-33	Aluminum	12,600	45	99	N	J	SA	SW846 3050B/6020B
	Aluminum	11,400	45.1	99.2	N	J	DU	SW846 3050B/6020B
	Antimony	1.12	0.31	1.88	J	1.88U	SA	SW846 3050B/6010D
	Antimony	1.74	0.324	1.96	J	1.96U	DU	SW846 3050B/6010D
	Arsenic	5.84	0.335	0.99		None	SA	SW846 3050B/6020B
	Arsenic	5.12	0.335	0.992		None	DU	SW846 3050B/6020B
	Beryllium	1.08	0.0198	0.099		None	SA	SW846 3050B/6020B
	Beryllium	0.94	0.0198	0.0992		None	DU	SW846 3050B/6020B
	Cadmium	1.12	0.0198	0.198		J+	SA	SW846 3050B/6020B
	Cadmium	0.878	0.0198	0.198		J+	DU	SW846 3050B/6020B
	Chromium	12.7	0.198	0.594		None	SA	SW846 3050B/6020B
	Chromium	11.3	0.198	0.595		None	DU	SW846 3050B/6020B
	Copper	12.3	0.0653	0.396		None	SA	SW846 3050B/6020B
	Copper	10.6	0.0655	0.397		None	DU	SW846 3050B/6020B
	Iron	13,100	65.3	198	N	J	SA	SW846 3050B/6020B
	Iron	12,500	65.5	198	N	J	DU	SW846 3050B/6020B
	Lead	13.5	0.099	0.396		None	SA	SW846 3050B/6020B
	Lead	11.8	0.0992	0.397		None	DU	SW846 3050B/6020B
	Magnesium	5,180	1.98	5.94	N	None	SA	SW846 3050B/6020B
	Magnesium	4,970	1.98	5.95	N	None	DU	SW846 3050B/6020B
Nickel	13.1	0.099	0.396		None	SA	SW846 3050B/6020B	
Nickel	11.5	0.0992	0.397		None	DU	SW846 3050B/6020B	
Selenium	1.47	0.356	0.99		None	SA	SW846 3050B/6020B	
S-33	Selenium	1.26	0.357	0.992		None	DU	SW846 3050B/6020B
	Silver	0.094	0.094	0.47	U	None	SA	SW846 3050B/6010D
	Silver	0.098	0.098	0.49	U	None	DU	SW846 3050B/6010D
	Thallium	0.164	0.139	0.396	J	None	SA	SW846 3050B/6020B
	Thallium	0.142	0.139	0.397	J	None	DU	SW846 3050B/6020B
	Uranium	0.876	0.0131	0.0396		None	SA	SW846 3050B/6020B
	Uranium	0.773	0.0131	0.0397		None	DU	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-34	Zinc	60.6	0.792	3.96		None	SA	SW846 3050B/6020B
	Zinc	56.8	0.794	3.97		None	DU	SW846 3050B/6020B
	Aluminum	17,500	44.2	97.1	N	J	SA	SW846 3050B/6020B
	Antimony	1.05	0.296	1.8	J	1.80U	SA	SW846 3050B/6010D
	Arsenic	4.79	0.328	0.971		None	SA	SW846 3050B/6020B
	Beryllium	0.755	0.0194	0.0971		None	SA	SW846 3050B/6020B
	Cadmium	0.259	0.0194	0.194		None	SA	SW846 3050B/6020B
	Chromium	14.5	0.194	0.583		None	SA	SW846 3050B/6020B
	Copper	9.4	0.0641	0.388		None	SA	SW846 3050B/6020B
	Iron	15,400	64.1	194	N	J	SA	SW846 3050B/6020B
	Lead	9.4	0.0971	0.388		None	SA	SW846 3050B/6020B
	Magnesium	3,990	1.94	5.83	N	None	SA	SW846 3050B/6020B
	Nickel	12.3	0.0971	0.388		None	SA	SW846 3050B/6020B
	Selenium	4.59	0.35	0.971		None	SA	SW846 3050B/6020B
	Silver	0.0898	0.0898	0.449	U	None	SA	SW846 3050B/6010D
	Thallium	0.146	0.136	0.388	J	None	SA	SW846 3050B/6020B
	Uranium	0.499	0.0128	0.0388		None	SA	SW846 3050B/6020B
Zinc	38.1	0.777	3.88		None	SA	SW846 3050B/6020B	
S-45	Aluminum	7,810	3.93	8.64	N	J	SA	SW846 3050B/6020B
	Antimony	1.01	0.325	1.97	J	1.97U	SA	SW846 3050B/6010D
	Arsenic	2.43	0.292	0.864		None	SA	SW846 3050B/6020B
	Beryllium	0.373	0.0173	0.0864		None	SA	SW846 3050B/6020B
S-45	Cadmium	0.12	0.0173	0.173	J	None	SA	SW846 3050B/6020B
	Chromium	6.78	0.173	0.518		None	SA	SW846 3050B/6020B
	Copper	5.45	0.057	0.345		None	SA	SW846 3050B/6020B
	Iron	7,730	5.7	17.3	N	J	SA	SW846 3050B/6020B
	Lead	6.17	0.0864	0.345		None	SA	SW846 3050B/6020B
	Magnesium	2,580	1.73	5.18	N	None	SA	SW846 3050B/6020B
	Nickel	5.71	0.0864	0.345		None	SA	SW846 3050B/6020B
	Selenium	0.856	0.311	0.864	J	None	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Silver	0.0986	0.0986	0.493	U	None	SA	SW846 3050B/6010D
	Thallium	0.121	0.121	0.345	U	None	SA	SW846 3050B/6020B
	Uranium	0.321	0.0114	0.0345		None	SA	SW846 3050B/6020B
	Zinc	24.1	0.691	3.45		None	SA	SW846 3050B/6020B
S-51	Aluminum	9,290	4.24	9.31	N	J	SA	SW846 3050B/6020B
	Antimony	0.916	0.287	1.74	J	1.74U	SA	SW846 3050B/6010D
	Arsenic	2.71	0.315	0.931		None	SA	SW846 3050B/6020B
	Beryllium	0.511	0.0186	0.0931		None	SA	SW846 3050B/6020B
	Cadmium	0.249	0.0186	0.186		J+	SA	SW846 3050B/6020B
	Chromium	49.5	0.186	0.559		None	SA	SW846 3050B/6020B
	Copper	8.35	0.0615	0.372		None	SA	SW846 3050B/6020B
	Iron	8,600	6.15	18.6	N	J	SA	SW846 3050B/6020B
	Lead	8.65	0.0931	0.372		None	SA	SW846 3050B/6020B
	Magnesium	3,210	1.86	5.59	N	None	SA	SW846 3050B/6020B
	Nickel	7.56	0.0931	0.372		None	SA	SW846 3050B/6020B
	Selenium	3.86	0.335	0.931		None	SA	SW846 3050B/6020B
	Silver	0.0871	0.0871	0.436	U	None	SA	SW846 3050B/6010D
	Thallium	0.13	0.13	0.372	U	None	SA	SW846 3050B/6020B
	Uranium	0.366	0.0123	0.0372		None	SA	SW846 3050B/6020B
Zinc	113	0.745	3.72		None	SA	SW846 3050B/6020B	
S-53	Aluminum	7,950	3.92	8.62	N	J	SA	SW846 3050B/6020B
S-53	Aluminum	8,230	3.83	8.42	N	J	DU	SW846 3050B/6020B
	Antimony	1.12	0.29	1.76	J	1.76U	SA	SW846 3050B/6010D
	Antimony	1.45	0.32	1.94	J	1.94U	DU	SW846 3050B/6010D
	Arsenic	1.84	0.291	0.862		None	SA	SW846 3050B/6020B
	Arsenic	1.86	0.285	0.842		None	DU	SW846 3050B/6020B
	Beryllium	0.384	0.0172	0.0862		None	SA	SW846 3050B/6020B
	Beryllium	0.384	0.0168	0.0842		None	DU	SW846 3050B/6020B
	Cadmium	0.126	0.0172	0.172	J	None	SA	SW846 3050B/6020B
	Cadmium	0.129	0.0168	0.168	J	None	DU	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Chromium	10.9	0.172	0.517		None	SA	SW846 3050B/6020B
	Chromium	7.54	0.168	0.505		None	DU	SW846 3050B/6020B
	Copper	5.81	0.0569	0.345		None	SA	SW846 3050B/6020B
	Copper	8.51	0.0556	0.337		None	DU	SW846 3050B/6020B
	Iron	7,590	5.69	17.2	N	J	SA	SW846 3050B/6020B
	Iron	7,630	5.56	16.8	N	J	DU	SW846 3050B/6020B
	Lead	8.48	0.0862	0.345		None	SA	SW846 3050B/6020B
	Lead	7.73	0.0842	0.337		None	DU	SW846 3050B/6020B
	Magnesium	2,490	1.72	5.17	N	None	SA	SW846 3050B/6020B
	Magnesium	2,340	1.68	5.05	N	None	DU	SW846 3050B/6020B
	Nickel	6.52	0.0862	0.345		None	SA	SW846 3050B/6020B
	Nickel	6.48	0.0842	0.337		None	DU	SW846 3050B/6020B
	Selenium	0.73	0.31	0.862	J	None	SA	SW846 3050B/6020B
	Selenium	0.649	0.303	0.842	J	None	DU	SW846 3050B/6020B
	Silver	0.088	0.088	0.44	U	None	SA	SW846 3050B/6010D
	Silver	0.124	0.0969	0.484	J	None	DU	SW846 3050B/6010D
	Thallium	0.121	0.121	0.345	U	None	SA	SW846 3050B/6020B
	Thallium	0.118	0.118	0.337	U	None	DU	SW846 3050B/6020B
	Uranium	0.287	0.0114	0.0345		None	SA	SW846 3050B/6020B
	Uranium	0.347	0.0111	0.0337		None	DU	SW846 3050B/6020B
S-53	Zinc	21.7	0.69	3.45		None	SA	SW846 3050B/6020B
	Zinc	21.6	0.673	3.37		None	DU	SW846 3050B/6020B
S-55	Aluminum	11,900	40.2	88.3		J	SA	SW846 3050B/6020B
	Antimony	0.307	0.307	1.86	U	None	SA	SW846 3050B/6010D
	Arsenic	2.77	0.299	0.883		None	SA	SW846 3050B/6020B
	Beryllium	0.489	0.0177	0.0883		None	SA	SW846 3050B/6020B
	Cadmium	0.189	0.0177	0.177		None	SA	SW846 3050B/6020B
	Chromium	9.45	0.177	0.53	N	J	SA	SW846 3050B/6020B
	Copper	6.66	0.0583	0.353		None	SA	SW846 3050B/6020B
	Iron	10,700	58.3	177		J	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Lead	8.98	0.0883	0.353		None	SA	SW846 3050B/6020B
	Magnesium	3,850	1.77	5.3		None	SA	SW846 3050B/6020B
	Nickel	7.62	0.0883	0.353		None	SA	SW846 3050B/6020B
	Selenium	0.999	0.318	0.883		None	SA	SW846 3050B/6020B
	Silver	0.0931	0.0931	0.466	U	0.466UJ	SA	SW846 3050B/6010D
	Thallium	0.124	0.124	0.353	U	None	SA	SW846 3050B/6020B
	Uranium	0.417	0.0117	0.0353		None	SA	SW846 3050B/6020B
	Zinc	30.7	0.707	3.53		J	SA	SW846 3050B/6020B
S-57	Aluminum	8,100	4.2	9.23		J	SA	SW846 3050B/6020B
	Antimony	0.299	0.299	1.81	U	None	SA	SW846 3050B/6010D
	Arsenic	3.32	0.312	0.923		None	SA	SW846 3050B/6020B
	Beryllium	0.416	0.0185	0.0923		None	SA	SW846 3050B/6020B
	Cadmium	0.158	0.0185	0.185	J	J+	SA	SW846 3050B/6020B
	Chromium	7.27	0.185	0.554	N	J	SA	SW846 3050B/6020B
	Copper	6.94	0.0609	0.369		None	SA	SW846 3050B/6020B
	Iron	10,600	60.9	185		J	SA	SW846 3050B/6020B
	Lead	6.84	0.0923	0.369		None	SA	SW846 3050B/6020B
	Magnesium	4,590	1.85	5.54		None	SA	SW846 3050B/6020B
	Nickel	6.51	0.0923	0.369		None	SA	SW846 3050B/6020B
S-57	Selenium	0.925	0.332	0.923		None	SA	SW846 3050B/6020B
	Silver	0.0906	0.0906	0.453	U	0.453UJ	SA	SW846 3050B/6010D
	Thallium	0.129	0.129	0.369	U	None	SA	SW846 3050B/6020B
	Uranium	0.985	0.0122	0.0369		None	SA	SW846 3050B/6020B
	Zinc	60.5	0.738	3.69		J	SA	SW846 3050B/6020B
S-90	Aluminum	9,010	4.34	9.54		J	SA	SW846 3050B/6020B
	Antimony	0.305	0.305	1.85	U	None	SA	SW846 3050B/6010D
	Arsenic	2.67	0.323	0.954		None	SA	SW846 3050B/6020B
	Beryllium	0.382	0.0191	0.0954		None	SA	SW846 3050B/6020B
	Cadmium	0.107	0.0191	0.191	J	None	SA	SW846 3050B/6020B
	Chromium	8.14	0.191	0.573	N	J	SA	SW846 3050B/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
	Copper	5.8	0.063	0.382		None	SA	SW846 3050B/6020B
	Iron	8,890	63	191		J	SA	SW846 3050B/6020B
	Lead	7.42	0.0954	0.382		None	SA	SW846 3050B/6020B
	Magnesium	2,170	1.91	5.73		None	SA	SW846 3050B/6020B
	Nickel	6.15	0.0954	0.382		None	SA	SW846 3050B/6020B
	Selenium	0.773	0.344	0.954	J	None	SA	SW846 3050B/6020B
	Silver	0.0924	0.0924	0.462	U	0.462UJ	SA	SW846 3050B/6010D
	Thallium	0.134	0.134	0.382	U	None	SA	SW846 3050B/6020B
	Uranium	0.333	0.0126	0.0382		None	SA	SW846 3050B/6020B
	Zinc	24.1	0.763	3.82		J	SA	SW846 3050B/6020B
S-92	Aluminum	7,920	4.19	9.21		J	SA	SW846 3050B/6020B
	Antimony	0.296	0.296	1.8	U	None	SA	SW846 3050B/6010D
	Arsenic	1.71	0.311	0.921		None	SA	SW846 3050B/6020B
	Beryllium	0.377	0.0184	0.0921		None	SA	SW846 3050B/6020B
	Cadmium	0.128	0.0184	0.184	J	None	SA	SW846 3050B/6020B
	Chromium	7.69	0.184	0.552	N	J	SA	SW846 3050B/6020B
	Copper	5.88	0.0608	0.368		None	SA	SW846 3050B/6020B
	Iron	7,680	60.8	184		J	SA	SW846 3050B/6020B
S-92	Lead	7.47	0.0921	0.368		None	SA	SW846 3050B/6020B
	Magnesium	2,020	1.84	5.52		None	SA	SW846 3050B/6020B
	Nickel	6.01	0.0921	0.368		None	SA	SW846 3050B/6020B
	Selenium	0.864	0.331	0.921	J	None	SA	SW846 3050B/6020B
	Silver	0.0898	0.0898	0.449	U	0.449UJ	SA	SW846 3050B/6010D
	Thallium	0.129	0.129	0.368	U	None	SA	SW846 3050B/6020B
	Uranium	0.456	0.0122	0.0368		None	SA	SW846 3050B/6020B
	Zinc	26.9	0.737	3.68		J	SA	SW846 3050B/6020B

^a Blank cells indicate that the laboratory did not qualify the data.

Laboratory Data Qualifiers

J = An estimated value, the analyte concentration was above the effective MDL and below the effective PQL.

N = A spike was outside limits.

Appendix B. Terrestrial Surveillance Analytical Results in 2023

U = The analyte was absent or below the method detection limit.

Data Validation Qualifiers

J = The associated value was an estimated quantity.

J+ = The associated numerical value is an estimated quantity with a suspected positive bias.

None = There was no data validation assigned.

U = The analyte was analyzed for but was not detected. The associated numerical value was the sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The associated value was an estimate and might be inaccurate or imprecise.

Sample Type

DU = duplicate sample

SA = sample

Analytical Method

SW-846 (EPA 1986)

Table B-5. Nonradiological results in sediment, 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
P-73	Aluminum	3,070	4.3	9.45		J	SA	SW846 3050B/6020B
	Antimony	0.352	0.291	1.76	J	J+	SA	SW846 3050B/6010D
	Arsenic	0.848	0.319	0.945	J	None	SA	SW846 3050B/6020B
	Beryllium	0.23	0.0189	0.0945		None	SA	SW846 3050B/6020B
	Cadmium	0.13	0.0189	0.189	J	J+	SA	SW846 3050B/6020B
	Chromium	2.78	0.189	0.567	N	J	SA	SW846 3050B/6020B
	Copper	3.73	0.0624	0.378		None	SA	SW846 3050B/6020B
	Iron	7,290	62.4	189		J	SA	SW846 3050B/6020B
	Lead	2.97	0.0945	0.378		None	SA	SW846 3050B/6020B
	Magnesium	1,920	1.89	5.67		None	SA	SW846 3050B/6020B
	Nickel	2.95	0.0945	0.378		None	SA	SW846 3050B/6020B
	Selenium	0.825	0.34	0.945	J	None	SA	SW846 3050B/6020B
	Silver	0.0882	0.0882	0.441	U	0.441UJ	SA	SW846 3050B/6010D
	Thallium	0.132	0.132	0.378	U	None	SA	SW846 3050B/6020B
Uranium	0.543	0.0125	0.0378		None	SA	SW846 3050B/6020B	
Zinc	15.9	0.756	3.78		J	SA	SW846 3050B/6020B	
S-72	Aluminum	11,400	41.7	91.7		J	SA	SW846 3050B/6020B
	Antimony	0.323	0.323	1.96	U	None	SA	SW846 3050B/6010D
	Arsenic	4.22	0.31	0.917		None	SA	SW846 3050B/6020B
	Beryllium	0.459	0.0183	0.0917		None	SA	SW846 3050B/6020B
	Cadmium	0.185	0.0183	0.183		J+	SA	SW846 3050B/6020B
	Chromium	11.8	0.183	0.55	N	J	SA	SW846 3050B/6020B
	Copper	10.9	0.0606	0.367		None	SA	SW846 3050B/6020B
	Iron	13,200	60.6	183		J	SA	SW846 3050B/6020B
	Lead	10.3	0.0917	0.367		None	SA	SW846 3050B/6020B
	Magnesium	4,710	1.83	5.5		None	SA	SW846 3050B/6020B
	Nickel	9.71	0.0917	0.367		None	SA	SW846 3050B/6020B
	Selenium	1.05	0.33	0.917		None	SA	SW846 3050B/6020B
Silver	0.0978	0.0978	0.489	U	0.489UJ	SA	SW846 3050B/6010D	

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-72	Thallium	0.128	0.128	0.367	U	None	SA	SW846 3050B/6020B
	Uranium	0.645	0.0121	0.0367		None	SA	SW846 3050B/6020B
	Zinc	36.4	0.734	3.67		J	SA	SW846 3050B/6020B
S-74N	Aluminum	3,350	4.35	9.56		J	SA	SW846 3050B/6020B
	Aluminum	4,720	4.54	9.98		J	DU	SW846 3050B/6020B
	Antimony	0.319	0.319	1.93	U	None	SA	SW846 3050B/6010D
	Antimony	0.31	0.31	1.88	U	None	DU	SW846 3050B/6010D
	Arsenic	1.19	0.323	0.956		None	SA	SW846 3050B/6020B
	Arsenic	1.57	0.337	0.998		None	DU	SW846 3050B/6020B
	Beryllium	0.313	0.0191	0.0956		None	SA	SW846 3050B/6020B
	Beryllium	0.316	0.02	0.0998		None	DU	SW846 3050B/6020B
	Cadmium	0.0784	0.0191	0.191	J	None	SA	SW846 3050B/6020B
	Cadmium	0.154	0.02	0.2	J	J+	DU	SW846 3050B/6020B
	Chromium	3.54	0.191	0.574	N	J	SA	SW846 3050B/6020B
	Chromium	6.73	0.2	0.599	N	J	DU	SW846 3050B/6020B
	Copper	5.43	0.0631	0.382		None	SA	SW846 3050B/6020B
	Copper	6.95	0.0659	0.399		None	DU	SW846 3050B/6020B
	Iron	4,940	63.1	191		J	SA	SW846 3050B/6020B
	Iron	10,100	65.9	200		J	DU	SW846 3050B/6020B
	Lead	2.96	0.0956	0.382		None	SA	SW846 3050B/6020B
	Lead	5.88	0.0998	0.399		None	DU	SW846 3050B/6020B
	Magnesium	1,790	1.91	5.74		None	SA	SW846 3050B/6020B
	Magnesium	2,900	2	5.99		None	DU	SW846 3050B/6020B
	Nickel	3.43	0.0956	0.382		None	SA	SW846 3050B/6020B
	Nickel	5.76	0.0998	0.399		None	DU	SW846 3050B/6020B
	Selenium	1.63	0.344	0.956		None	SA	SW846 3050B/6020B
Selenium	1.6	0.359	0.998		None	DU	SW846 3050B/6020B	
Silver	0.0965	0.0965	0.483	U	0.483UJ	SA	SW846 3050B/6010D	
Silver	0.094	0.094	0.47	U	0.470UJ	DU	SW846 3050B/6010D	
Thallium	0.134	0.134	0.382	U	None	SA	SW846 3050B/6020B	

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-74N	Thallium	0.14	0.14	0.399	U	None	DU	SW846 3050B/6020B
	Uranium	1.48	0.0126	0.0382		None	SA	SW846 3050B/6020B
	Uranium	1.47	0.0132	0.0399		None	DU	SW846 3050B/6020B
	Zinc	14.8	0.765	3.82		J	SA	SW846 3050B/6020B
	Zinc	28.3	0.798	3.99		J	DU	SW846 3050B/6020B
S-75	Aluminum	4,350	4.55	10		J	SA	SW846 3050B/6020B
	Antimony	0.302	0.302	1.83	U	None	SA	SW846 3050B/6010D
	Arsenic	1.09	0.338	1		None	SA	SW846 3050B/6020B
	Beryllium	0.291	0.02	0.1		None	SA	SW846 3050B/6020B
	Cadmium	0.206	0.02	0.2		J+	SA	SW846 3050B/6020B
	Chromium	5.27	0.2	0.6	N	J	SA	SW846 3050B/6020B
	Copper	5.62	0.066	0.4		None	SA	SW846 3050B/6020B
	Iron	5,860	66	200		J	SA	SW846 3050B/6020B
	Lead	3.57	0.1	0.4		None	SA	SW846 3050B/6020B
	Magnesium	2,530	2	6		None	SA	SW846 3050B/6020B
	Nickel	5.86	0.1	0.4		None	SA	SW846 3050B/6020B
	Selenium	0.759	0.36	1	J	None	SA	SW846 3050B/6020B
	Silver	0.0914	0.0914	0.457	U	0.457UJ	SA	SW846 3050B/6010D
	Thallium	0.14	0.14	0.4	U	None	SA	SW846 3050B/6020B
	Uranium	0.59	0.0132	0.04		None	SA	SW846 3050B/6020B
Zinc	17.3	0.8	4		J	SA	SW846 3050B/6020B	
S-85	Aluminum	6,490	4.08	8.96		J	SA	SW846 3050B/6020B
	Antimony	0.323	0.323	1.96	U	None	SA	SW846 3050B/6010D
	Arsenic	2.53	0.303	0.896		None	SA	SW846 3050B/6020B
	Beryllium	0.306	0.0179	0.0896		None	SA	SW846 3050B/6020B
	Cadmium	0.192	0.0179	0.179		J+	SA	SW846 3050B/6020B
	Chromium	10.8	0.179	0.538	N	J	SA	SW846 3050B/6020B
	Copper	7.24	0.0591	0.358		None	SA	SW846 3050B/6020B
	Iron	9,170	59.1	179		J	SA	SW846 3050B/6020B
Lead	5.23	0.0896	0.358		None	SA	SW846 3050B/6020B	

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-85	Magnesium	4,450	1.79	5.38		None	SA	SW846 3050B/6020B
	Nickel	9.93	0.0896	0.358		None	SA	SW846 3050B/6020B
	Selenium	0.663	0.323	0.896	J	None	SA	SW846 3050B/6020B
	Silver	0.489	0.489	2.45	U	None	SA	SW846 3050B/6010D
	Thallium	0.125	0.125	0.358	U	None	SA	SW846 3050B/6020B
	Uranium	0.807	0.0118	0.0358		None	SA	SW846 3050B/6020B
	Zinc	34.7	0.717	3.58		J	SA	SW846 3050B/6020B
S-91	Aluminum	5,200	4.14	9.09		J	SA	SW846 3050B/6020B
	Antimony	0.295	0.295	1.79	U	None	SA	SW846 3050B/6010D
	Arsenic	7.82	0.307	0.909		None	SA	SW846 3050B/6020B
	Beryllium	0.442	0.0182	0.0909		None	SA	SW846 3050B/6020B
	Cadmium	0.61	0.0182	0.182		J+	SA	SW846 3050B/6020B
	Chromium	6.58	0.182	0.545	N	J	SA	SW846 3050B/6020B
	Copper	4.93	0.06	0.364		None	SA	SW846 3050B/6020B
	Iron	11,200	60	182		J	SA	SW846 3050B/6020B
	Lead	7.34	0.0909	0.364		None	SA	SW846 3050B/6020B
	Magnesium	2,410	1.82	5.45		None	SA	SW846 3050B/6020B
	Nickel	8.43	0.0909	0.364		None	SA	SW846 3050B/6020B
	Selenium	1.32	0.327	0.909		None	SA	SW846 3050B/6020B
	Silver	0.0894	0.0894	0.447	U	0.447UJ	SA	SW846 3050B/6010D
	Thallium	0.127	0.127	0.364	U	None	SA	SW846 3050B/6020B
	Uranium	0.868	0.012	0.0364		None	SA	SW846 3050B/6020B
	Zinc	31.6	0.727	3.64		J	SA	SW846 3050B/6020B

^a Blank cells indicate that the laboratory did not qualify the data.

Laboratory Data Qualifiers

J = An estimated value, the analyte concentration was above the effective MDL and below the effective PQL.

N = A spike was outside limits.

U = The analyte was absent or below the method detection limit.

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Data Validation Qualifiers

J = The associated value was an estimated quantity.

J+= The associated numerical value is an estimated quantity with a suspected positive base.

None = There was no data validation assigned.

UJ = The analyte was analyzed for but was not detected. The associated value was an estimate and might be inaccurate or imprecise.

Sample Type

DU = duplicate sample

SA = sample

Analytical Method

SW-846 (EPA 1986)

Table B-6. Perchlorate results in soil, 2023

Location	Analyte	Result (mg/kg)	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-53	Perchlorate	0.00737	0.000463	0.00185	N	J-	SA	SW846 6850 Modified
S-53	Perchlorate	0.00793	0.000481	0.00192	N	J-	DU	SW846 6850 Modified

^a Blank cells indicate that the laboratory did not qualify the data.

Laboratory Data Qualifier

N = A spike was outside limits.

Data Validation Qualifier

J- = The associated numerical value is an estimated quantity with a suspected negative bias.

Sample Type

DU = duplicate sample

SA = sample

Analytical Method

SW-846 (EPA 1986)

Table B-7. High explosives results in soil, 2023

Location	Analyte	Result (µg/kg)	Method Detection Limit (µg/kg)	Practical Quantitation Limit (µg/kg)	Laboratory Data Qualifier	Data Validation Qualifier	Sample Type	Analytical Method
S-90	Amino-2,6-dinitrotoluene, 4-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Amino-4,6-dinitrotoluene, 2-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrobenzene, 1,3-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrotoluene, 2,4-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrotoluene, 2,6-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	HMX	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Nitro-benzene	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 2-	140	140	465	U	UJ	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 3-	140	140	465	U	UJ	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 4-	140	140	465	U	UJ	SA	SW846 8330B by LC/MS/MS
	Pentaerythritol tetranitrate	233	233	930	U	None	SA	SW846 8330B by LC/MS/MS
	RDX	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Tetryl	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
	Trinitrobenzene, 1,3,5-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS
Trinitrotoluene, 2,4,6-	140	140	465	U	None	SA	SW846 8330B by LC/MS/MS	
S-93	Amino-2,6-dinitrotoluene, 4-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Amino-4,6-dinitrotoluene, 2-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (µg/kg)	Method Detection Limit (µg/kg)	Practical Quantitation Limit (µg/kg)	Laboratory Data Qualifier	Data Validation Qualifier	Sample Type	Analytical Method
S-93	Dinitrobenzene, 1,3-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrotoluene, 2,4-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrotoluene, 2,6-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	HMX	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Nitro-benzene	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 2-	149	149	498	U	UJ	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 3-	149	149	498	U	UJ	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 4-	149	149	498	U	UJ	SA	SW846 8330B by LC/MS/MS
	Pentaerythritol tetranitrate	249	249	995	U	None	SA	SW846 8330B by LC/MS/MS
	RDX	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Tetryl	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Trinitrobenzene, 1,3,5-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
	Trinitrotoluene, 2,4,6-	149	149	498	U	None	SA	SW846 8330B by LC/MS/MS
S-94	Amino-2,6-dinitrotoluene, 4-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Amino-4,6-dinitrotoluene, 2-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrobenzene, 1,3-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Dinitrotoluene, 2,4-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Location	Analyte	Result (µg/kg)	Method Detection Limit (µg/kg)	Practical Quantitation Limit (µg/kg)	Laboratory Data Qualifier	Data Validation Qualifier	Sample Type	Analytical Method
S-94	Dinitrotoluene, 2,6-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	HMX	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Nitro-benzene	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 2-	145	145	483	U	UJ	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 3-	145	145	483	U	UJ	SA	SW846 8330B by LC/MS/MS
	Nitrotoluene, 4-	145	145	483	U	UJ	SA	SW846 8330B by LC/MS/MS
	Pentaerythritol tetranitrate	242	242	966	U	None	SA	SW846 8330B by LC/MS/MS
	RDX	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Tetryl	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Trinitrobenzene, 1,3,5-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS
	Trinitrotoluene, 2,4,6-	145	145	483	U	None	SA	SW846 8330B by LC/MS/MS

HMX = high melting explosive
 LC/MS/MS = liquid chromatography/mass spectrometry/mass spectrometry
 RDX = rapid-detonating explosive

Laboratory Data Qualifier

U = The analyte was absent or below the method detection limit.

Data Validation Qualifier

None = There was no data validation assigned.
 UJ = The analyte was analyzed for but was not detected. The associated value was an estimate and might be inaccurate or imprecise.

Sample Type

SA = sample

Analytical Method

SW-846 (EPA 1986)

Table B-8. Equipment blank detections, 2023

Sample Identification	Analyte	Result (mg/L)	Method Detection Limit (mg/L)	Practical Quantitation Limit (mg/L)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-EB-33	Aluminum	0.0224	0.0193	0.05	J	None	EB	SW846 3005A/6020B
	Antimony	0.001	0.001	0.003	U	None	EB	SW846 3005A/6020B
	Arsenic	0.002	0.002	0.005	U	None	EB	SW846 3005A/6020B
	Beryllium	0.0002	0.0002	0.0005	U	None	EB	SW846 3005A/6020B
	Cadmium	0.172	0.0003	0.001		None	EB	SW846 3005A/6020B
	Chromium	0.003	0.003	0.01	U	None	EB	SW846 3005A/6020B
	Copper	0.0003	0.0003	0.002	U	None	EB	SW846 3005A/6020B
	Iron	0.0519	0.033	0.1	J	None	EB	SW846 3005A/6020B
	Lead	0.0005	0.0005	0.002	U	None	EB	SW846 3005A/6020B
	Magnesium	0.0213	0.01	0.03	J	None	EB	SW846 3005A/6020B
	Nickel	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Selenium	0.0015	0.0015	0.005	U	None	EB	SW846 3005A/6020B
	Silver	0.0003	0.0003	0.001	U	None	EB	SW846 3005A/6020B
	Thallium	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Uranium	0.000067	0.000067	0.0002	U	None	EB	SW846 3005A/6020B
Zinc	0.0129	0.0033	0.02	J	None	EB	SW846 3005A/6020B	
S-EB-51	Aluminum	0.0339	0.0193	0.05	J	None	EB	SW846 3005A/6020B
	Antimony	0.001	0.001	0.003	U	None	EB	SW846 3005A/6020B
	Arsenic	0.002	0.002	0.005	U	None	EB	SW846 3005A/6020B
	Beryllium	0.0002	0.0002	0.0005	U	None	EB	SW846 3005A/6020B
	Cadmium	0.0867	0.0003	0.001		None	EB	SW846 3005A/6020B
	Chromium	0.003	0.003	0.01	U	None	EB	SW846 3005A/6020B
	Copper	0.0003	0.0003	0.002	U	None	EB	SW846 3005A/6020B
	Iron	0.0577	0.033	0.1	J	None	EB	SW846 3005A/6020B
	Lead	0.0005	0.0005	0.002	U	None	EB	SW846 3005A/6020B
	Magnesium	0.0291	0.01	0.03	J	None	EB	SW846 3005A/6020B
	Nickel	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Selenium	0.0015	0.0015	0.005	U	None	EB	SW846 3005A/6020B
	Silver	0.0003	0.0003	0.001	U	None	EB	SW846 3005A/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Sample Identification	Analyte	Result (mg/L)	Method Detection Limit (mg/L)	Practical Quantitation Limit (mg/L)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-EB-51	Thallium	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Uranium	0.000067	0.000067	0.0002	U	None	EB	SW846 3005A/6020B
	Zinc	0.00526	0.0033	0.02	J	None	EB	SW846 3005A/6020B
S-EB-74N	Aluminum	0.0239	0.0193	0.05	J	None	EB	SW846 3005A/6020B
	Antimony	0.001	0.001	0.003	U	None	EB	SW846 3005A/6020B
	Arsenic	0.002	0.002	0.005	U	None	EB	SW846 3005A/6020B
	Beryllium	0.0002	0.0002	0.0005	U	None	EB	SW846 3005A/6020B
	Cadmium	0.0494	0.0003	0.001		None	EB	SW846 3005A/6020B
	Chromium	0.003	0.003	0.01	U	None	EB	SW846 3005A/6020B
	Copper	0.0003	0.0003	0.002	U	None	EB	SW846 3005A/6020B
	Iron	0.033	0.033	0.1	U	None	EB	SW846 3005A/6020B
	Lead	0.0005	0.0005	0.002	U	None	EB	SW846 3005A/6020B
	Magnesium	0.0367	0.01	0.03		None	EB	SW846 3005A/6020B
	Nickel	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Selenium	0.0015	0.0015	0.005	U	None	EB	SW846 3005A/6020B
	Silver	0.0003	0.0003	0.001	U	None	EB	SW846 3005A/6020B
	Thallium	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Uranium	0.000067	0.000067	0.0002	U	None	EB	SW846 3005A/6020B
Zinc	0.00641	0.0033	0.02	J	None	EB	SW846 3005A/6020B	
S-EB-DIW	Aluminum	0.0193	0.0193	0.05	U	None	EB	SW846 3005A/6020B
	Antimony	0.001	0.001	0.003	U	None	EB	SW846 3005A/6020B
	Arsenic	0.002	0.002	0.005	U	None	EB	SW846 3005A/6020B
	Beryllium	0.0002	0.0002	0.0005	U	None	EB	SW846 3005A/6020B
	Cadmium	0.0003	0.0003	0.001	U	None	EB	SW846 3005A/6020B
	Chromium	0.003	0.003	0.01	U	None	EB	SW846 3005A/6020B
	Copper	0.0003	0.0003	0.002	U	None	EB	SW846 3005A/6020B
	Iron	0.033	0.033	0.1	U	None	EB	SW846 3005A/6020B
	Lead	0.0005	0.0005	0.002	U	None	EB	SW846 3005A/6020B
	Nickel	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B

Appendix B. Terrestrial Surveillance Analytical Results in 2023

Sample Identification	Analyte	Result (mg/L)	Method Detection Limit (mg/L)	Practical Quantitation Limit (mg/L)	Laboratory Data Qualifier ^a	Data Validation Qualifier	Sample Type	Analytical Method
S-EB-DIW	Selenium	0.0015	0.0015	0.005	U	None	EB	SW846 3005A/6020B
	Silver	0.0003	0.0003	0.001	U	None	EB	SW846 3005A/6020B
	Thallium	0.0006	0.0006	0.002	U	None	EB	SW846 3005A/6020B
	Uranium	0.000067	0.000067	0.0002	U	None	EB	SW846 3005A/6020B
	Zinc	0.0033	0.0033	0.02	U	None	EB	SW846 3005A/6020B

^a Blank cells indicate that the laboratory did not qualify the data.

Laboratory Data Qualifier

J = An estimated value, the analyte concentration was above the effective MDL and below the effective PQL.

U = The analyte was absent or below the method detection limit.

Data Validation Qualifier

None = There was no data validation assigned.

Sample Type

EB = equipment blank

Analytical Method

SW-846 (EPA 1986)

Table B-9. Coefficient of variance results, 2023

Location	Analyte	Result (mg/kg)	Sample Type	Average (mg/kg)	Standard Deviation (mg/kg)	Coefficient of Variance ^a (percent)
S-74	Lead	2.96	SA	4.42	2.06	46.71
		5.88	DU			
	Nickel	3.43	SA	4.60	1.65	35.86
		5.76	DU			

^aCoefficient of variance reported for duplicate sets that exceeded 35 percent.

Sample Type

DU = duplicate sample

SA = sample

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023



Sunset

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Table C-1. Ambient air metals analysis, fiscal year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a
Blank	7-Dec-22	Aluminum	<0.0272	0.0272	0.08	U
Sample		Aluminum	0.0407	0.0272	0.08	J
Blank		Antimony	<0.00132	0.00132	0.008	U
Sample		Antimony	0.00136	0.00132	0.008	JB
Blank		Arsenic	<0.002	0.002	0.012	U
Sample		Arsenic	<0.002	0.002	0.012	U
Blank		Barium	0.000686	0.0004	0.002	J
Sample		Barium	0.00246	0.0004	0.002	
Blank		Beryllium	<0.0004	0.0004	0.002	U
Sample		Beryllium	<0.0004	0.0004	0.002	U
Blank		Cadmium	<0.0004	0.0004	0.002	U
Sample		Cadmium	<0.0004	0.0004	0.002	U
Blank		Calcium	0.329	0.032	0.1	
Sample		Calcium	0.409	0.032	0.1	
Blank		Chromium	0.00312	0.0006	0.004	J
Sample		Chromium	0.0154	0.0006	0.004	
Blank		Cobalt	<0.0006	0.0006	0.002	U
Sample		Cobalt	<0.0006	0.0006	0.002	U
Blank		Copper	0.00429	0.0012	0.008	J
Sample		Copper	0.0522	0.0012	0.008	
Blank		Iron	<0.032	0.032	0.1	U
Sample		Iron	0.081	0.032	0.1	J
Blank		Lead	<0.00132	0.00132	0.008	U
Sample		Lead	0.00268	0.00132	0.008	J
Blank		Magnesium	0.0545	0.034	0.12	J
Sample		Magnesium	0.063	0.034	0.12	J
Blank		Manganese	<0.0008	0.0008	0.004	U
Sample		Manganese	0.00175	0.0008	0.004	J
Blank		Nickel	<0.0006	0.0006	0.002	U
Sample		Nickel	0.000742	0.0006	0.002	J

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a	
Blank	7-Dec-22	Potassium	0.0357	0.0256	0.1	J	
Sample		Potassium	0.276	0.0256	0.1		
Blank		Selenium	<0.002	0.002	0.012	U	
Sample		Selenium	<0.002	0.002	0.012	U	
Blank		Silver	<0.0004	0.0004	0.002	U	
Sample		Silver	<0.0004	0.0004	0.002	U	
Blank		Sodium	0.904	0.028	0.1		
Sample		Sodium	0.902	0.028	0.1		
Blank		Thallium	<0.002	0.002	0.008	U	
Sample		Thallium	<0.002	0.002	0.008	U	
Blank		Uranium	<0.0000264	0.0000264	0.00008	U	
Sample		Uranium	<0.0000264	0.0000264	0.00008	U	
Blank		Vanadium	<0.0004	0.0004	0.002	U	
Sample		Vanadium	<0.0004	0.0004	0.002	U	
Blank		Zinc	0.00549	0.0016	0.008	JB	
Sample		Zinc	0.0309	0.0016	0.008	B	
Blank		11-Jan-23	Aluminum	<0.0272	0.0272	0.08	U
Sample			Aluminum	0.0776	0.0272	0.08	J
Blank			Antimony	<0.00132	0.00132	0.008	U
Sample			Antimony	<0.00132	0.00132	0.008	U
Blank	Arsenic		<0.002	0.002	0.012	U	
Sample	Arsenic		<0.002	0.002	0.012	U	
Blank	Barium		0.000446	0.0004	0.002	J	
Sample	Barium		0.00262	0.0004	0.002		
Blank	Beryllium		<0.0004	0.0004	0.002	U	
Sample	Beryllium		<0.0004	0.0004	0.002	U	
Blank	Cadmium		<0.0004	0.0004	0.002	U	
Sample	Cadmium		<0.0004	0.0004	0.002	U	
Blank	Calcium		0.433	0.032	0.1		
Sample	Calcium		0.716	0.032	0.1		
Blank	Chromium		0.00238	0.0006	0.004	J	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a
Sample	11-Jan-23	Chromium	0.0115	0.0006	0.004	
Blank		Cobalt	<0.0006	0.0006	0.002	U
Sample		Cobalt	0.000949	0.0006	0.002	J
Blank		Copper	<0.0012	0.0012	0.008	U
Sample		Copper	0.0269	0.0012	0.008	
Blank		Iron	<0.032	0.032	0.1	U
Sample		Iron	0.101	0.032	0.1	
Blank		Lead	<0.00132	0.00132	0.008	U
Sample		Lead	0.00282	0.00132	0.008	J
Blank		Magnesium	0.0512	0.034	0.12	J
Sample		Magnesium	0.0826	0.034	0.12	J
Blank		Manganese	<0.0008	0.0008	0.004	U
Sample		Manganese	0.00232	0.0008	0.004	J
Blank		Nickel	<0.0006	0.0006	0.002	U
Sample		Nickel	0.000922	0.0006	0.002	J
Blank		Potassium	0.0572	0.0256	0.1	J
Sample		Potassium	0.142	0.0256	0.1	
Blank		Selenium	<0.002	0.002	0.012	U
Sample		Selenium	<0.002	0.002	0.012	U
Blank		Silver	<0.0004	0.0004	0.002	U
Sample		Silver	<0.0004	0.0004	0.002	U
Blank		Sodium	0.769	0.028	0.1	
Sample		Sodium	0.997	0.028	0.1	
Blank		Thallium	<0.002	0.002	0.008	U
Sample		Thallium	<0.002	0.002	0.008	U
Blank		Uranium	<0.0000264	0.0000264	0.00008	U
Sample		Uranium	<0.0000264	0.0000264	0.00008	U
Blank		Vanadium	<0.0004	0.0004	0.002	U
Sample		Vanadium	<0.0004	0.0004	0.002	U
Blank		Zinc	0.00462	0.0016	0.008	J
Sample		Zinc	0.0181	0.0016	0.008	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a
Blank	27-Apr-23	Aluminum	0.216	0.0272	0.08	
Sample		Aluminum	0.301	0.0272	0.08	
Blank		Antimony	0.00167	0.00132	0.008	JB
Sample		Antimony	0.00224	0.00132	0.008	JB
Blank		Arsenic	0.00277	0.002	0.012	JB
Sample		Arsenic	<0.002	0.002	0.012	U
Blank		Barium	0.00267	0.0004	0.002	
Sample		Barium	0.00477	0.0004	0.002	
Blank		Beryllium	<0.0004	0.0004	0.002	U
Sample		Beryllium	<0.0004	0.0004	0.002	U
Blank		Cadmium	<0.0004	0.0004	0.002	U
Sample		Cadmium	<0.0004	0.0004	0.002	U
Blank		Calcium	1.36	0.032	0.1	
Sample		Calcium	1.64	0.032	0.1	
Blank		Chromium	0.00328	0.0006	0.004	J
Sample		Chromium	0.00311	0.0006	0.004	J
Blank		Cobalt	<0.0006	0.0006	0.002	U
Sample		Cobalt	<0.0006	0.0006	0.002	U
Blank		Copper	0.00529	0.0012	0.008	J
Sample		Copper	0.012	0.0012	0.008	
Blank		Iron	0.0398	0.032	0.1	J
Sample		Iron	0.144	0.032	0.1	
Blank		Lead	0.00242	0.00132	0.008	JB
Sample		Lead	0.00326	0.00132	0.008	JB
Blank		Magnesium	0.335	0.034	0.12	
Sample		Magnesium	0.361	0.034	0.12	
Blank		Manganese	0.000947	0.0008	0.004	J
Sample		Manganese	0.00369	0.0008	0.004	J
Blank		Nickel	0.00106	0.0006	0.002	J
Sample		Nickel	0.00116	0.0006	0.002	J
Blank		Potassium	0.564	0.0256	0.1	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a	
Sample	27-Apr-23	Potassium	0.55	0.0256	0.1		
Blank		Selenium	<0.002	0.002	0.012	U	
Sample		Selenium	0.00314	0.002	0.012	J	
Blank		Silver	<0.0004	0.0004	0.002	U	
Sample		Silver	<0.0004	0.0004	0.002	U	
Blank		Sodium	20.5	0.028	0.1		
Sample		Sodium	19.3	0.028	0.1		
Blank		Thallium	<0.002	0.002	0.008	U	
Sample		Thallium	<0.002	0.002	0.008	U	
Blank		Uranium	0.0000592	0.0000264	0.00008	J	
Sample		Uranium	0.0000288	0.0000264	0.00008	J	
Blank		Vanadium	<0.0004	0.0004	0.002	U	
Sample		Vanadium	<0.0004	0.0004	0.002	U	
Blank		Zinc	0.0091	0.0016	0.008		
Sample		Zinc	0.0139	0.0016	0.008		
Blank		19-Jul-23	Aluminum	0.207	0.0272	0.08	
Sample			Aluminum	0.0371	0.0272	0.08	J
Blank			Antimony	0.00627	0.00132	0.008	J
Sample	Antimony		<0.00132	0.00132	0.008	U	
Blank	Arsenic		<0.002	0.002	0.012	U	
Sample	Arsenic		<0.002	0.002	0.012	U	
Blank	Barium		0.00381	0.0004	0.002		
Sample	Barium		0.000636	0.0004	0.002	J	
Blank	Beryllium		<0.0004	0.0004	0.002	U	
Sample	Beryllium		<0.0004	0.0004	0.002	U	
Blank	Cadmium		<0.0004	0.0004	0.002	U	
Sample	Cadmium		<0.0004	0.0004	0.002	U	
Blank	Calcium		0.988	0.032	0.1		
Sample	Calcium		0.295	0.032	0.1		
Blank	Chromium		0.00142	0.0006	0.004	J	
Sample	Chromium		0.000971	0.0006	0.004	J	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a
Blank	19-Jul-23	Cobalt	0.000604	0.0006	0.002	J
Sample		Cobalt	<0.0006	0.0006	0.002	U
Blank		Copper	0.00578	0.0012	0.008	JB
Sample		Copper	0.00257	0.0012	0.008	JB
Blank		Iron	0.17	0.032	0.1	
Sample		Iron	<0.032	0.032	0.1	U
Blank		Lead	0.00176	0.00132	0.008	J
Sample		Lead	<0.00132	0.00132	0.008	U
Blank		Magnesium	0.187	0.034	0.12	
Sample		Magnesium	0.0721	0.034	0.12	J
Blank		Manganese	0.00502	0.0008	0.004	
Sample		Manganese	<0.0008	0.0008	0.004	U
Blank		Nickel	0.000742	0.0006	0.002	J
Sample		Nickel	<0.0006	0.0006	0.002	U
Blank		Potassium	0.403	0.0256	0.1	B
Sample		Potassium	0.308	0.0256	0.1	B
Blank		Selenium	0.00598	0.002	0.012	JB
Sample		Selenium	0.00834	0.002	0.012	JB
Blank		Silver	<0.0004	0.0004	0.002	U
Sample		Silver	<0.0004	0.0004	0.002	U
Blank		Sodium	10.4	0.028	0.1	
Sample		Sodium	7.96	0.028	0.1	
Blank		Thallium	<0.002	0.002	0.008	U
Sample		Thallium	<0.002	0.002	0.008	U
Blank		Uranium	0.0000416	0.0000264	0.00008	J
Sample		Uranium	<0.0000264	0.0000264	0.00008	U
Blank		Vanadium	<0.0004	0.0004	0.002	U

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (mg/sa)	MDL (mg/sa)	PQL (mg/sa)	Laboratory Data Qualifiers ^a
Sample		Vanadium	<0.0004	0.0004	0.002	U
Blank		Zinc	0.00966	0.0016	0.008	B
Sample		Zinc	0.00385	0.0016	0.008	JB

^a Blank cells indicate that the lab did not qualify the data.

MDL = method detection limit; the minimum concentration or activity that can be measured and reported with 99 percent confidence that the analyte is greater than zero; analyte is matrix-specific

PQL = practical quantitation limit; the lowest concentration of analytes in a sample that can be determined reliably within specified limits of precision and accuracy by that indicated method under routine laboratory operating conditions

Laboratory Data Qualifier

B = The analyte was detected in the blank.

J = An estimated value, the analyte concentration was above the effective MDL and below the effective PQL.

U = The analyte was absent or below the method detection limit.

Table C-2. Ambient air radiological analysis, fiscal year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a
Blank	7-Dec-22	Actinium-228	-53.9	42.9	16.7	35.5	U
Sample		Actinium-228	-31.2	40.5	14.8	31.6	U
Blank		Alpha, gross	2.6	3.52	2.7	5.83	U
Sample		Alpha, gross	4.62	3.51	2.58	5.6	U
Blank		Americium-241	2.32	4.44	3.95	8.25	U
Sample		Americium-241	0.113	4.7	3.93	8.16	U
Blank		Beryllium-7	21.2	39.5	33.9	71.6	U
Sample		Beryllium-7	236	74.6	28.6	60.6	
Blank		Beta, gross	2.91	5.38	4.45	9.13	U
Sample		Beta, gross	19	5.91	4.54	9.31	
Blank		Bismuth-212	26.2	69.3	58.1	123	U
Sample		Bismuth-212	27.8	83.3	50.9	108	U
Blank		Bismuth-214	-28.1	21.6	9.41	19.7	U
Sample		Bismuth-214	1.54	20.2	6.63	14.1	U
Blank		Cesium-137	3.97	5.01	4.14	8.8	U
Sample		Cesium-137	3.98	4.45	3.65	7.76	U
Blank		Cobalt-60	1.17	5.2	3.95	8.69	U
Sample		Cobalt-60	-5.77	7.08	3.49	7.68	U
Blank		Lead-212	7.6	16.1	6.78	14	U
Sample		Lead-212	11.4	11.9	4.57	9.55	X
Blank		Lead-214	-4.9	16.2	9.11	18.9	U
Sample		Lead-214	-1.97	15.8	8.15	16.9	U
Blank		Neptunium-237	10.5	12.1	6.98	14.6	U
Sample		Neptunium-237	1.05	6.62	5.79	12.1	U
Blank		Potassium-40	10.5	114	36.6	81.1	U
Sample		Potassium-40	-93.5	96.1	49.6	106	U
Blank		Radium-223	-5.35	79.7	63.4	133	U
Sample		Radium-223	-10.2	60.5	51.9	109	U
Blank		Radium-224	-45.5	111	59.6	124	U
Sample		Radium-224	53.3	130	49	102	U

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a	
Blank	7-Dec-22	Radium-226	-203	168	79.9	165	U	
Sample		Radium-226	34.2	167	56.3	117	U	
Blank		Radium-228	-53.9	42.9	16.7	35.5	U	
Sample		Radium-228	-31.2	40.5	14.8	31.6	U	
Blank		Sodium-22	-2.61	6.43	4.38	9.54	U	
Sample		Sodium-22	-0.837	4.54	3.82	8.33	U	
Blank		Thorium-227	8.55	30.4	25	52.2	U	
Sample		Thorium-227	-27	38.1	22	45.8	U	
Blank		Thorium-231	5.55	62.2	24	49.9	U	
Sample		Thorium-231	5.41	59.7	24.3	50.2	U	
Blank		Thorium-234	-80.8	106	64.2	132	U	
Sample		Thorium-234	-71.3	97.7	49.8	103	U	
Blank		Uranium-235	-20.3	35.2	18.9	39.2	U	
Sample		Uranium-235	12.2	40.3	15.6	32.3	U	
Blank		Uranium-238	-80.8	106	64.2	132	U	
Sample		Uranium-238	-71.3	97.7	49.8	103	U	
Blank		11-Jan-23	Actinium-228	3.02	48.6	12.6	27.1	U
Sample			Actinium-228	-10.2	27.4	13.6	28.5	U
Blank			Alpha, gross	1.26	2.78	2.21	4.89	U
Sample			Alpha, gross	1.09	2.68	2.15	4.77	U
Blank	Americium-241		7.98	31.1	27.1	56.2	U	
Sample	Americium-241		-5.94	6.7	3.06	6.31	U	
Blank	Beryllium-7		-1.79	36.6	31.3	65.6	U	
Sample	Beryllium-7		280	67.6	23.5	49.1		
Blank	Beta, gross		3.82	5.91	4.88	9.98	U	
Sample	Beta, gross		26.4	6.14	4.5	9.22		
Blank	Bismuth-212		49.1	110	57.2	120	U	
Sample	Bismuth-212		-7.11	96.5	43.4	91	U	
Blank	Bismuth-214		12.4	24.5	7.84	16.4	U	
Sample	Bismuth-214		3.64	19.1	8.05	16.6	U	
Blank	Cesium-137		4.09	7.03	3.71	7.83	U	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a
Sample	11-Jan-23	Cesium-137	1.47	3.37	2.89	6.08	U
Blank		Cobalt-60	0.861	4.92	4.23	9.12	U
Sample		Cobalt-60	1.26	3.36	2.8	6.05	U
Blank		Lead-212	20.5	24	7.57	20.5	U
Sample		Lead-212	8.55	14.8	6.61	13.5	U
Blank		Lead-214	9.48	29.7	9.39	19.4	U
Sample		Lead-214	-6.33	16.9	6.98	14.4	U
Blank		Neptunium-237	7.35	9.56	7.42	15.4	U
Sample		Neptunium-237	1.27	6.02	4.91	10.2	U
Blank		Potassium-40	16.5	127	35.4	77.4	U
Sample		Potassium-40	-95.7	117	54.9	114	U
Blank		Radium-223	-33.5	88	67.4	140	U
Sample		Radium-223	-19.1	66.4	52.5	109	U
Blank		Radium-224	3.52	87.7	65.6	136	U
Sample		Radium-224	124	82.3	41.9	86.7	X
Blank		Radium-226	-126	172	95.2	195	U
Sample		Radium-226	-121	145	65	133	U
Blank		Radium-228	3.02	48.6	12.6	27.1	U
Sample		Radium-228	-10.2	27.4	13.6	28.5	U
Blank		Sodium-22	0.817	4.19	3.63	7.89	U
Sample		Sodium-22	-0.301	3.49	2.81	6.06	U
Blank		Thorium-227	24	47.3	27.6	57.1	U
Sample		Thorium-227	0.338	23.8	19.6	40.4	U
Blank		Thorium-231	-6.65	54.6	46.6	96.2	U
Sample		Thorium-231	14.4	47	18.3	37.6	U
Blank		Thorium-234	599	777	240	599	U
Sample		Thorium-234	17.9	104	40.9	83.8	U
Blank		Uranium-235	36.4	56.3	22.5	46.2	U
Sample		Uranium-235	-9.14	34.4	15	30.7	U
Blank		Uranium-238	599	777	240	599	U
Sample		Uranium-238	17.9	104	40.9	83.8	U

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a
Blank	27-Apr-23	Actinium-228	-37.2	42.5	17.6	36.7	U
Sample		Actinium-228	-54.4	43.6	18.5	38.5	U
Blank		Alpha, gross	5.43	6.84	5.3	11.4	U
Sample		Alpha, gross	8.92	6.18	4.56	9.85	U
Blank		Americium-241	-0.129	26.1	22.9	47	U
Sample		Americium-241	-3.67	28.8	21.8	44.7	U
Blank		Beryllium-7	7.26	39.1	33.7	70.1	U
Sample		Beryllium-7	245	90.5	36.8	76.4	
Blank		Beta, gross	17.4	4.82	3.51	7.26	
Sample		Beta, gross	23.1	5.15	3.68	7.6	
Blank		Bismuth-212	106	79.5	57.2	120	U
Sample		Bismuth-212	17.5	122	51.4	108	U
Blank		Bismuth-214	14.3	24.2	9.04	18.7	U
Sample		Bismuth-214	-7.58	19.6	10.5	21.6	U
Blank		Cesium-137	3.1	4.87	3.79	7.95	U
Sample		Cesium-137	-2.34	5.22	4.01	8.38	U
Blank		Cobalt-60	-0.607	4.47	3.72	8.01	U
Sample		Cobalt-60	-2.66	4.84	3.65	7.86	U
Blank		Lead-212	-20.1	17.6	7.93	16.2	U
Sample		Lead-212	-1.97	13.4	7.84	16	U
Blank		Lead-214	3.5	22.7	8.52	17.6	U
Sample		Lead-214	13	25.1	10.2	21	U
Blank		Neptunium-237	7.48	8.84	6.92	14.3	U
Sample		Neptunium-237	-0.602	9.01	7.61	15.7	U
Blank		Potassium-40	-85.5	121	51.6	109	U
Sample		Potassium-40	-78.2	123	72.3	150	U
Blank		Radium-223	21.2	86.6	70.9	146	U
Sample		Radium-223	-118	143	75.6	156	U
Blank		Radium-224	-546	287	66.7	137	U
Sample		Radium-224	-226	137	70.6	145	U
Blank	Radium-226	118	229	60.9	126	U	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a	
Sample	27-Apr-23	Radium-226	-105	216	126	256	U	
Blank		Radium-228	-37.2	42.5	17.6	36.7	U	
Sample		Radium-228	-54.4	43.6	18.5	38.5	U	
Blank		Sodium-22	-0.983	4.16	3.43	7.4	U	
Sample		Sodium-22	0.607	4.54	3.79	8.13	U	
Blank		Thorium-227	-10	32.4	26.1	53.8	U	
Sample		Thorium-227	-18.6	37.7	27.5	56.7	U	
Blank		Thorium-231	-53	94.8	49.5	101	U	
Sample		Thorium-231	58.9	144	47.3	96.8	U	
Blank		Thorium-234	-156	448	227	464	U	
Sample		Thorium-234	2.69	594	172	353	U	
Blank		Uranium-235	34.9	53.8	19.9	40.8	U	
Sample		Uranium-235	-31.8	57.6	25.3	51.6	U	
Blank		Uranium-238	-156	448	227	464	U	
Sample		Uranium-238	2.69	594	172	353	U	
Blank		19-Jul-23	Actinium-228	-18.5	26	12.9	26.7	U
Sample			Actinium-228	11.4	31.3	13	27.3	U
Blank			Alpha, gross	3.1	4.6	3.28	7.3	U
Sample	Alpha, gross		4.95	5.08	3.83	8.44	U	
Blank	Americium-241		-1.72	21.9	17.3	35.5	U	
Sample	Americium-241		-19.5	20.5	8.4	17.3	U	
Blank	Beryllium-7		321	67.9	26.9	55.4		
Sample	Beryllium-7		-28.6	35.6	25.7	53.6	U	
Blank	Beta, gross		49.6	6.49	3.86	7.97		
Sample	Beta, gross		71.7	6.62	3.14	6.53		
Blank	Bismuth-212		165	82	36.9	76.7	X	
Sample	Bismuth-212		111	55.8	41.5	87.3	X	
Blank	Bismuth-214		-9.78	14.7	7.62	15.6	U	
Sample	Bismuth-214		9.35	15.4	6.19	12.9	U	
Blank	Cesium-137		-2.19	6.2	3.16	6.54	U	
Sample	Cesium-137		0.846	3.93	3.3	6.91	U	

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a
Blank	19-Jul-23	Cobalt-60	0.369	3.46	2.95	6.21	U
Sample		Cobalt-60	0.0895	3.8	3.15	6.76	U
Blank		Lead-212	2.4	12.3	6.34	12.9	U
Sample		Lead-212	5.12	12.2	5.87	12	U
Blank		Lead-214	-8.17	15.1	7.29	14.9	U
Sample		Lead-214	8.62	15.2	7.06	14.6	U
Blank		Neptunium-237	1.42	6.51	5.39	11.1	U
Sample		Neptunium-237	-7.33	12.1	5.61	11.6	U
Blank		Potassium-40	-100	115	43.4	90	U
Sample		Potassium-40	-16.9	87.3	43.8	92.4	U
Blank		Radium-223	69.5	71.2	54.4	112	U
Sample		Radium-223	14.9	63.1	52.8	109	U
Blank		Radium-224	13.8	107	51.8	106	U
Sample		Radium-224	60.8	84	50.3	104	U
Blank		Radium-226	-31.5	138	71.9	146	U
Sample		Radium-226	82.5	180	50.9	105	U
Blank		Radium-228	-18.5	26	12.9	26.7	U
Sample		Radium-228	11.4	31.3	13	27.3	U
Blank		Sodium-22	1.07	4.03	3	6.31	U
Sample		Sodium-22	1.29	3.69	2.78	6	U
Blank		Thorium-227	-2.18	26.3	19.7	40.5	U
Sample		Thorium-227	-1.38	25.9	21.7	44.8	U
Blank		Thorium-231	-52.5	86	36.6	74.9	U
Sample		Thorium-231	-15.6	63.2	32.5	66.6	U
Blank		Thorium-234	106	413	162	330	U
Sample		Thorium-234	-44.2	170	108	221	U
Blank		Uranium-235	13.9	40.2	16.8	34.3	U

Appendix C. Ambient Air Surveillance Results in Fiscal Year 2023

Sample Type	Sample Date	Analyte	Result (pCi/sa)	Error (pCi/sa)	Lc (pCi/sa)	MDA (pCi/sa)	Laboratory Data Qualifiers ^a
Sample		Uranium-235	-7.46	32.7	17.6	36.1	U
Blank		Uranium-238	106	413	162	330	U
Sample		Uranium-238	-44.2	170	108	221	U

Lc = critical level

MDA = minimal detectable activity or minimum measured activity in a sample required to ensure a 95 percent probability that the measured activity is accurately quantified above the critical level

Laboratory Data Qualifier

U = The analyte was absent or below the method detection limit.

X = The data was rejected due to the peak not meeting identification criteria.

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Appendix D. Stormwater Sampling Requirements and Results in 2023



Bluet damselfly (*Enallagma* sp.)

Table D-1. MSGP stormwater sampling results, 2023

Sampling Point	Sample Date	Analyte	Result (mg/L)	MDL (mg/L)	PQL (mg/L)	Sample Preparation
SWSP-41B-1	9-Aug-2023	Chemical oxygen demand	126	8.95	20	EPA 410.4
		Solids, total suspended	254	22.8	100	SM 2540 D
SWSP-50	9-Aug-2023	Chemical oxygen demand	21.2	8.95	20	EPA 410.4
		Solids, total suspended	437	3.8	16.7	SM 2540 D
SWSP-52	9-Aug-2023	Arsenic	0.0126	0.002	0.005	EPA 200.8
		Cadmium	< 0.0003	0.0003	0.001	EPA 200.8
		Lead	0.000696	0.0005	0.002	EPA 200.8
		Mercury	< 0.000067	0.000067	0.0002	EPA 245.1
		Selenium	< 0.0015	0.0015	0.005	EPA 200.8
		Silver	< 0.0003	0.0003	0.001	EPA 200.8
		Cyanide, total	0.00553	0.00167	0.005	EPA 335.4
		Ammonia	3.51	0.085	0.25	EPA 350.1
		Chemical oxygen demand	67.7	8.95	20	EPA 410.4
SWSP-50	12-Sep-2023	Chemical oxygen demand	37.2	8.95	20	EPA 410.4
		Solids, total suspended	418	2.85	12.5	SM 2540 D
SWSP-05	13-Sep-2023	Chemical oxygen demand	164	8.95	20	EPA 410.4
		Solids, total suspended	40.5	2.85	12.5	SM 2540 D

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Sample Date	Analyte	Result (mg/L)	MDL (mg/L)	PQL (mg/L)	Sample Preparation
SWSP-41B-1	13-Sep-2023	Chemical oxygen demand	47.8	8.95	20	EPA 410.4
		Solids, total suspended	371	22.8	100	SM 2540 D
SWSP-42	13-Sep-2023	Chemical oxygen demand	136	8.95	20	EPA 410.4
		Solids, total suspended	1,730	22.8	100	SM 2540 D
SWSP-57	13-Sep-2023	Chemical oxygen demand	136	8.95	20	EPA 410.4
		Solids, total suspended	598	10.4	45.5	SM 2540 D
SWSP-08	14-Sep-2023	Chemical oxygen demand	100	8.95	20	EPA 410.4
		Solids, total suspended	466	16.3	71.4	SM 2540 D
SWSP-40	14-Sep-2023	Arsenic	< 0.002	0.002	0.005	EPA 200.8
		Cadmium	< 0.0003	0.0003	0.001	EPA 200.8
		Lead	0.000548	0.0005	0.002	EPA 200.8
		Mercury	< 0.000067	0.000067	0.0002	EPA 245.1
		Selenium	< 0.0015	0.0015	0.005	EPA 200.8
		Silver	< 0.0003	0.0003	0.001	EPA 200.8
		Cyanide, total	< 0.00167	0.00167	0.005	EPA 335.4
		Ammonia	0.154	0.017	0.05	EPA 350.1
		Chemical oxygen demand	47.8	8.95	20	EPA 410.4
SWSP-46	14-Sep-2023	Arsenic	< 0.002	0.002	0.005	EPA 200.8
		Cadmium	< 0.003	0.003	0.01	EPA 200.8
		Lead	0.0226	0.005	0.02	EPA 200.8
		Mercury	< 0.000067	0.000067	0.0002	EPA 245.1
		Selenium	< 0.015	0.015	0.05	EPA 200.8
		Selenium	< 0.0015	0.0015	0.005	EPA 200.8
		Silver	< 0.003	0.003	0.01	EPA 200.8
		Cyanide, total	< 0.00167	0.00167	0.005	EPA 335.4
		Ammonia	1.65	0.085	0.25	EPA 350.1
		Chemical oxygen demand	70.5	8.95	20	EPA 410.4
SWSP-47	14-Sep-2023	Arsenic	< 0.002	0.002	0.005	EPA 200.8
		Cadmium	< 0.003	0.003	0.01	EPA 200.8
		Lead	0.087	0.005	0.02	EPA 200.8
		Mercury	< 0.000067	0.000067	0.0002	EPA 245.1
		Selenium	< 0.0015	0.0015	0.005	EPA 200.8
		Selenium	< 0.015	0.015	0.05	EPA 200.8
		Silver	< 0.003	0.003	0.01	EPA 200.8
		Cyanide, total	< 0.00167	0.00167	0.005	EPA 335.4
		Ammonia	5.61	0.17	0.5	EPA 350.1
		Chemical oxygen demand	136	8.95	20	EPA 410.4
SWSP-52	14-Sep-2023	Arsenic	< 0.002	0.002	0.005	EPA 200.8
		Cadmium	< 0.003	0.003	0.01	EPA 200.8
		Lead	0.0113	0.005	0.02	EPA 200.8
		Mercury	< 0.000067	0.000067	0.0002	EPA 245.1
		Selenium	< 0.015	0.015	0.05	EPA 200.8

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Sample Date	Analyte	Result (mg/L)	MDL (mg/L)	PQL (mg/L)	Sample Preparation
SWSP-52	14-Sep-2023	Selenium	< 0.0015	0.0015	0.005	EPA 200.8
		Silver	< 0.003	0.003	0.01	EPA 200.8
		Cyanide, total	< 0.00167	0.00167	0.005	EPA 335.4
		Ammonia	0.596	0.017	0.05	EPA 350.1
		Chemical oxygen demand	36.4	8.95	20	EPA 410.4

MDL = method detection limit; the minimum concentration or activity that can be measured and reported with 99 percent confidence that the analyte is greater than zero; analyte is matrix-specific

PQL = practical quantitation limit; the lowest concentration of analytes in a sample that can be determined reliably within specified limits of precision and accuracy by that indicated method under routine laboratory operating conditions

Analytical Method

EPA 200.8 (EPA 1994)

EPA 245.1 (EPA 1994)

EPA 335.4 (EPA 1993)

EPA 350.1 (EPA 1993)

EPA 410.4 (EPA 1993)

SM 2540 D (Standard Methods Committee of the American Public Health Association, American Water Works Association, and Water Environment Federation 2018)

Appendix D. Stormwater Sampling Requirements and Results in 2023

Table D-2. Polyfluoroalkyl substances screening results for NMED, 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
SWSP-40	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 33.3	33.3	97	ng/L	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 3.08	3.08	7.68	ng/g	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 3.2	3.2	7.52	ng/g	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 167	167	475	ng/L	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 10.8	10.8	30	ng/g	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 679	679	1890	ng/L	EPA 537.1
	Aqueous	14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 1.33	1.33	4.04	ng/L	EPA 537.1
	Solid	14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 2.2	2.2	8	ng/g	EPA 537.1
	Aqueous	14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 1.33	1.33	4.04	ng/L	EPA 537.1
	Solid	14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 3.48	3.48	8	ng/g	EPA 537.1
	Solid	14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 2.64	2.64	8	ng/g	EPA 537.1
	Aqueous	14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 1.33	1.33	4.04	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	< 1.32	1.32	3.56	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	3.25	0.667	1.8	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutanoic acid (PFBA)	< 4.04	4.04	10.1	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorobutanoic acid (PFBA)	< 1.6	1.6	4	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	< 1.32	1.32	3.88	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	<0.< 0.667	0.667	1.96	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorodecanoic acid (PFDA)	< 2.96	2.96	8	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecanoic acid (PFDA)	1.43	0.788	2.02	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorododecanoic acid (PFDOA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorododecanoic acid (PFDOA)	< 1.32	1.32	4	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	0.785	0.667	1.92	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	< 1.48	1.48	3.8	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	1.13	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	< 1.32	1.32	4	ng/g	EPA 537.1
Solid	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	< 1.32	1.32	3.64	ng/g	EPA 537.1	

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
SWSP-40	Aqueous	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	<0.< 0.667	0.667	1.84	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexanoic acid (PFHxA)	4.69	0.808	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorohexanoic acid (PFHxA)	< 1.6	1.6	4	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	< 1.32	1.32	3.84	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	<0.< 0.707	0.707	1.94	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorononanoic acid (PFNA)	< 1.32	1.32	4	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononanoic acid (PFNA)	0.893	0.667	2.02	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	< 1.32	1.32	4	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	4.52	0.808	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	< 1.6	1.6	4	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctanoic acid (PFOA)	2.79	0.808	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctanoic acid (PFOA)	< 1.6	1.6	4	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	< 1.32	1.32	3.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	<0.< 0.667	0.667	1.9	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentanoic acid (PFPeA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoropentanoic acid (PFPeA)	< 1.32	1.32	4	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	<0.< 0.808	0.808	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	< 1.6	1.6	4	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
Solid	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	< 1.32	1.32	4	ng/g	EPA 537.1	
Solid	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	< 1.32	1.32	4	ng/g	EPA 537.1	
Aqueous	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1	
SWSP-46	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 33.3	33.3	97	ng/L	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 4.05	4.05	10.1	ng/g	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 4.21	4.21	9.89	ng/g	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 33.3	33.3	95	ng/L	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 136	136	379	ng/L	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 14.2	14.2	39.5	ng/g	EPA 537.1
	Solid	14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 2.89	2.89	10.5	ng/g	EPA 537.1

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Aqueous	14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 1.33	1.33	4.04	ng/L	EPA 537.1
SWSP-46	Aqueous	14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 1.33	1.33	4.04	ng/L	EPA 537.1
	Solid	14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 4.58	4.58	10.5	ng/g	EPA 537.1
	Solid	14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 3.47	3.47	10.5	ng/g	EPA 537.1
	Aqueous	14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 1.33	1.33	4.04	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	<0.< 0.667	0.667	1.8	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	< 1.74	1.74	4.68	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutanoic acid (PFBA)	74.9	4.04	10.1	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorobutanoic acid (PFBA)	< 2.11	2.11	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	<0.< 0.667	0.667	1.96	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	< 1.74	1.74	5.11	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorodecanoic acid (PFDA)	< 3.89	3.89	10.5	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecanoic acid (PFDA)	2.68	0.788	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorododecanoic acid (PFDOA)	< 1.74	1.74	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorododecanoic acid (PFDOA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	<0.< 0.667	0.667	1.92	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	< 1.95	1.95	5	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	< 1.74	1.74	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	4.78	0.667	2.02	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	<0.< 0.667	0.667	1.84	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	< 1.74	1.74	4.79	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexanoic acid (PFHxA)	10.6	0.808	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorohexanoic acid (PFHxA)	< 2.11	2.11	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	<0.< 0.707	0.707	1.94	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	< 1.74	1.74	5.05	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononanoic acid (PFNA)	3.06	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorononanoic acid (PFNA)	< 1.74	1.74	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	< 1.74	1.74	5.26	ng/g	EPA 537.1

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Solid	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	< 2.11	2.11	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	9.21	0.808	2.02	ng/L	EPA 537.1
SWSP-46	Aqueous	14-Sep-23	Perfluorooctanoic acid (PFOA)	3.25	0.808	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctanoic acid (PFOA)	< 2.11	2.11	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	<0.< 0.667	0.667	1.9	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	< 1.74	1.74	4.95	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluoropentanoic acid (PFPeA)	< 1.74	1.74	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentanoic acid (PFPeA)	33.1	0.667	2.02	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	< 4.04	4.04	10.1	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	< 2.11	2.11	5.26	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	< 1.74	1.74	5.26	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	< 3.33	3.33	10.1	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	<0.< 0.667	0.667	2.02	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	< 1.74	1.74	5.26	ng/g	EPA 537.1
	SWSP-47	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 31.8	31.8	92.6	ng/L
Solid		14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 1.05	1.05	2.63	ng/g	EPA 537.1
Solid		14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 1.1	1.1	2.58	ng/g	EPA 537.1
Aqueous		14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 159	159	453	ng/L	EPA 537.1
Solid		14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 3.68	3.68	10.3	ng/g	EPA 537.1
Aqueous		14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 130	130	362	ng/L	EPA 537.1
Aqueous		14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 1.27	1.27	3.86	ng/L	EPA 537.1
Solid		14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	<0.< 0.753	0.753	2.74	ng/g	EPA 537.1
Solid		14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 1.19	1.19	2.74	ng/g	EPA 537.1
Aqueous		14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 1.27	1.27	3.86	ng/L	EPA 537.1
Aqueous		14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 1.27	1.27	3.86	ng/L	EPA 537.1
Solid		14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	<0.< 0.904	0.904	2.74	ng/g	EPA 537.1
Solid		14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	<0.< 0.452	0.452	1.22	ng/g	EPA 537.1
Aqueous	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	<0.< 0.637	0.637	1.72	ng/L	EPA 537.1	

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Solid	14-Sep-23	Perfluorobutanoic acid (PFBA)	<0.< 0.548	0.548	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutanoic acid (PFBA)	76.7	3.86	9.65	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	<0.< 0.637	0.637	1.87	ng/L	EPA 537.1
SWSP-47	Solid	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	<0.< 0.452	0.452	1.33	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorodecanoic acid (PFDA)	< 1.01	1.01	2.74	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecanoic acid (PFDA)	2.14	0.753	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorododecanoic acid (PFDOA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorododecanoic acid (PFDOA)	<0.< 0.637	0.637	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	<0.< 0.507	0.507	1.3	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	<0.< 0.637	0.637	1.83	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	2.17	0.637	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	<0.< 0.637	0.637	1.76	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	<0.< 0.452	0.452	1.25	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorohexanoic acid (PFHxA)	<0.< 0.548	0.548	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexanoic acid (PFHxA)	6.59	0.772	1.93	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	<0.< 0.675	0.675	1.85	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	<0.< 0.452	0.452	1.32	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorononanoic acid (PFNA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononanoic acid (PFNA)	3.33	0.637	1.93	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	<0.< 0.637	0.637	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	0.947	0.548	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	14.1	0.772	1.93	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctanoic acid (PFOA)	2.06	0.772	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctanoic acid (PFOA)	<0.< 0.548	0.548	1.37	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	<0.< 0.452	0.452	1.29	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	<0.< 0.637	0.637	1.81	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentanoic acid (PFPeA)	22.6	0.637	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoropentanoic acid (PFPeA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	< 3.86	3.86	9.65	ng/L	EPA 537.1

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Solid	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	<0.< 0.548	0.548	1.37	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	< 3.18	3.18	9.65	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	<0.< 0.452	0.452	1.37	ng/g	EPA 537.1
SWSP-47	Aqueous	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	<0.< 0.637	0.637	1.93	ng/L	EPA 537.1
SWSP-52	Solid	9-Aug-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.< 0.611	0.611	1.52	ng/g	EPA 537.1
	Aqueous	9-Aug-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 171	171	497	ng/L	EPA 537.1
	Aqueous	9-Aug-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 171	171	487	ng/L	EPA 537.1
	Solid	9-Aug-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.< 0.635	0.635	1.49	ng/g	EPA 537.1
	Aqueous	9-Aug-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 139	139	388	ng/L	EPA 537.1
	Solid	9-Aug-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 2.13	2.13	5.95	ng/g	EPA 537.1
	Aqueous	9-Aug-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 1.37	1.37	4.14	ng/L	EPA 537.1
	Solid	9-Aug-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	<0.< 0.437	0.437	1.59	ng/g	EPA 537.1
	Aqueous	9-Aug-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 6.84	6.84	20.7	ng/L	EPA 537.1
	Solid	9-Aug-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	<0.< 0.69	0.69	1.59	ng/g	EPA 537.1
	Aqueous	9-Aug-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 1.37	1.37	4.14	ng/L	EPA 537.1
	Solid	9-Aug-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	<0.< 0.524	0.524	1.59	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorobutane sulfonic acid (PFBS)	6.21	0.684	1.84	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorobutane sulfonic acid (PFBS)	<0.< 0.262	0.262	0.71	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorobutanoic acid (PFBA)	185	4.14	10.4	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorobutanoic acid (PFBA)	<0.< 0.317	0.317	0.79	ng/g	EPA 537.1
	Solid	9-Aug-23	Perfluorodecane sulfonic acid (PFDS)	0.932	0.262	0.77	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorodecane sulfonic acid (PFDS)	2.9	0.684	2.01	ng/L	EPA 537.1
	Aqueous	9-Aug-23	Perfluorodecanoic acid (PFDA)	38.2	0.808	2.07	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorodecanoic acid (PFDA)	1.25	0.587	1.59	ng/g	EPA 537.1
	Solid	9-Aug-23	Perfluorododecanoic acid (PFDOA)	2.05	0.262	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorododecanoic acid (PFDOA)	4.53	3.42	10.4	ng/L	EPA 537.1
	Aqueous	9-Aug-23	Perfluoroheptane sulfonic acid (PFHpS)	20	0.684	1.97	ng/L	EPA 537.1

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Solid	9-Aug-23	Perfluoroheptane sulfonic acid (PFHpS)	<0.< 0.294	0.294	0.75	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluoroheptanoic acid (PFHpA)	9	3.42	10.4	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluoroheptanoic acid (PFHpA)	<0.< 0.262	0.262	0.79	ng/g	EPA 537.1
	Solid	9-Aug-23	Perfluorohexane sulfonic acid (PFHxS)	<0.< 0.262	0.262	0.72	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorohexane sulfonic acid (PFHxS)	47.6	0.684	1.89	ng/L	EPA 537.1
SWSP-52	Aqueous	9-Aug-23	Perfluorohexanoic acid (PFHxA)	11.5	0.829	2.07	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorohexanoic acid (PFHxA)	<0.< 0.317	0.317	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorononane sulfonic acid (PFNS)	1.6	0.725	1.99	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorononane sulfonic acid (PFNS)	<0.< 0.262	0.262	0.76	ng/g	EPA 537.1
	Solid	9-Aug-23	Perfluorononanoic acid (PFNA)	<0.< 0.262	0.262	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorononanoic acid (PFNA)	30.9	3.42	10.4	ng/L	EPA 537.1
	Aqueous	9-Aug-23	Perfluorooctane sulfonamide (PFOSA)	2.8	0.684	2.07	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorooctane sulfonamide (PFOSA)	<0.< 0.262	0.262	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorooctane sulfonic acid (PFOS)	2,700	20.7	51.8	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorooctane sulfonic acid (PFOS)	43.3	0.317	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorooctanoic acid (PFOA)	41.6	4.14	10.4	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorooctanoic acid (PFOA)	<0.< 0.317	0.317	0.79	ng/g	EPA 537.1
	Solid	9-Aug-23	Perfluoropentane sulfonic acid (PFPeS)	<0.< 0.262	0.262	0.75	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluoropentane sulfonic acid (PFPeS)	2.6	0.684	1.95	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluoropentanoic acid (PFPeA)	<0.< 0.262	0.262	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluoropentanoic acid (PFPeA)	36.1	3.42	10.4	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorotetradecanoic acid (PFTeDA)	0.693	0.317	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorotetradecanoic acid (PFTeDA)	<4.14	4.14	10.4	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluorotridecanoic acid (PFTrDA)	0.888	0.262	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluorotridecanoic acid (PFTrDA)	<3.42	3.42	10.4	ng/L	EPA 537.1
	Solid	9-Aug-23	Perfluoroundecanoic acid (PFUnDA)	1.52	0.262	0.79	ng/g	EPA 537.1
	Aqueous	9-Aug-23	Perfluoroundecanoic acid (PFUnDA)	13.4	0.684	2.07	ng/L	EPA 537.1
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.67	3.67	9.14	ng/g	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2 FTS)	< 31.9	31.9	92.8	ng/L	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	< 31.9	31.9	90.9	ng/L	EPA 537.1
Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.81	3.81	8.95	ng/g	EPA 537.1	

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Solid	14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 12.8	12.8	35.7	ng/g	EPA 537.1
	Aqueous	14-Sep-23	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)	< 130	130	363	ng/L	EPA 537.1
	Aqueous	14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 1.28	1.28	3.87	ng/L	EPA 537.1
	Solid	14-Sep-23	N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	< 2.62	2.62	9.52	ng/g	EPA 537.1
SWSP-52	Aqueous	14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 1.28	1.28	3.87	ng/L	EPA 537.1
	Solid	14-Sep-23	N-Methylperfluorooctane sulfonamide (NMeFOSA)	< 4.14	4.14	9.52	ng/g	EPA 537.1
	Aqueous	14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 1.28	1.28	3.87	ng/L	EPA 537.1
	Solid	14-Sep-23	N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	< 3.14	3.14	9.52	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	2.92	0.638	1.72	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorobutane sulfonic acid (PFBS)	< 1.57	1.57	4.24	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorobutanoic acid (PFBA)	< 1.9	1.9	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorobutanoic acid (PFBA)	12.3	0.774	1.93	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	1.96	0.638	1.88	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorodecane sulfonic acid (PFDS)	< 1.57	1.57	4.62	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorodecanoic acid (PFDA)	12.7	0.754	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorodecanoic acid (PFDA)	< 3.52	3.52	9.52	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorododecanoic acid (PFDOA)	2.01	0.638	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorododecanoic acid (PFDOA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	< 1.76	1.76	4.52	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptane sulfonic acid (PFHpS)	2.92	0.638	1.84	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	1.99	0.638	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroheptanoic acid (PFHpA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	< 1.57	1.57	4.33	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexane sulfonic acid (PFHxS)	13.4	0.638	1.76	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluorohexanoic acid (PFHxA)	2.01	0.774	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorohexanoic acid (PFHxA)	< 1.9	1.9	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	0.825	0.677	1.86	ng/L	EPA 537.1
Solid	14-Sep-23	Perfluorononane sulfonic acid (PFNS)	< 1.57	1.57	4.57	ng/g	EPA 537.1	

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Matrix	Sample Date	Analyte	Result	MDL (ng/L)	PQL ng/L)	Sample Prep.	Sampling Point
	Aqueous	14-Sep-23	Perfluorononanoic acid (PFNA)	5.27	0.638	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorononanoic acid (PFNA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonamide (PFOSA)	0.977	0.638	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	3.32	1.9	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctane sulfonic acid (PFOS)	534	3.87	9.67	ng/L	EPA 537.1
SWSP-52	Solid	14-Sep-23	Perfluorooctanoic acid (PFOA)	< 1.9	1.9	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorooctanoic acid (PFOA)	6.49	0.774	1.93	ng/L	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	1.24	0.638	1.82	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoropentane sulfonic acid (PFPeS)	< 1.57	1.57	4.48	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoropentanoic acid (PFPeA)	2.57	0.638	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoropentanoic acid (PFPeA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Solid	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	< 1.9	1.9	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotetradecanoic acid (PFTeDA)	<0. < 0.774	0.774	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluorotridecanoic acid (PFTrDA)	<0. < 0.638	0.638	1.93	ng/L	EPA 537.1
	Solid	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	< 1.57	1.57	4.76	ng/g	EPA 537.1
	Aqueous	14-Sep-23	Perfluoroundecanoic acid (PFUnDA)	5.64	0.638	1.93	ng/L	EPA 537.1

MDL = method detection limit; the minimum concentration or activity that can be measured and reported with 99 percent confidence that the analyte is greater than zero; analyte is matrix-specific

PQL = practical quantitation limit; the lowest concentration of analytes in a sample that can be determined reliably within specified limits of precision and accuracy by that indicated method under routine laboratory operating conditions

Appendix D. Stormwater Sampling Requirements and Results in 2023

Table D-3. MS4 Permit sampling results, 2023

Sampling Point	Sample Date	Analyte	Result	MDL	PQL	Sample Preparation	Units
SWSP-02	13-Sep-23	Alpha, gross	4.62	0.487	1.06	pCi/L	EPA 900.0
		Biological oxygen demand	7.75	1	1	mg/L	SM 5210 B
		Beta, gross	9.59	0.465	0.97	pCi/L	EPA 900.0
		Chemical oxygen demand	47.8	8.95	20	mg/L	EPA 410.4
		<i>E. coli</i>	4,352	1	1	MPN/100	SM 9223 B
		Nitrate plus nitrite as N	0.469	0.085	0.25	mg/L	EPA 353.2
		Nitrogen, Kjeldahl	1.64	0.033	0.1	mg/L	EPA 351.2
		Oil and grease	< 1.33	1.33	4.76	mg/L	SM 9223 B
		Phosphorus, total as P	0.368	0.02	0.05	mg/L	EPA 365.4
		Phosphorus, total as P	0.136	0.02	0.05	mg/L	EPA 365.4
		Solids, total dissolved	80	2.38	10	mg/L	SM 2540 C
		Solids, total suspended	86.5	2.85	12.5	mg/L	SM 2540 D
		Total PCB congeners	559		108	pg/L	EPA 1668 C
SWSP-05	13-Sep-23	Alpha, gross	2.18	0.352	0.965	pCi/L	EPA 900.0
		Biological oxygen demand	25.9	1	1	mg/L	SM 5210 B
		Beta, gross	12.1	0.304	0.63	pCi/L	EPA 900.0
		Chemical oxygen demand	168	8.95	20	mg/L	EPA 410.4
		<i>E. coli</i>	2,755	1	1	MPN/100	SM 9223 B
		Nitrate plus nitrite as N	1.04	0.17	0.5	mg/L	EPA 353.2
		Nitrogen, Kjeldahl	3.14	0.033	0.1	mg/L	EPA 351.2
		Oil and grease	1.36	1.27	4.55	mg/L	SM 9223 B
		Phosphorus, total as P	0.104	0.02	0.05	mg/L	EPA 365.4
		Phosphorus, total as P	0.173	0.02	0.05	mg/L	EPA 365.4
		Solids, total dissolved	182	2.38	10	mg/L	SM 2540 C
		Solids, total suspended	38.5	2.85	12.5	mg/L	SM 2540 D
		Total PCB congeners	6,310		117	pg/L	EPA 1668 C
SWSP-35	13-Sep-23	Alpha, gross	4.26	0.343	0.979	pCi/L	EPA 900.0
		Biological oxygen demand	22.8	1	1	mg/L	SM 5210 B
		Beta, gross	23.1	0.369	0.759	pCi/L	EPA 900.0
		Chemical oxygen demand	134	8.95	20	mg/L	EPA 410.4

Appendix D. Stormwater Sampling Requirements and Results in 2023

Sampling Point	Sample Date	Analyte	Result	MDL	PQL	Sample Preparation	Units
SWSP-35	13-Sep-23	<i>E. coli</i>	1,650	1	1	MPN/100	SM 9223 B
		Nitrate plus nitrite as N	1.34	0.085	0.25	mg/L	EPA 353.2
		Nitrogen, Kjeldahl	4.29	0.033	0.1	mg/L	EPA 351.2
		Oil and grease	1.78	1.39	4.95	mg/L	SM 9223 B
		Phosphorus, total as P	0.336	0.02	0.05	mg/L	EPA 365.4
		Phosphorus, total as P	0.148	0.02	0.05	mg/L	EPA 365.4
		Solids, total dissolved	118	2.38	10	mg/L	SM 2540 C
		Solids, total suspended	126	2.85	12.5	mg/L	SM 2540 D
		Total PCB congeners	,1370		117	pg/L	EPA 1668 C
SWSP-36	13-Sep-23	Alpha, gross	1.07	0.361	0.961	pCi/L	EPA 900.0
		Beta, gross	7.18	0.352	0.723	pCi/L	EPA 900.0
		Chemical oxygen demand	125	8.95	20	mg/L	EPA 410.4
		<i>E. coli</i>	14,136	1	1	MPN/100	SM 9223 B
		Nitrate plus nitrite as N	0.357	0.085	0.25	mg/L	EPA 353.2
		Nitrogen, Kjeldahl	2.8	0.033	0.1	mg/L	EPA 351.2
		Oil and grease	< 1.37	1.37	4.9	mg/L	SM 9223 B
		Phosphorus, total as P	0.034	0.02	0.05	mg/L	EPA 365.4
		Phosphorus, total as P	0.086	0.02	0.05	mg/L	EPA 365.4
		Solids, total dissolved	100	2.38	10	mg/L	SM 2540 C
		Solids, total suspended	63.5	2.85	12.5	mg/L	SM 2540 D
		Total PCB congeners	1,920		108	pg/L	EPA 1668 C

E. coli = *Escherichia coli*

MDL = method detection limit; the minimum concentration or activity that can be measured and reported with 99 percent confidence that the analyte is greater than zero; analyte is matrix-specific

MPN = most probable number

MS4 = Municipal Separate Storm Sewer System

N = nitrogen

P = phosphorus

PCB = polychlorinated biphenyl

PQL = practical quantitation limit; the lowest concentration of analytes in a sample that can be determined reliably within specified limits of precision and accuracy by that indicated method under routine laboratory operating conditions

Appendix D. Stormwater Sampling Requirements and Results in 2023

Analytical Method

EPA 351.2 (EPA 1993)

EPA 353.2 (EPA 1993)

EPA 365.4 (EPA 1974)

EPA 410.4 (EPA 1993)

EPA 900.0 (EPA 1980)

EPA 1668 C (EPA 2010)

SM 2540 C (Standard Methods Committee of the American Public Health Association, American Water Works Association, and Water Environment Federation 2018)

SM 2540 D (Standard Methods Committee of the American Public Health Association, American Water Works Association, and Water Environment Federation 2018)

SM 5210 B (Standard Methods Committee of the American Public Health Association, 5-Day Biochemical Oxygen Demand Test 2018)

SM 9223 B (Standard Methods Committee of the American Public Health Association, Enzyme Substrate Coliform Test: 9223B Enzyme Substrate Test 2018)

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Appendix E. Sanitary Outfalls Monitoring Results in 2023



Giant vinegarroon (*Mastigoproctus giganteus*)

Table E-1. Inorganic results for permitted sanitary outfalls, second quarter of calendar year 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	11-Apr-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	11-Apr-2023	Ammonia		0.017	U	EPA 350.1
CINT	2238A	11-Apr-2023	Arsenic	0.00823	0.002		EPA 200.8
CINT	2238A	11-Apr-2023	Boron	0.0605	0.0052		EPA 200.8
CINT	2238A	11-Apr-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	11-Apr-2023	Chemical oxygen demand		8.95	U	EPA 410.4
CINT	2238A	11-Apr-2023	Chromium	0.00311	0.003	J	EPA 200.8
CINT	2238A	11-Apr-2023	Copper	0.00148	0.0003	J	EPA 200.8
CINT	2238A	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	11-Apr-2023	Fluoride	1.31	0.033		EPA 300.0
CINT	2238A	11-Apr-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	11-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	11-Apr-2023	Molybdenum	0.00351	0.0002		EPA 200.8
CINT	2238A	11-Apr-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	11-Apr-2023	Phosphorus, Total as P	0.065	0.02	B	EPA 365.4
CINT	2238A	11-Apr-2023	Selenium	0.00259	0.0015	J	EPA 200.8
CINT	2238A	11-Apr-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	11-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	11-Apr-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	12-Apr-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	12-Apr-2023	Ammonia		0.017	U	EPA 350.1
CINT	2238A	12-Apr-2023	Arsenic	0.0054	0.002		EPA 200.8
CINT	2238A	12-Apr-2023	Boron	0.0342	0.0052		EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	12-Apr-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	12-Apr-2023	Chemical oxygen demand	55	8.95		EPA 410.4
CINT	2238A	12-Apr-2023	Chromium	0.00323	0.003	J	EPA 200.8
CINT	2238A	12-Apr-2023	Copper	0.00133	0.0003	J	EPA 200.8
CINT	2238A	12-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	12-Apr-2023	Fluoride	1.75	0.033		EPA 300.0
CINT	2238A	12-Apr-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	12-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	12-Apr-2023	Molybdenum	0.00374	0.0002		EPA 200.8
CINT	2238A	12-Apr-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	12-Apr-2023	Phosphorus, Total as P	0.103	0.02	B	EPA 365.4
CINT	2238A	12-Apr-2023	Selenium	0.00248	0.0015	J	EPA 200.8
CINT	2238A	12-Apr-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	12-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	12-Apr-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	13-Apr-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	13-Apr-2023	Ammonia		0.017	U	EPA 350.1
CINT	2238A	13-Apr-2023	Arsenic	0.00988	0.002		EPA 200.8
CINT	2238A	13-Apr-2023	Boron	0.0784	0.0052		EPA 200.8
CINT	2238A	13-Apr-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	13-Apr-2023	Chemical oxygen demand	28.9	8.95		EPA 410.4
CINT	2238A	13-Apr-2023	Chromium		0.003	U	EPA 200.8
CINT	2238A	13-Apr-2023	Copper	0.00257	0.0003		EPA 200.8
CINT	2238A	13-Apr-2023	Fluoride	0.839	0.033		EPA 300.0
CINT	2238A	13-Apr-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	13-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	13-Apr-2023	Molybdenum	0.00407	0.0002		EPA 200.8
CINT	2238A	13-Apr-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	13-Apr-2023	Phosphorus, Total as P	0.096	0.02	B	EPA 365.4
CINT	2238A	13-Apr-2023	Selenium	0.00263	0.0015	J	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	13-Apr-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	13-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	13-Apr-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	14-Apr-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	14-Apr-2023	Ammonia		0.017	U	EPA 350.1
CINT	2238A	14-Apr-2023	Arsenic	0.00529	0.002		EPA 200.8
CINT	2238A	14-Apr-2023	Boron	0.0368	0.0052		EPA 200.8
CINT	2238A	14-Apr-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	14-Apr-2023	Chemical oxygen demand		8.95	U	EPA 410.4
CINT	2238A	14-Apr-2023	Chromium		0.003	U	EPA 200.8
CINT	2238A	14-Apr-2023	Copper	0.000777	0.0003	J	EPA 200.8
CINT	2238A	14-Apr-2023	Fluoride	1.5	0.165		EPA 300.0
CINT	2238A	14-Apr-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	14-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	14-Apr-2023	Molybdenum	0.00403	0.0002		EPA 200.8
CINT	2238A	14-Apr-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	14-Apr-2023	Phosphorus, Total as P	0.089	0.02	B	EPA 365.4
CINT	2238A	14-Apr-2023	Selenium	0.00249	0.0015	J	EPA 200.8
CINT	2238A	14-Apr-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	14-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	14-Apr-2023	Zinc		0.0033	U	EPA 200.8
WW001	2069A	11-Apr-2023	Aluminum	0.0579	0.0193		EPA 200.8
WW001	2069A	11-Apr-2023	Ammonia	9.39	0.17	B	EPA 350.1
WW001	2069A	11-Apr-2023	Arsenic	0.00351	0.002	J	EPA 200.8
WW001	2069A	11-Apr-2023	Boron	0.048	0.0052		EPA 200.8
WW001	2069A	11-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	11-Apr-2023	Chemical oxygen demand	106	8.95		EPA 410.4
WW001	2069A	11-Apr-2023	Chromium	0.00384	0.003	J	EPA 200.8
WW001	2069A	11-Apr-2023	Copper	0.0251	0.0003		EPA 200.8
WW001	2069A	11-Apr-2023	Fluoride	3.32	0.033		EPA 300.0

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	11-Apr-2023	Lead	0.00166	0.0005	J	EPA 200.8
WW001	2069A	11-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	11-Apr-2023	Molybdenum	0.0112	0.0002		EPA 200.8
WW001	2069A	11-Apr-2023	Nickel	0.00126	0.0006	J	EPA 200.8
WW001	2069A	11-Apr-2023	Phosphorus, Total as P	2.28	0.08	B	EPA 365.4
WW001	2069A	11-Apr-2023	Selenium	0.00289	0.0015	J	EPA 200.8
WW001	2069A	11-Apr-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	11-Apr-2023	Solids, total suspended	38.3	1.9		SM 2540D
WW001	2069A	11-Apr-2023	Zinc	0.054	0.0033		EPA 200.8
WW001	2069A	12-Apr-2023	Aluminum	0.0936	0.0193		EPA 200.8
WW001	2069A	12-Apr-2023	Ammonia	10.2	0.17	B	EPA 350.1
WW001	2069A	12-Apr-2023	Arsenic	0.00388	0.002	J	EPA 200.8
WW001	2069A	12-Apr-2023	Boron	0.0612	0.0052		EPA 200.8
WW001	2069A	12-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	12-Apr-2023	Chemical oxygen demand	64.6	8.95		EPA 410.4
WW001	2069A	12-Apr-2023	Chromium	0.00428	0.003	J	EPA 200.8
WW001	2069A	12-Apr-2023	Copper	0.0316	0.0003		EPA 200.8
WW001	2069A	12-Apr-2023	Fluoride	2.26	0.033		EPA 300.0
WW001	2069A	12-Apr-2023	Lead	0.00578	0.0005		EPA 200.8
WW001	2069A	12-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	12-Apr-2023	Molybdenum	0.0139	0.0002		EPA 200.8
WW001	2069A	12-Apr-2023	Nickel	0.00131	0.0006	J	EPA 200.8
WW001	2069A	12-Apr-2023	Phosphorus, Total as P	3.52	0.08	B	EPA 365.4
WW001	2069A	12-Apr-2023	Selenium	0.00326	0.0015	J	EPA 200.8
WW001	2069A	12-Apr-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	12-Apr-2023	Solids, total suspended	39.4	1.63		SM 2540D
WW001	2069A	12-Apr-2023	Zinc	0.0387	0.0033		EPA 200.8
WW001	2069A	13-Apr-2023	Aluminum	0.105	0.0193		EPA 200.8
WW001	2069A	13-Apr-2023	Ammonia	5.82	0.085	B	EPA 350.1
WW001	2069A	13-Apr-2023	Arsenic	0.00343	0.002	J	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	13-Apr-2023	Boron	0.0504	0.0052		EPA 200.8
WW001	2069A	13-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	13-Apr-2023	Chemical oxygen demand	112	8.95		EPA 410.4
WW001	2069A	13-Apr-2023	Chromium	0.00386	0.003	J	EPA 200.8
WW001	2069A	13-Apr-2023	Copper	0.0327	0.0003		EPA 200.8
WW001	2069A	13-Apr-2023	Fluoride	2.88	0.033		EPA 300.0
WW001	2069A	13-Apr-2023	Lead	0.00643	0.0005		EPA 200.8
WW001	2069A	13-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	13-Apr-2023	Molybdenum	0.0129	0.0002		EPA 200.8
WW001	2069A	13-Apr-2023	Nickel	0.00139	0.0006	J	EPA 200.8
WW001	2069A	13-Apr-2023	Phosphorus, Total as P	6.78	0.08	B	EPA 365.4
WW001	2069A	13-Apr-2023	Selenium	0.00264	0.0015	J	EPA 200.8
WW001	2069A	13-Apr-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	13-Apr-2023	Solids, total suspended	33.2	2.28		SM 2540D
WW001	2069A	13-Apr-2023	Zinc	0.0384	0.0033		EPA 200.8
WW001	2069A	14-Apr-2023	Aluminum	0.0844	0.0193		EPA 200.8
WW001	2069A	14-Apr-2023	Ammonia	4.5	0.085	B	EPA 350.1
WW001	2069A	14-Apr-2023	Arsenic	0.00308	0.002	J	EPA 200.8
WW001	2069A	14-Apr-2023	Boron	0.0543	0.0052		EPA 200.8
WW001	2069A	14-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	14-Apr-2023	Chemical oxygen demand	55	8.95		EPA 410.4
WW001	2069A	14-Apr-2023	Chromium	0.00412	0.003	J	EPA 200.8
WW001	2069A	14-Apr-2023	Copper	0.0304	0.0003		EPA 200.8
WW001	2069A	14-Apr-2023	Fluoride	1.3	0.165		EPA 300.0
WW001	2069A	14-Apr-2023	Lead	0.00636	0.0005		EPA 200.8
WW001	2069A	14-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	14-Apr-2023	Molybdenum	0.0138	0.0002		EPA 200.8
WW001	2069A	14-Apr-2023	Nickel	0.00131	0.0006	J	EPA 200.8
WW001	2069A	14-Apr-2023	Phosphorus, Total as P	1.98	0.02	B	EPA 365.4
WW001	2069A	14-Apr-2023	Selenium	0.00284	0.0015	J	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	14-Apr-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	14-Apr-2023	Solids, total suspended	35.1	1.23		SM 2540D
WW001	2069A	14-Apr-2023	Zinc	0.0398	0.0033		EPA 200.8
WW006	2069F	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	11-Apr-2023	Aluminum	0.164	0.0193		EPA 200.8
WW006	2069F	11-Apr-2023	Ammonia	50.7	0.85	B	EPA 350.1
WW006	2069F	11-Apr-2023	Arsenic	0.00448	0.002	J	EPA 200.8
WW006	2069F	11-Apr-2023	Boron	0.171	0.0052		EPA 200.8
WW006	2069F	11-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	11-Apr-2023	Chemical oxygen demand	587	8.95		EPA 410.4
WW006	2069F	11-Apr-2023	Chromium	0.00327	0.003	J	EPA 200.8
WW006	2069F	11-Apr-2023	Copper	0.0613	0.0003		EPA 200.8
WW006	2069F	11-Apr-2023	Cyanide, total	0.00219	0.00167	J	EPA 335.4
WW006	2069F	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	11-Apr-2023	Fluoride	1.24	0.033		EPA 300.0
WW006	2069F	11-Apr-2023	Lead	0.00184	0.0005	J	EPA 200.8
WW006	2069F	11-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	11-Apr-2023	Molybdenum	0.00889	0.0002		EPA 200.8
WW006	2069F	11-Apr-2023	Nickel	0.00284	0.0006		EPA 200.8
WW006	2069F	11-Apr-2023	Phosphorus, Total as P	8.36	0.08	B	EPA 365.4
WW006	2069F	11-Apr-2023	Selenium	0.00332	0.0015	J	EPA 200.8
WW006	2069F	11-Apr-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	11-Apr-2023	Solids, total suspended	152	5.7		SM 2540D
WW006	2069F	11-Apr-2023	Zinc	1.29	0.0033		EPA 200.8
WW006	2069F	12-Apr-2023	Aluminum	0.125	0.0193		EPA 200.8
WW006	2069F	12-Apr-2023	Ammonia	62.5	8.5	B	EPA 350.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	12-Apr-2023	Arsenic	0.00434	0.002	J	EPA 200.8
WW006	2069F	12-Apr-2023	Boron	0.125	0.0052		EPA 200.8
WW006	2069F	12-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	12-Apr-2023	Chemical oxygen demand	257	8.95		EPA 410.4
WW006	2069F	12-Apr-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	12-Apr-2023	Copper	0.0424	0.0003		EPA 200.8
WW006	2069F	12-Apr-2023	Cyanide, total	0.002	0.00167	J	EPA 335.4
WW006	2069F	12-Apr-2023	Fluoride	1.19	0.033		EPA 300.0
WW006	2069F	12-Apr-2023	Lead	0.000808	0.0005	J	EPA 200.8
WW006	2069F	12-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	12-Apr-2023	Molybdenum	0.00565	0.0002		EPA 200.8
WW006	2069F	12-Apr-2023	Nickel	0.00205	0.0006		EPA 200.8
WW006	2069F	12-Apr-2023	Phosphorus, Total as P	6.71	0.08	B	EPA 365.4
WW006	2069F	12-Apr-2023	Selenium	0.00355	0.0015	J	EPA 200.8
WW006	2069F	12-Apr-2023	Silver	0.000589	0.0003	J	EPA 200.8
WW006	2069F	12-Apr-2023	Solids, total suspended	116	5.7		SM 2540D
WW006	2069F	12-Apr-2023	Zinc	0.108	0.0033		EPA 200.8
WW006	2069F	13-Apr-2023	Aluminum	0.127	0.0193		EPA 200.8
WW006	2069F	13-Apr-2023	Ammonia	5.25	0.85	B	EPA 350.1
WW006	2069F	13-Apr-2023	Arsenic	0.00492	0.002	J	EPA 200.8
WW006	2069F	13-Apr-2023	Boron	0.36	0.026		EPA 200.8
WW006	2069F	13-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	13-Apr-2023	Chemical oxygen demand	455	8.95		EPA 410.4
WW006	2069F	13-Apr-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	13-Apr-2023	Copper	0.0466	0.0003		EPA 200.8
WW006	2069F	13-Apr-2023	Fluoride	1.1	0.033		EPA 300.0
WW006	2069F	13-Apr-2023	Lead	0.0011	0.0005	J	EPA 200.8
WW006	2069F	13-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	13-Apr-2023	Molybdenum	0.00563	0.0002		EPA 200.8
WW006	2069F	13-Apr-2023	Nickel	0.00215	0.0006		EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	13-Apr-2023	Phosphorus, Total as P	7.7	0.08	B	EPA 365.4
WW006	2069F	13-Apr-2023	Selenium	0.00333	0.0015	J	EPA 200.8
WW006	2069F	13-Apr-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	13-Apr-2023	Solids, total suspended	120	5.7		SM 2540D
WW006	2069F	13-Apr-2023	Zinc	0.546	0.0033		EPA 200.8
WW006	2069F	14-Apr-2023	Aluminum	0.151	0.0193		EPA 200.8
WW006	2069F	14-Apr-2023	Ammonia	5.15	0.85	B	EPA 350.1
WW006	2069F	14-Apr-2023	Arsenic	0.00373	0.002	J	EPA 200.8
WW006	2069F	14-Apr-2023	Boron	0.137	0.0052		EPA 200.8
WW006	2069F	14-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	14-Apr-2023	Chemical oxygen demand	372	8.95		EPA 410.4
WW006	2069F	14-Apr-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	14-Apr-2023	Copper	0.057	0.0003		EPA 200.8
WW006	2069F	14-Apr-2023	Fluoride	1.21	0.165		EPA 300.0
WW006	2069F	14-Apr-2023	Lead	0.00171	0.0005	J	EPA 200.8
WW006	2069F	14-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	14-Apr-2023	Molybdenum	0.00541	0.0002		EPA 200.8
WW006	2069F	14-Apr-2023	Nickel	0.00213	0.0006		EPA 200.8
WW006	2069F	14-Apr-2023	Phosphorus, Total as P	6.1	0.1	B	EPA 365.4
WW006	2069F	14-Apr-2023	Selenium	0.00296	0.0015	J	EPA 200.8
WW006	2069F	14-Apr-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	14-Apr-2023	Solids, total suspended	148	5.7		SM 2540D
WW006	2069F	14-Apr-2023	Zinc	0.304	0.0033		EPA 200.8
WW007	2069G	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	10-Apr-2023	Cyanide, total	0.0249	0.00167		EPA 335.4
WW007	2069G	10-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	11-Apr-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	11-Apr-2023	Ammonia	5.77	0.17	B	EPA 350.1
WW007	2069G	11-Apr-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	11-Apr-2023	Boron	0.0162	0.0052		EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	11-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW007	2069G	11-Apr-2023	Chemical oxygen demand	14.6	8.95	J	EPA 410.4
WW007	2069G	11-Apr-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	11-Apr-2023	Copper	0.0115	0.0003		EPA 200.8
WW007	2069G	11-Apr-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	11-Apr-2023	Fluoride	4.41	0.033		EPA 300.0
WW007	2069G	11-Apr-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	11-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	11-Apr-2023	Molybdenum	0.0141	0.0002		EPA 200.8
WW007	2069G	11-Apr-2023	Nickel	0.000669	0.0006	J	EPA 200.8
WW007	2069G	11-Apr-2023	Phosphorus, Total as P	2.4	0.02	B	EPA 365.4
WW007	2069G	11-Apr-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	11-Apr-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	11-Apr-2023	Solids, total suspended	0.9	0.57	J	SM 2540D
WW007	2069G	11-Apr-2023	Zinc		0.0033	U	EPA 200.8
WW007	2069G	12-Apr-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	12-Apr-2023	Ammonia	5.14	0.17	B	EPA 350.1
WW007	2069G	12-Apr-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	12-Apr-2023	Boron	0.0189	0.0052		EPA 200.8
WW007	2069G	12-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW007	2069G	12-Apr-2023	Chemical oxygen demand	93.1	8.95		EPA 410.4
WW007	2069G	12-Apr-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	12-Apr-2023	Copper	0.00533	0.0003		EPA 200.8
WW007	2069G	12-Apr-2023	Cyanide, total		0.00167	UN	EPA 335.4
WW007	2069G	12-Apr-2023	Cyanide, total		0.00167	UN	EPA 335.4
WW007	2069G	12-Apr-2023	Cyanide, total		0.00167	UN	EPA 335.4
WW007	2069G	12-Apr-2023	Fluoride	2.36	0.033		EPA 300.0
WW007	2069G	12-Apr-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	12-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	12-Apr-2023	Molybdenum	0.0146	0.0002		EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	12-Apr-2023	Nickel		0.0006	U	EPA 200.8
WW007	2069G	12-Apr-2023	Phosphorus, Total as P	4.77	0.1	B	EPA 365.4
WW007	2069G	12-Apr-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	12-Apr-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	12-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	12-Apr-2023	Zinc		0.0033	U	EPA 200.8
WW007	2069G	13-Apr-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	13-Apr-2023	Ammonia	1.94	0.085	B	EPA 350.1
WW007	2069G	13-Apr-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	13-Apr-2023	Boron	0.0167	0.0052		EPA 200.8
WW007	2069G	13-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW007	2069G	13-Apr-2023	Chemical oxygen demand		8.95	U	EPA 410.4
WW007	2069G	13-Apr-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	13-Apr-2023	Copper	0.00282	0.0003		EPA 200.8
WW007	2069G	13-Apr-2023	Cyanide, total		0.00167	UN	EPA 335.4
WW007	2069G	13-Apr-2023	Fluoride	3.8	0.033		EPA 300.0
WW007	2069G	13-Apr-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	13-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	13-Apr-2023	Molybdenum	0.0128	0.0002		EPA 200.8
WW007	2069G	13-Apr-2023	Nickel		0.0006	U	EPA 200.8
WW007	2069G	13-Apr-2023	Phosphorus, Total as P	2.16	0.02	B	EPA 365.4
WW007	2069G	13-Apr-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	13-Apr-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	13-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	13-Apr-2023	Zinc		0.0033	U	EPA 200.8
WW007	2069G	14-Apr-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	14-Apr-2023	Ammonia	1.75	0.085	B	EPA 350.1
WW007	2069G	14-Apr-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	14-Apr-2023	Boron	0.0193	0.0052		EPA 200.8
WW007	2069G	14-Apr-2023	Cadmium		0.0003	U	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	14-Apr-2023	Chemical oxygen demand		8.95	U	EPA 410.4
WW007	2069G	14-Apr-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	14-Apr-2023	Copper	0.00226	0.0003		EPA 200.8
WW007	2069G	14-Apr-2023	Fluoride	0.975	0.165		EPA 300.0
WW007	2069G	14-Apr-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	14-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	14-Apr-2023	Molybdenum	0.0145	0.0002		EPA 200.8
WW007	2069G	14-Apr-2023	Nickel	0.0014	0.0006	J	EPA 200.8
WW007	2069G	14-Apr-2023	Phosphorus, Total as P	0.139	0.02	B	EPA 365.4
WW007	2069G	14-Apr-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	14-Apr-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	14-Apr-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	14-Apr-2023	Zinc		0.0033	U	EPA 200.8
WW008	2069I	11-Apr-2023	Aluminum	0.0376	0.0193	J	EPA 200.8
WW008	2069I	11-Apr-2023	Ammonia	13.6	0.17	B	EPA 350.1
WW008	2069I	11-Apr-2023	Arsenic	0.00279	0.002	J	EPA 200.8
WW008	2069I	11-Apr-2023	Boron	0.115	0.0052		EPA 200.8
WW008	2069I	11-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	11-Apr-2023	Chemical oxygen demand	82.8	8.95		EPA 410.4
WW008	2069I	11-Apr-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	11-Apr-2023	Copper	0.0199	0.0003		EPA 200.8
WW008	2069I	11-Apr-2023	Fluoride	0.734	0.033		EPA 300.0
WW008	2069I	11-Apr-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	11-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW008	2069I	11-Apr-2023	Molybdenum	0.00378	0.0002		EPA 200.8
WW008	2069I	11-Apr-2023	Nickel	0.00721	0.0006		EPA 200.8
WW008	2069I	11-Apr-2023	Phosphorus, Total as P	2.65	0.02	B	EPA 365.4
WW008	2069I	11-Apr-2023	Selenium	0.00226	0.0015	J	EPA 200.8
WW008	2069I	11-Apr-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	11-Apr-2023	Solids, total suspended	43	1.9		SM 2540D

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	11-Apr-2023	Zinc	0.0359	0.0033		EPA 200.8
WW008	2069I	12-Apr-2023	Aluminum	0.0297	0.0193	J	EPA 200.8
WW008	2069I	12-Apr-2023	Ammonia	17.3	0.85	B	EPA 350.1
WW008	2069I	12-Apr-2023	Arsenic	0.00241	0.002	J	EPA 200.8
WW008	2069I	12-Apr-2023	Boron	0.104	0.0052		EPA 200.8
WW008	2069I	12-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	12-Apr-2023	Chemical oxygen demand	110	8.95		EPA 410.4
WW008	2069I	12-Apr-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	12-Apr-2023	Copper	0.0143	0.0003		EPA 200.8
WW008	2069I	12-Apr-2023	Fluoride	0.65	0.033		EPA 300.0
WW008	2069I	12-Apr-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	12-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW008	2069I	12-Apr-2023	Molybdenum	0.00356	0.0002		EPA 200.8
WW008	2069I	12-Apr-2023	Nickel	0.00547	0.0006		EPA 200.8
WW008	2069I	12-Apr-2023	Phosphorus, Total as P	2.6	0.08	B	EPA 365.4
WW008	2069I	12-Apr-2023	Selenium	0.0022	0.0015	J	EPA 200.8
WW008	2069I	12-Apr-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	12-Apr-2023	Solids, total suspended	41.2	2.28		SM 2540D
WW008	2069I	12-Apr-2023	Zinc	0.0256	0.0033		EPA 200.8
WW008	2069I	13-Apr-2023	Aluminum	0.068	0.0193		EPA 200.8
WW008	2069I	13-Apr-2023	Ammonia	3.3	0.85	B	EPA 350.1
WW008	2069I	13-Apr-2023	Arsenic	0.00243	0.002	J	EPA 200.8
WW008	2069I	13-Apr-2023	Boron	0.104	0.0052		EPA 200.8
WW008	2069I	13-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	13-Apr-2023	Chemical oxygen demand	188	8.95		EPA 410.4
WW008	2069I	13-Apr-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	13-Apr-2023	Copper	0.0281	0.0003		EPA 200.8
WW008	2069I	13-Apr-2023	Fluoride	0.659	0.033		EPA 300.0
WW008	2069I	13-Apr-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	13-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	13-Apr-2023	Molybdenum	0.0039	0.0002		EPA 200.8
WW008	2069I	13-Apr-2023	Nickel	0.0103	0.0006		EPA 200.8
WW008	2069I	13-Apr-2023	Phosphorus, Total as P	4.03	0.08	B	EPA 365.4
WW008	2069I	13-Apr-2023	Selenium	0.00234	0.0015	J	EPA 200.8
WW008	2069I	13-Apr-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	13-Apr-2023	Solids, total suspended	62	3.8		SM 2540D
WW008	2069I	13-Apr-2023	Zinc	0.0529	0.0033		EPA 200.8
WW008	2069I	14-Apr-2023	Aluminum	0.0232	0.0193	J	EPA 200.8
WW008	2069I	14-Apr-2023	Ammonia	21.1	0.85	B	EPA 350.1
WW008	2069I	14-Apr-2023	Arsenic		0.002	U	EPA 200.8
WW008	2069I	14-Apr-2023	Boron	0.103	0.0052		EPA 200.8
WW008	2069I	14-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	14-Apr-2023	Chemical oxygen demand	78.9	8.95		EPA 410.4
WW008	2069I	14-Apr-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	14-Apr-2023	Copper	0.0139	0.0003		EPA 200.8
WW008	2069I	14-Apr-2023	Fluoride	0.783	0.165		EPA 300.0
WW008	2069I	14-Apr-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	14-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW008	2069I	14-Apr-2023	Molybdenum	0.00323	0.0002		EPA 200.8
WW008	2069I	14-Apr-2023	Nickel	0.00637	0.0006		EPA 200.8
WW008	2069I	14-Apr-2023	Phosphorus, Total as P	2.77	0.02	B	EPA 365.4
WW008	2069I	14-Apr-2023	Selenium	0.00196	0.0015	J	EPA 200.8
WW008	2069I	14-Apr-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	14-Apr-2023	Solids, total suspended	36.3	1.63		SM 2540D
WW008	2069I	14-Apr-2023	Zinc	0.0253	0.0033		EPA 200.8
WW011	2069K	11-Apr-2023	Aluminum	0.154	0.0193		EPA 200.8
WW011	2069K	11-Apr-2023	Ammonia	16	0.17	B	EPA 350.1
WW011	2069K	11-Apr-2023	Arsenic	0.00274	0.002	J	EPA 200.8
WW011	2069K	11-Apr-2023	Boron	0.0716	0.0052		EPA 200.8
WW011	2069K	11-Apr-2023	Cadmium		0.0003	U	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	11-Apr-2023	Chemical oxygen demand	181	8.95		EPA 410.4
WW011	2069K	11-Apr-2023	Chromium	0.00515	0.003	J	EPA 200.8
WW011	2069K	11-Apr-2023	Copper	0.0332	0.0003		EPA 200.8
WW011	2069K	11-Apr-2023	Fluoride	0.801	0.033		EPA 300.0
WW011	2069K	11-Apr-2023	Lead	0.00075	0.0005	J	EPA 200.8
WW011	2069K	11-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW011	2069K	11-Apr-2023	Molybdenum	0.00461	0.0002		EPA 200.8
WW011	2069K	11-Apr-2023	Nickel	0.00253	0.0006		EPA 200.8
WW011	2069K	11-Apr-2023	Phosphorus, Total as P	10.7	0.08	B	EPA 365.4
WW011	2069K	11-Apr-2023	Selenium	0.00221	0.0015	J	EPA 200.8
WW011	2069K	11-Apr-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	11-Apr-2023	Solids, total suspended	104	5.7		SM 2540D
WW011	2069K	11-Apr-2023	Zinc	0.0906	0.0033		EPA 200.8
WW011	2069K	12-Apr-2023	Aluminum	0.137	0.0193		EPA 200.8
WW011	2069K	12-Apr-2023	Ammonia	21.7	0.85	B	EPA 350.1
WW011	2069K	12-Apr-2023	Arsenic	0.00276	0.002	J	EPA 200.8
WW011	2069K	12-Apr-2023	Boron	0.0648	0.0052		EPA 200.8
WW011	2069K	12-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW011	2069K	12-Apr-2023	Chemical oxygen demand	191	8.95		EPA 410.4
WW011	2069K	12-Apr-2023	Chromium	0.00491	0.003	J	EPA 200.8
WW011	2069K	12-Apr-2023	Copper	0.0391	0.0003		EPA 200.8
WW011	2069K	12-Apr-2023	Fluoride	0.589	0.033		EPA 300.0
WW011	2069K	12-Apr-2023	Lead	0.000754	0.0005	J	EPA 200.8
WW011	2069K	12-Apr-2023	Mercury	0.000076	0.000067	J	EPA 245.1/245.2
WW011	2069K	12-Apr-2023	Molybdenum	0.00483	0.0002		EPA 200.8
WW011	2069K	12-Apr-2023	Nickel	0.00266	0.0006		EPA 200.8
WW011	2069K	12-Apr-2023	Phosphorus, Total as P	11.3	0.4	B	EPA 365.4
WW011	2069K	12-Apr-2023	Selenium	0.0021	0.0015	J	EPA 200.8
WW011	2069K	12-Apr-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	12-Apr-2023	Solids, total suspended	97	5.7		SM 2540D

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	12-Apr-2023	Zinc	0.0928	0.0033		EPA 200.8
WW011	2069K	13-Apr-2023	Aluminum	0.147	0.0193		EPA 200.8
WW011	2069K	13-Apr-2023	Ammonia	16.6	0.17	B	EPA 350.1
WW011	2069K	13-Apr-2023	Arsenic	0.00331	0.002	J	EPA 200.8
WW011	2069K	13-Apr-2023	Boron	0.0631	0.0052		EPA 200.8
WW011	2069K	13-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW011	2069K	13-Apr-2023	Chemical oxygen demand	226	8.95		EPA 410.4
WW011	2069K	13-Apr-2023	Chromium	0.00564	0.003	J	EPA 200.8
WW011	2069K	13-Apr-2023	Copper	0.0519	0.0003		EPA 200.8
WW011	2069K	13-Apr-2023	Fluoride	0.812	0.033		EPA 300.0
WW011	2069K	13-Apr-2023	Lead	0.000879	0.0005	J	EPA 200.8
WW011	2069K	13-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW011	2069K	13-Apr-2023	Molybdenum	0.00515	0.0002		EPA 200.8
WW011	2069K	13-Apr-2023	Nickel	0.00239	0.0006		EPA 200.8
WW011	2069K	13-Apr-2023	Phosphorus, Total as P	11.3	0.08	B	EPA 365.4
WW011	2069K	13-Apr-2023	Selenium	0.00225	0.0015	J	EPA 200.8
WW011	2069K	13-Apr-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	13-Apr-2023	Solids, total suspended	116	5.7		SM 2540D
WW011	2069K	13-Apr-2023	Zinc	0.0967	0.0033		EPA 200.8
WW011	2069K	14-Apr-2023	Aluminum	0.106	0.0193		EPA 200.8
WW011	2069K	14-Apr-2023	Ammonia	26.9	0.85	B	EPA 350.1
WW011	2069K	14-Apr-2023	Arsenic	0.00219	0.002	J	EPA 200.8
WW011	2069K	14-Apr-2023	Boron	0.0666	0.0052		EPA 200.8
WW011	2069K	14-Apr-2023	Cadmium		0.0003	U	EPA 200.8
WW011	2069K	14-Apr-2023	Chemical oxygen demand	212	8.95		EPA 410.4
WW011	2069K	14-Apr-2023	Chromium	0.00439	0.003	J	EPA 200.8
WW011	2069K	14-Apr-2023	Copper	0.0341	0.0003		EPA 200.8
WW011	2069K	14-Apr-2023	Fluoride	0.679	0.033		EPA 300.0
WW011	2069K	14-Apr-2023	Lead	0.000663	0.0005	J	EPA 200.8
WW011	2069K	14-Apr-2023	Mercury		0.000067	U	EPA 245.1/245.2

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	14-Apr-2023	Molybdenum	0.00342	0.0002		EPA 200.8
WW011	2069K	14-Apr-2023	Nickel	0.00272	0.0006		EPA 200.8
WW011	2069K	14-Apr-2023	Phosphorus, Total as P	15.2	0.5	B	EPA 365.4
WW011	2069K	14-Apr-2023	Selenium	0.00164	0.0015	J	EPA 200.8
WW011	2069K	14-Apr-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	14-Apr-2023	Solids, total suspended	116	5.7		SM 2540D
WW011	2069K	14-Apr-2023	Zinc	0.0895	0.0033		EPA 200.8

^a Blank cells indicate that the data did not require a data qualifier.

CINT = Center for Integrated Nanotechnologies

MDL = method detection limit; the minimum concentration or activity that can be measured and reported with 99 percent confidence that the analyte is greater than zero; analyte is matrix-specific

Laboratory Data Qualifier

* = A replicate was outside limits.

B = The analyte was detected in the blank.

J = An estimated value, the analyte concentration was above the effective MDL and below the effective PQL.

N = A spike was outside limits.

U = The analyte was absent or below the method detection limit.

Analytical Method

EPA 200.8 (EPA 1994)

EPA 245.1/245.2 (EPA 1994) (EPA 1974)

EPA 300.0 (EPA 1993)

EPA 335.4 (EPA 1993)

EPA 350.1 (EPA 1993)

EPA 365.4 (EPA 1974)

EPA 410.4 (EPA 1993)

SM 2540D (Standard Methods Committee of the American Public Health Association, American Water Works Association, and Water Environment Federation 2018)

Table E-2. Inorganic results for permitted sanitary outfalls, fourth quarter of calendar year 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	10-Oct-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	10-Oct-2023	Ammonia	0.461	0.017	B	EPA 350.1
CINT	2238A	10-Oct-2023	Arsenic	0.00459	0.002	J	EPA 200.8
CINT	2238A	10-Oct-2023	Boron	0.0529	0.0052		EPA 200.8
CINT	2238A	10-Oct-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	10-Oct-2023	Chemical oxygen demand	24	8.95		EPA 410.4
CINT	2238A	10-Oct-2023	Chromium		0.003	U	EPA 200.8
CINT	2238A	10-Oct-2023	Copper	0.00512	0.0003		EPA 200.8
CINT	2238A	10-Oct-2023	Fluoride	1.69	0.033		EPA 300.0
CINT	2238A	10-Oct-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	10-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	10-Oct-2023	Molybdenum	0.00304	0.0002		EPA 200.8
CINT	2238A	10-Oct-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	10-Oct-2023	Phosphorus, Total as P	0.046	0.02	J	EPA 365.4
CINT	2238A	10-Oct-2023	Selenium	0.0017	0.0015	J	EPA 200.8
CINT	2238A	10-Oct-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	10-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	10-Oct-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	11-Oct-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	11-Oct-2023	Ammonia	0.398	0.017	B	EPA 350.1
CINT	2238A	11-Oct-2023	Arsenic	0.00368	0.002	J	EPA 200.8
CINT	2238A	11-Oct-2023	Boron	0.051	0.0052		EPA 200.8
CINT	2238A	11-Oct-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	11-Oct-2023	Chemical oxygen demand		8.95	U	EPA 410.4
CINT	2238A	11-Oct-2023	Chromium		0.003	U	EPA 200.8
CINT	2238A	11-Oct-2023	Copper	0.00198	0.0003	J	EPA 200.8
CINT	2238A	11-Oct-2023	Fluoride	2.58	0.033		EPA 300.0
CINT	2238A	11-Oct-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	11-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	11-Oct-2023	Molybdenum	0.00306	0.0002		EPA 200.8
CINT	2238A	11-Oct-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	11-Oct-2023	Phosphorus, Total as P	0.035	0.02	J	EPA 365.4
CINT	2238A	11-Oct-2023	Selenium	0.0022	0.0015	J	EPA 200.8
CINT	2238A	11-Oct-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	11-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	11-Oct-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	12-Oct-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	12-Oct-2023	Ammonia	0.131	0.017	B	EPA 350.1
CINT	2238A	12-Oct-2023	Arsenic	0.00366	0.002	J	EPA 200.8
CINT	2238A	12-Oct-2023	Boron	0.0538	0.0052		EPA 200.8
CINT	2238A	12-Oct-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	12-Oct-2023	Chemical oxygen demand	13.2	8.95	J	EPA 410.4
CINT	2238A	12-Oct-2023	Chromium		0.003	U	EPA 200.8
CINT	2238A	12-Oct-2023	Copper	0.00254	0.0003		EPA 200.8
CINT	2238A	12-Oct-2023	Cyanide, total		0.00167	UN	EPA 335.4
CINT	2238A	12-Oct-2023	Cyanide, total		0.00167	UN	EPA 335.4
CINT	2238A	12-Oct-2023	Cyanide, total		0.00167	UN	EPA 335.4
CINT	2238A	12-Oct-2023	Fluoride	0.923	0.033		EPA 300.0
CINT	2238A	12-Oct-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	12-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	12-Oct-2023	Molybdenum	0.00317	0.0002		EPA 200.8
CINT	2238A	12-Oct-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	12-Oct-2023	Phosphorus, Total as P	0.039	0.02	JN	EPA 365.4
CINT	2238A	12-Oct-2023	Selenium	0.00176	0.0015	J	EPA 200.8
CINT	2238A	12-Oct-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	12-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	12-Oct-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	13-Oct-2023	Aluminum		0.0193	U	EPA 200.8
CINT	2238A	13-Oct-2023	Ammonia	0.078	0.017	B	EPA 350.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	13-Oct-2023	Arsenic	0.00341	0.002	J	EPA 200.8
CINT	2238A	13-Oct-2023	Boron	0.0512	0.0052		EPA 200.8
CINT	2238A	13-Oct-2023	Cadmium		0.0003	U	EPA 200.8
CINT	2238A	13-Oct-2023	Chemical oxygen demand	26.6	8.95		EPA 410.4
CINT	2238A	13-Oct-2023	Chromium		0.003	U	EPA 200.8
CINT	2238A	13-Oct-2023	Copper	0.00303	0.0003		EPA 200.8
CINT	2238A	13-Oct-2023	Cyanide, total		0.00167	UN	EPA 335.4
CINT	2238A	13-Oct-2023	Fluoride	1.13	0.033	N	EPA 300.0
CINT	2238A	13-Oct-2023	Lead		0.0005	U	EPA 200.8
CINT	2238A	13-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
CINT	2238A	13-Oct-2023	Molybdenum	0.00337	0.0002		EPA 200.8
CINT	2238A	13-Oct-2023	Nickel		0.0006	U	EPA 200.8
CINT	2238A	13-Oct-2023	Phosphorus, Total as P	0.036	0.02	JN	EPA 365.4
CINT	2238A	13-Oct-2023	Selenium	0.00179	0.0015	J	EPA 200.8
CINT	2238A	13-Oct-2023	Silver		0.0003	U	EPA 200.8
CINT	2238A	13-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
CINT	2238A	13-Oct-2023	Zinc		0.0033	U	EPA 200.8
CINT	2238A	15-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	15-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	15-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
CINT	2238A	16-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW001	2069A	10-Oct-2023	Aluminum	0.036	0.0193	J	EPA 200.8
WW001	2069A	10-Oct-2023	Ammonia	11.1	0.17	B	EPA 350.1
WW001	2069A	10-Oct-2023	Arsenic	0.0039	0.002	J	EPA 200.8
WW001	2069A	10-Oct-2023	Boron	0.0656	0.0052		EPA 200.8
WW001	2069A	10-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	10-Oct-2023	Chemical oxygen demand	91.4	8.95		EPA 410.4
WW001	2069A	10-Oct-2023	Chromium	0.00358	0.003	J	EPA 200.8
WW001	2069A	10-Oct-2023	Copper	0.0244	0.0003		EPA 200.8
WW001	2069A	10-Oct-2023	Fluoride	2.78	0.033		EPA 300.0

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	10-Oct-2023	Lead	0.000614	0.0005	J	EPA 200.8
WW001	2069A	10-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	10-Oct-2023	Molybdenum	0.0139	0.0002		EPA 200.8
WW001	2069A	10-Oct-2023	Nickel	0.00153	0.0006	J	EPA 200.8
WW001	2069A	10-Oct-2023	Phosphorus, Total as P	7.43	0.08		EPA 365.4
WW001	2069A	10-Oct-2023	Selenium	0.00273	0.0015	J	EPA 200.8
WW001	2069A	10-Oct-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	10-Oct-2023	Solids, total suspended	42.5	2.85		SM 2540D
WW001	2069A	10-Oct-2023	Zinc	0.0624	0.0033		EPA 200.8
WW001	2069A	11-Oct-2023	Aluminum	0.039	0.0193	J	EPA 200.8
WW001	2069A	11-Oct-2023	Ammonia	11.7	0.425	B	EPA 350.1
WW001	2069A	11-Oct-2023	Arsenic	0.0037	0.002	J	EPA 200.8
WW001	2069A	11-Oct-2023	Boron	0.0751	0.0052		EPA 200.8
WW001	2069A	11-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	11-Oct-2023	Chemical oxygen demand	86.6	8.95		EPA 410.4
WW001	2069A	11-Oct-2023	Chromium	0.00361	0.003	J	EPA 200.8
WW001	2069A	11-Oct-2023	Copper	0.0268	0.0003		EPA 200.8
WW001	2069A	11-Oct-2023	Fluoride	2.62	0.033		EPA 300.0
WW001	2069A	11-Oct-2023	Lead	0.00113	0.0005	J	EPA 200.8
WW001	2069A	11-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	11-Oct-2023	Molybdenum	0.0128	0.0002		EPA 200.8
WW001	2069A	11-Oct-2023	Nickel	0.00173	0.0006	J	EPA 200.8
WW001	2069A	11-Oct-2023	Phosphorus, Total as P	2.46	0.02		EPA 365.4
WW001	2069A	11-Oct-2023	Selenium	0.00281	0.0015	J	EPA 200.8
WW001	2069A	11-Oct-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	11-Oct-2023	Solids, total suspended	36.8	2.28		SM 2540D
WW001	2069A	11-Oct-2023	Zinc	0.0519	0.0033		EPA 200.8
WW001	2069A	12-Oct-2023	Aluminum	0.0343	0.0193	J	EPA 200.8
WW001	2069A	12-Oct-2023	Ammonia	10.1	0.17	B	EPA 350.1
WW001	2069A	12-Oct-2023	Arsenic	0.00343	0.002	J	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	12-Oct-2023	Boron	0.0556	0.0052		EPA 200.8
WW001	2069A	12-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	12-Oct-2023	Chemical oxygen demand	102	8.95		EPA 410.4
WW001	2069A	12-Oct-2023	Chromium	0.00354	0.003	J	EPA 200.8
WW001	2069A	12-Oct-2023	Copper	0.0255	0.0003		EPA 200.8
WW001	2069A	12-Oct-2023	Fluoride	2.93	0.033		EPA 300.0
WW001	2069A	12-Oct-2023	Lead	0.000801	0.0005	J	EPA 200.8
WW001	2069A	12-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	12-Oct-2023	Molybdenum	0.012	0.0002		EPA 200.8
WW001	2069A	12-Oct-2023	Nickel	0.00209	0.0006		EPA 200.8
WW001	2069A	12-Oct-2023	Phosphorus, Total as P	3.16	0.08	N	EPA 365.4
WW001	2069A	12-Oct-2023	Selenium	0.00211	0.0015	J	EPA 200.8
WW001	2069A	12-Oct-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	12-Oct-2023	Solids, total suspended	31	2.85		SM 2540D
WW001	2069A	12-Oct-2023	Zinc	0.0341	0.0033		EPA 200.8
WW001	2069A	13-Oct-2023	Aluminum		0.0193	U	EPA 200.8
WW001	2069A	13-Oct-2023	Ammonia	6.33	0.085	B	EPA 350.1
WW001	2069A	13-Oct-2023	Arsenic	0.00363	0.002	J	EPA 200.8
WW001	2069A	13-Oct-2023	Boron	0.058	0.0052		EPA 200.8
WW001	2069A	13-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW001	2069A	13-Oct-2023	Chemical oxygen demand	51	8.95		EPA 410.4
WW001	2069A	13-Oct-2023	Chromium		0.003	U	EPA 200.8
WW001	2069A	13-Oct-2023	Copper	0.0143	0.0003		EPA 200.8
WW001	2069A	13-Oct-2023	Fluoride	2.7	0.033	N	EPA 300.0
WW001	2069A	13-Oct-2023	Lead	0.00391	0.0005		EPA 200.8
WW001	2069A	13-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW001	2069A	13-Oct-2023	Molybdenum	0.0117	0.0002		EPA 200.8
WW001	2069A	13-Oct-2023	Nickel	0.000797	0.0006	J	EPA 200.8
WW001	2069A	13-Oct-2023	Phosphorus, Total as P	2.03	0.02	N	EPA 365.4
WW001	2069A	13-Oct-2023	Selenium	0.00207	0.0015	J	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	13-Oct-2023	Silver		0.0003	U	EPA 200.8
WW001	2069A	13-Oct-2023	Solids, total suspended	16.5	1.43		SM 2540D
WW001	2069A	13-Oct-2023	Zinc	0.0175	0.0033	J	EPA 200.8
WW006	2069F	9-Oct-2023	Cyanide, total	0.00259	0.00167	JB	EPA 335.4
WW006	2069F	9-Oct-2023	Cyanide, total	0.00405	0.00167	JB	EPA 335.4
WW006	2069F	9-Oct-2023	Cyanide, total	0.00317	0.00167	JB	EPA 335.4
WW006	2069F	10-Oct-2023	Aluminum	0.0596	0.0193		EPA 200.8
WW006	2069F	10-Oct-2023	Ammonia	46	1.7	B	EPA 350.1
WW006	2069F	10-Oct-2023	Arsenic	0.00303	0.002	J	EPA 200.8
WW006	2069F	10-Oct-2023	Boron	0.143	0.0052		EPA 200.8
WW006	2069F	10-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	10-Oct-2023	Chemical oxygen demand	189	8.95		EPA 410.4
WW006	2069F	10-Oct-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	10-Oct-2023	Copper	0.0278	0.0003		EPA 200.8
WW006	2069F	10-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	10-Oct-2023	Cyanide, total	0.00257	0.00167	J	EPA 335.4
WW006	2069F	10-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	10-Oct-2023	Cyanide, total	0.00377	0.00167	JB	EPA 335.4
WW006	2069F	10-Oct-2023	Fluoride	1.19	0.033		EPA 300.0
WW006	2069F	10-Oct-2023	Lead		0.0005	U	EPA 200.8
WW006	2069F	10-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	10-Oct-2023	Molybdenum	0.00407	0.0002		EPA 200.8
WW006	2069F	10-Oct-2023	Nickel	0.00172	0.0006	J	EPA 200.8
WW006	2069F	10-Oct-2023	Phosphorus, Total as P	6.08	0.08		EPA 365.4
WW006	2069F	10-Oct-2023	Selenium	0.003	0.0015	J	EPA 200.8
WW006	2069F	10-Oct-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	10-Oct-2023	Solids, total suspended	67.8	3.17		SM 2540D
WW006	2069F	10-Oct-2023	Zinc	0.104	0.0033		EPA 200.8
WW006	2069F	11-Oct-2023	Aluminum	0.082	0.0193		EPA 200.8
WW006	2069F	11-Oct-2023	Ammonia	36.8	0.85	B	EPA 350.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	11-Oct-2023	Arsenic	0.00394	0.002	J	EPA 200.8
WW006	2069F	11-Oct-2023	Boron	0.11	0.0052		EPA 200.8
WW006	2069F	11-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	11-Oct-2023	Chemical oxygen demand	140	8.95		EPA 410.4
WW006	2069F	11-Oct-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	11-Oct-2023	Copper	0.0367	0.0003		EPA 200.8
WW006	2069F	11-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW006	2069F	11-Oct-2023	Fluoride	1.01	0.033		EPA 300.0
WW006	2069F	11-Oct-2023	Lead	0.000504	0.0005	J	EPA 200.8
WW006	2069F	11-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	11-Oct-2023	Molybdenum	0.00442	0.0002		EPA 200.8
WW006	2069F	11-Oct-2023	Nickel	0.00173	0.0006	J	EPA 200.8
WW006	2069F	11-Oct-2023	Phosphorus, Total as P	3.98	0.1		EPA 365.4
WW006	2069F	11-Oct-2023	Selenium	0.00217	0.0015	J	EPA 200.8
WW006	2069F	11-Oct-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	11-Oct-2023	Solids, total suspended	80	5.7		SM 2540D
WW006	2069F	11-Oct-2023	Zinc	0.0955	0.0033		EPA 200.8
WW006	2069F	12-Oct-2023	Aluminum	0.073	0.0193		EPA 200.8
WW006	2069F	12-Oct-2023	Ammonia	37.2	0.85	B	EPA 350.1
WW006	2069F	12-Oct-2023	Arsenic	0.00318	0.002	J	EPA 200.8
WW006	2069F	12-Oct-2023	Boron	0.101	0.0052		EPA 200.8
WW006	2069F	12-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	12-Oct-2023	Chemical oxygen demand	131	8.95		EPA 410.4
WW006	2069F	12-Oct-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	12-Oct-2023	Copper	0.0375	0.0003		EPA 200.8
WW006	2069F	12-Oct-2023	Fluoride	0.838	0.033		EPA 300.0
WW006	2069F	12-Oct-2023	Lead		0.0005	U	EPA 200.8
WW006	2069F	12-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	12-Oct-2023	Molybdenum	0.00345	0.0002		EPA 200.8
WW006	2069F	12-Oct-2023	Nickel	0.00137	0.0006	J	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	12-Oct-2023	Phosphorus, Total as P	4.06	0.08	N	EPA 365.4
WW006	2069F	12-Oct-2023	Selenium	0.00179	0.0015	J	EPA 200.8
WW006	2069F	12-Oct-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	12-Oct-2023	Solids, total suspended	83	5.7		SM 2540D
WW006	2069F	12-Oct-2023	Zinc	0.0756	0.0033		EPA 200.8
WW006	2069F	13-Oct-2023	Aluminum	0.0511	0.0193		EPA 200.8
WW006	2069F	13-Oct-2023	Ammonia	29.3	0.85	B	EPA 350.1
WW006	2069F	13-Oct-2023	Arsenic	0.00284	0.002	J	EPA 200.8
WW006	2069F	13-Oct-2023	Boron	0.0842	0.0052		EPA 200.8
WW006	2069F	13-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW006	2069F	13-Oct-2023	Chemical oxygen demand	122	8.95		EPA 410.4
WW006	2069F	13-Oct-2023	Chromium		0.003	U	EPA 200.8
WW006	2069F	13-Oct-2023	Copper	0.0293	0.0003		EPA 200.8
WW006	2069F	13-Oct-2023	Fluoride	0.797	0.033	N	EPA 300.0
WW006	2069F	13-Oct-2023	Lead		0.0005	U	EPA 200.8
WW006	2069F	13-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW006	2069F	13-Oct-2023	Molybdenum	0.00312	0.0002		EPA 200.8
WW006	2069F	13-Oct-2023	Nickel	0.00115	0.0006	J	EPA 200.8
WW006	2069F	13-Oct-2023	Phosphorus, Total as P	3.52	0.08	N	EPA 365.4
WW006	2069F	13-Oct-2023	Selenium	0.00154	0.0015	J	EPA 200.8
WW006	2069F	13-Oct-2023	Silver		0.0003	U	EPA 200.8
WW006	2069F	13-Oct-2023	Solids, total suspended	59	2.85		SM 2540D
WW006	2069F	13-Oct-2023	Zinc	0.0439	0.0033		EPA 200.8
WW007	2069G	9-Oct-2023	Cyanide, total	0.00707	0.00167	B	EPA 335.4
WW007	2069G	9-Oct-2023	Cyanide, total	0.00401	0.00167	JB	EPA 335.4
WW007	2069G	9-Oct-2023	Cyanide, total	0.0019	0.00167	JB	EPA 335.4
WW007	2069G	10-Oct-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	10-Oct-2023	Ammonia	2.61	0.085	B	EPA 350.1
WW007	2069G	10-Oct-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	10-Oct-2023	Boron	0.0202	0.0052		EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	10-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW007	2069G	10-Oct-2023	Chemical oxygen demand	26.3	8.95		EPA 410.4
WW007	2069G	10-Oct-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	10-Oct-2023	Copper	0.00271	0.0003		EPA 200.8
WW007	2069G	10-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	10-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	10-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	10-Oct-2023	Cyanide, total	0.00215	0.00167	JB	EPA 335.4
WW007	2069G	10-Oct-2023	Fluoride	4.43	0.033		EPA 300.0
WW007	2069G	10-Oct-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	10-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	10-Oct-2023	Molybdenum	0.0172	0.0002		EPA 200.8
WW007	2069G	10-Oct-2023	Nickel	0.00102	0.0006	J	EPA 200.8
WW007	2069G	10-Oct-2023	Phosphorus, Total as P	11.7	0.08		EPA 365.4
WW007	2069G	10-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	10-Oct-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	10-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	10-Oct-2023	Zinc		0.0033	U	EPA 200.8
WW007	2069G	11-Oct-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	11-Oct-2023	Ammonia	0.185	0.085	JB	EPA 350.1
WW007	2069G	11-Oct-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	11-Oct-2023	Boron	0.0325	0.0052		EPA 200.8
WW007	2069G	11-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW007	2069G	11-Oct-2023	Chemical oxygen demand	26.6	8.95		EPA 410.4
WW007	2069G	11-Oct-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	11-Oct-2023	Copper	0.00177	0.0003	J	EPA 200.8
WW007	2069G	11-Oct-2023	Cyanide, total		0.00167	U	EPA 335.4
WW007	2069G	11-Oct-2023	Fluoride	4.16	0.033		EPA 300.0
WW007	2069G	11-Oct-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	11-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	11-Oct-2023	Molybdenum	0.0176	0.0002		EPA 200.8
WW007	2069G	11-Oct-2023	Nickel	0.000874	0.0006	J	EPA 200.8
WW007	2069G	11-Oct-2023	Phosphorus, Total as P	1.29	0.02		EPA 365.4
WW007	2069G	11-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	11-Oct-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	11-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	11-Oct-2023	Zinc		0.0033	U	EPA 200.8
WW007	2069G	12-Oct-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	12-Oct-2023	Ammonia	3.79	0.085	B	EPA 350.1
WW007	2069G	12-Oct-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	12-Oct-2023	Boron	0.0185	0.0052		EPA 200.8
WW007	2069G	12-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW007	2069G	12-Oct-2023	Chemical oxygen demand	17.7	8.95	J	EPA 410.4
WW007	2069G	12-Oct-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	12-Oct-2023	Copper	0.00558	0.0003		EPA 200.8
WW007	2069G	12-Oct-2023	Fluoride	4.26	0.033		EPA 300.0
WW007	2069G	12-Oct-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	12-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	12-Oct-2023	Molybdenum	0.0147	0.0002		EPA 200.8
WW007	2069G	12-Oct-2023	Nickel	0.000849	0.0006	J	EPA 200.8
WW007	2069G	12-Oct-2023	Phosphorus, Total as P	11.3	0.4	N	EPA 365.4
WW007	2069G	12-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	12-Oct-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	12-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	12-Oct-2023	Zinc		0.0033	U	EPA 200.8
WW007	2069G	13-Oct-2023	Aluminum		0.0193	U	EPA 200.8
WW007	2069G	13-Oct-2023	Ammonia	2.07	0.085	B	EPA 350.1
WW007	2069G	13-Oct-2023	Arsenic		0.002	U	EPA 200.8
WW007	2069G	13-Oct-2023	Boron	0.0198	0.0052		EPA 200.8
WW007	2069G	13-Oct-2023	Cadmium		0.0003	U	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	13-Oct-2023	Chemical oxygen demand	24.3	8.95		EPA 410.4
WW007	2069G	13-Oct-2023	Chromium		0.003	U	EPA 200.8
WW007	2069G	13-Oct-2023	Copper	0.00181	0.0003	J	EPA 200.8
WW007	2069G	13-Oct-2023	Fluoride	3.9	0.033	N	EPA 300.0
WW007	2069G	13-Oct-2023	Lead		0.0005	U	EPA 200.8
WW007	2069G	13-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW007	2069G	13-Oct-2023	Molybdenum	0.0157	0.0002		EPA 200.8
WW007	2069G	13-Oct-2023	Nickel	0.000765	0.0006	J	EPA 200.8
WW007	2069G	13-Oct-2023	Phosphorus, Total as P	3.56	0.08	N	EPA 365.4
WW007	2069G	13-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW007	2069G	13-Oct-2023	Silver		0.0003	U	EPA 200.8
WW007	2069G	13-Oct-2023	Solids, total suspended		0.57	U	SM 2540D
WW007	2069G	13-Oct-2023	Zinc		0.0033	U	EPA 200.8
WW008	2069I	10-Oct-2023	Aluminum	0.0458	0.0193	J	EPA 200.8
WW008	2069I	10-Oct-2023	Ammonia	20.1	0.85	B	EPA 350.1
WW008	2069I	10-Oct-2023	Arsenic	0.00303	0.002	J	EPA 200.8
WW008	2069I	10-Oct-2023	Boron	0.0607	0.0052		EPA 200.8
WW008	2069I	10-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	10-Oct-2023	Chemical oxygen demand	124	8.95		EPA 410.4
WW008	2069I	10-Oct-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	10-Oct-2023	Copper	0.0179	0.0003		EPA 200.8
WW008	2069I	10-Oct-2023	Fluoride	0.728	0.033		EPA 300.0
WW008	2069I	10-Oct-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	10-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW008	2069I	10-Oct-2023	Molybdenum	0.00366	0.0002		EPA 200.8
WW008	2069I	10-Oct-2023	Nickel	0.00445	0.0006		EPA 200.8
WW008	2069I	10-Oct-2023	Phosphorus, Total as P	3.05	0.1		EPA 365.4
WW008	2069I	10-Oct-2023	Selenium	0.00285	0.0015	J	EPA 200.8
WW008	2069I	10-Oct-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	10-Oct-2023	Solids, total suspended	56.7	4.75		SM 2540D

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	10-Oct-2023	Zinc	0.0569	0.0033		EPA 200.8
WW008	2069I	11-Oct-2023	Aluminum	0.037	0.0193	J	EPA 200.8
WW008	2069I	11-Oct-2023	Ammonia	23.1	0.85	B	EPA 350.1
WW008	2069I	11-Oct-2023	Arsenic	0.00274	0.002	J	EPA 200.8
WW008	2069I	11-Oct-2023	Boron	0.0616	0.0052		EPA 200.8
WW008	2069I	11-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	11-Oct-2023	Chemical oxygen demand	82.1	8.95		EPA 410.4
WW008	2069I	11-Oct-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	11-Oct-2023	Copper	0.0196	0.0003		EPA 200.8
WW008	2069I	11-Oct-2023	Fluoride	0.76	0.033		EPA 300.0
WW008	2069I	11-Oct-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	11-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW008	2069I	11-Oct-2023	Molybdenum	0.00408	0.0002		EPA 200.8
WW008	2069I	11-Oct-2023	Nickel	0.00457	0.0006		EPA 200.8
WW008	2069I	11-Oct-2023	Phosphorus, Total as P	2.62	0.02		EPA 365.4
WW008	2069I	11-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW008	2069I	11-Oct-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	11-Oct-2023	Solids, total suspended	52.5	2.85		SM 2540D
WW008	2069I	11-Oct-2023	Zinc	0.0353	0.0033		EPA 200.8
WW008	2069I	12-Oct-2023	Aluminum	0.0389	0.0193	J	EPA 200.8
WW008	2069I	12-Oct-2023	Ammonia	51.3	0.85		EPA 350.1
WW008	2069I	12-Oct-2023	Arsenic	0.00355	0.002	J	EPA 200.8
WW008	2069I	12-Oct-2023	Boron	0.0925	0.0052		EPA 200.8
WW008	2069I	12-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	12-Oct-2023	Chemical oxygen demand	129	8.95		EPA 410.4
WW008	2069I	12-Oct-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	12-Oct-2023	Copper	0.0189	0.0003		EPA 200.8
WW008	2069I	12-Oct-2023	Fluoride	0.781	0.033		EPA 300.0
WW008	2069I	12-Oct-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	12-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	12-Oct-2023	Molybdenum	0.00298	0.0002		EPA 200.8
WW008	2069I	12-Oct-2023	Nickel	0.00558	0.0006		EPA 200.8
WW008	2069I	12-Oct-2023	Phosphorus, Total as P	5.3	0.1	N	EPA 365.4
WW008	2069I	12-Oct-2023	Selenium	0.0138	0.0015		EPA 200.8
WW008	2069I	12-Oct-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	12-Oct-2023	Solids, total suspended	78	5.7		SM 2540D
WW008	2069I	12-Oct-2023	Zinc	0.0473	0.0033		EPA 200.8
WW008	2069I	13-Oct-2023	Aluminum	0.0369	0.0193	J	EPA 200.8
WW008	2069I	13-Oct-2023	Ammonia	44.5	0.85	B	EPA 350.1
WW008	2069I	13-Oct-2023	Arsenic	0.00348	0.002	J	EPA 200.8
WW008	2069I	13-Oct-2023	Boron	0.0954	0.0052		EPA 200.8
WW008	2069I	13-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW008	2069I	13-Oct-2023	Chemical oxygen demand	135	8.95		EPA 410.4
WW008	2069I	13-Oct-2023	Chromium		0.003	U	EPA 200.8
WW008	2069I	13-Oct-2023	Copper	0.024	0.0003		EPA 200.8
WW008	2069I	13-Oct-2023	Fluoride	0.91	0.033	N	EPA 300.0
WW008	2069I	13-Oct-2023	Lead		0.0005	U	EPA 200.8
WW008	2069I	13-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW008	2069I	13-Oct-2023	Molybdenum	0.00428	0.0002		EPA 200.8
WW008	2069I	13-Oct-2023	Nickel	0.00474	0.0006		EPA 200.8
WW008	2069I	13-Oct-2023	Phosphorus, Total as P	5.07	0.08	N	EPA 365.4
WW008	2069I	13-Oct-2023	Selenium	0.00197	0.0015	J	EPA 200.8
WW008	2069I	13-Oct-2023	Silver		0.0003	U	EPA 200.8
WW008	2069I	13-Oct-2023	Solids, total suspended	49.5	2.85		SM 2540D
WW008	2069I	13-Oct-2023	Zinc	0.0379	0.0033		EPA 200.8
WW011	2069K	10-Oct-2023	Aluminum	0.0936	0.0193		EPA 200.8
WW011	2069K	10-Oct-2023	Ammonia	29.3	0.85	B	EPA 350.1
WW011	2069K	10-Oct-2023	Arsenic	0.00225	0.002	J	EPA 200.8
WW011	2069K	10-Oct-2023	Boron	0.0831	0.0052		EPA 200.8
WW011	2069K	10-Oct-2023	Cadmium		0.0003	U	EPA 200.8

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	10-Oct-2023	Chemical oxygen demand	243	8.95		EPA 410.4
WW011	2069K	10-Oct-2023	Chromium		0.003	U	EPA 200.8
WW011	2069K	10-Oct-2023	Copper	0.0391	0.0003		EPA 200.8
WW011	2069K	10-Oct-2023	Fluoride	0.778	0.033		EPA 300.0
WW011	2069K	10-Oct-2023	Lead	0.000571	0.0005	J	EPA 200.8
WW011	2069K	10-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW011	2069K	10-Oct-2023	Molybdenum	0.00382	0.0002		EPA 200.8
WW011	2069K	10-Oct-2023	Nickel	0.00254	0.0006		EPA 200.8
WW011	2069K	10-Oct-2023	Phosphorus, Total as P	11	0.08		EPA 365.4
WW011	2069K	10-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW011	2069K	10-Oct-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	10-Oct-2023	Solids, total suspended	99	5.7		SM 2540D
WW011	2069K	10-Oct-2023	Zinc	0.0724	0.0033		EPA 200.8
WW011	2069K	11-Oct-2023	Aluminum	0.0622	0.0193		EPA 200.8
WW011	2069K	11-Oct-2023	Ammonia	25.2	0.85	B	EPA 350.1
WW011	2069K	11-Oct-2023	Arsenic	0.00219	0.002	J	EPA 200.8
WW011	2069K	11-Oct-2023	Boron	0.0803	0.0052		EPA 200.8
WW011	2069K	11-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW011	2069K	11-Oct-2023	Chemical oxygen demand	198	8.95		EPA 410.4
WW011	2069K	11-Oct-2023	Chromium		0.003	U	EPA 200.8
WW011	2069K	11-Oct-2023	Copper	0.0338	0.0003		EPA 200.8
WW011	2069K	11-Oct-2023	Fluoride	0.687	0.033		EPA 300.0
WW011	2069K	11-Oct-2023	Lead		0.0005	U	EPA 200.8
WW011	2069K	11-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW011	2069K	11-Oct-2023	Molybdenum	0.00358	0.0002		EPA 200.8
WW011	2069K	11-Oct-2023	Nickel	0.00216	0.0006		EPA 200.8
WW011	2069K	11-Oct-2023	Phosphorus, Total as P	14.6	0.4		EPA 365.4
WW011	2069K	11-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW011	2069K	11-Oct-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	11-Oct-2023	Solids, total suspended	92	5.7		SM 2540D

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	11-Oct-2023	Zinc	0.0637	0.0033		EPA 200.8
WW011	2069K	12-Oct-2023	Aluminum	0.0586	0.0193		EPA 200.8
WW011	2069K	12-Oct-2023	Ammonia	24.3	0.85	B	EPA 350.1
WW011	2069K	12-Oct-2023	Arsenic	0.00236	0.002	J	EPA 200.8
WW011	2069K	12-Oct-2023	Boron	0.0784	0.0052		EPA 200.8
WW011	2069K	12-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW011	2069K	12-Oct-2023	Chemical oxygen demand	195	8.95		EPA 410.4
WW011	2069K	12-Oct-2023	Chromium		0.003	U	EPA 200.8
WW011	2069K	12-Oct-2023	Copper	0.0299	0.0003		EPA 200.8
WW011	2069K	12-Oct-2023	Fluoride	0.71	0.033		EPA 300.0
WW011	2069K	12-Oct-2023	Lead	0.000684	0.0005	J	EPA 200.8
WW011	2069K	12-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2
WW011	2069K	12-Oct-2023	Molybdenum	0.00262	0.0002		EPA 200.8
WW011	2069K	12-Oct-2023	Nickel	0.00288	0.0006		EPA 200.8
WW011	2069K	12-Oct-2023	Phosphorus, Total as P	14.5	0.4	N	EPA 365.4
WW011	2069K	12-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW011	2069K	12-Oct-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	12-Oct-2023	Solids, total suspended	107	5.7		SM 2540D
WW011	2069K	12-Oct-2023	Zinc	0.0831	0.0033		EPA 200.8
WW011	2069K	13-Oct-2023	Aluminum	0.0558	0.0193		EPA 200.8
WW011	2069K	13-Oct-2023	Ammonia	20.9	0.85	B	EPA 350.1
WW011	2069K	13-Oct-2023	Arsenic	0.00236	0.002	J	EPA 200.8
WW011	2069K	13-Oct-2023	Boron	0.0733	0.0052		EPA 200.8
WW011	2069K	13-Oct-2023	Cadmium		0.0003	U	EPA 200.8
WW011	2069K	13-Oct-2023	Chemical oxygen demand	149	8.95		EPA 410.4
WW011	2069K	13-Oct-2023	Chromium		0.003	U	EPA 200.8
WW011	2069K	13-Oct-2023	Copper	0.0366	0.0003		EPA 200.8
WW011	2069K	13-Oct-2023	Fluoride	0.644	0.033	N	EPA 300.0
WW011	2069K	13-Oct-2023	Lead	0.000519	0.0005	J	EPA 200.8
WW011	2069K	13-Oct-2023	Mercury		0.000067	U	EPA 245.1/245.2

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Result (mg/L)	MDL (mg/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	13-Oct-2023	Molybdenum	0.00357	0.0002		EPA 200.8
WW011	2069K	13-Oct-2023	Nickel	0.00239	0.0006		EPA 200.8
WW011	2069K	13-Oct-2023	Phosphorus, Total as P	15.7	0.4	N	EPA 365.4
WW011	2069K	13-Oct-2023	Selenium		0.0015	U	EPA 200.8
WW011	2069K	13-Oct-2023	Silver		0.0003	U	EPA 200.8
WW011	2069K	13-Oct-2023	Solids, total suspended	96	5.7		SM 2540D
WW011	2069K	13-Oct-2023	Zinc	0.0623	0.0033		EPA 200.8

^a Blank cells indicate that the data did not require a data qualifier.

CINT = Center for Integrated Nanotechnologies

MDL = method detection limit; the minimum concentration or activity that can be measured and reported with 99 percent confidence that the analyte is greater than zero; analyte is matrix-specific

PQL = practical quantitation limit; the lowest concentration of analytes in a sample that can be determined reliably within specified limits of precision and accuracy by that indicated method under routine laboratory operating conditions

Laboratory Data Qualifier

J = An estimated value, the analyte concentration was above the effective MDL and below the effective PQL.

N = A spike was outside limits.

U = The analyte was absent or below the method detection limit.

Analytical Method

EPA 200.8 (EPA 1994)

EPA 245.1/245.2 (EPA 1994)

EPA 300.0 (EPA 1993)

EPA 335.4 (EPA 1993)

EPA 350.1 (EPA 1993)

SM 2540D (Standard Methods Committee of the American Public Health Association, American Water Works Association, and Water Environment Federation 2018)

Table E-3. Radiological results for permitted sanitary outfalls, second quarter of calendar year 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	11-Apr-23	Actinium-228	1.19 ± 14.9	13.4	U	EPA 901.1
CINT	2238A	11-Apr-23	Alpha, gross	1.25 ± 0.73	1.14		EPA 900.0/SW846 9310
CINT	2238A	11-Apr-23	Americium-241	-5.25 ± 9.01	13.7	U	EPA 901.1
CINT	2238A	11-Apr-23	Beryllium-7	11.9 ± 13	22.3	U	EPA 901.1
CINT	2238A	11-Apr-23	Beta, gross	1.49 ± 0.663	1.05		EPA 900.0/SW846 9310
CINT	2238A	11-Apr-23	Bismuth-212	18.2 ± 22	35.3	U	EPA 901.1
CINT	2238A	11-Apr-23	Bismuth-214	6.58 ± 8.73	5.56	X	EPA 901.1
CINT	2238A	11-Apr-23	Cesium-137	0.443 ± 1.65	2.92	U	EPA 901.1
CINT	2238A	11-Apr-23	Cobalt-60	1.3 ± 1.73	3.22	U	EPA 901.1
CINT	2238A	11-Apr-23	Lead-212	-2.75 ± 4.83	5.42	U	EPA 901.1
CINT	2238A	11-Apr-23	Lead-214	11 ± 9.39	11	U	EPA 901.1
CINT	2238A	11-Apr-23	Neptunium-237	-0.399 ± 2.66	4.78	U	EPA 901.1
CINT	2238A	11-Apr-23	Potassium-40	-22.6 ± 37.7	43.6	U	EPA 901.1
CINT	2238A	11-Apr-23	Radium-223	-6.61 ± 28	49.9	U	EPA 901.1
CINT	2238A	11-Apr-23	Radium-224	-30.3 ± 33.5	48	U	EPA 901.1
CINT	2238A	11-Apr-23	Radium-226	3.96 ± 68.4	49.2	U	EPA 901.1
CINT	2238A	11-Apr-23	Radium-228	1.19 ± 14.9	13.4	U	EPA 901.1
CINT	2238A	11-Apr-23	Sodium-22	-1.11 ± 1.59	2.59	U	EPA 901.1
CINT	2238A	11-Apr-23	Thorium-227	-6.16 ± 12.4	19.3	U	EPA 901.1
CINT	2238A	11-Apr-23	Thorium-231	-7.62 ± 34.5	36.3	U	EPA 901.1
CINT	2238A	11-Apr-23	Thorium-234	44.7 ± 154	163	U	EPA 901.1
CINT	2238A	11-Apr-23	Tritium	-20.8 ± 115	229	U	EPA 906.0 Modified
CINT	2238A	11-Apr-23	Uranium-235	2.65 ± 17.8	15.3	U	EPA 901.1
CINT	2238A	11-Apr-23	Uranium-238	44.7 ± 154	163	U	EPA 901.1
CINT	2238A	12-Apr-23	Actinium-228	18.9 ± 15.4	9.39	X	EPA 901.1
CINT	2238A	12-Apr-23	Alpha, gross	-0.174 ± 0.765	1.41	U	EPA 900.0/SW846 9310
CINT	2238A	12-Apr-23	Americium-241	6.04 ± 9.32	14.7	U	EPA 901.1
CINT	2238A	12-Apr-23	Beryllium-7	0.277 ± 12.8	22.6	U	EPA 901.1
CINT	2238A	12-Apr-23	Beta, gross	2.14 ± 0.874	1.4		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	12-Apr-23	Bismuth-212	5.49 ± 22	38.6	U	EPA 901.1
CINT	2238A	12-Apr-23	Bismuth-214	1.89 ± 9.87	5.97	U	EPA 901.1
CINT	2238A	12-Apr-23	Cesium-137	-0.507 ± 1.67	2.83	U	EPA 901.1
CINT	2238A	12-Apr-23	Cobalt-60	1.11 ± 1.73	3.21	U	EPA 901.1
CINT	2238A	12-Apr-23	Lead-212	-0.51 ± 5.02	5.77	U	EPA 901.1
CINT	2238A	12-Apr-23	Lead-214	14.2 ± 9.41	14.2	U	EPA 901.1
CINT	2238A	12-Apr-23	Neptunium-237	-0.923 ± 3.03	5.33	U	EPA 901.1
CINT	2238A	12-Apr-23	Potassium-40	-60.7 ± 48.4	50.1	U	EPA 901.1
CINT	2238A	12-Apr-23	Radium-223	2.02 ± 29.2	52.5	U	EPA 901.1
CINT	2238A	12-Apr-23	Radium-224	48.7 ± 36.3	63.3	U	EPA 901.1
CINT	2238A	12-Apr-23	Radium-226	23.4 ± 79.6	53.4	U	EPA 901.1
CINT	2238A	12-Apr-23	Radium-228	18.9 ± 15.4	9.39	X	EPA 901.1
CINT	2238A	12-Apr-23	Sodium-22	-0.79 ± 1.51	2.57	U	EPA 901.1
CINT	2238A	12-Apr-23	Thorium-227	-2.54 ± 11.6	20.6	U	EPA 901.1
CINT	2238A	12-Apr-23	Thorium-231	1.77 ± 41	35.2	U	EPA 901.1
CINT	2238A	12-Apr-23	Thorium-234	199 ± 220	199	U	EPA 901.1
CINT	2238A	12-Apr-23	Tritium	-41.1 ± 112	230	U	EPA 906.0 Modified
CINT	2238A	12-Apr-23	Uranium-235	6.79 ± 21	16.7	U	EPA 901.1
CINT	2238A	12-Apr-23	Uranium-238	199 ± 220	199	U	EPA 901.1
CINT	2238A	13-Apr-23	Actinium-228	-5.72 ± 11.4	13.9	U	EPA 901.1
CINT	2238A	13-Apr-23	Alpha, gross	1.33 ± 1.83	3.11	U	EPA 900.0/SW846 9310
CINT	2238A	13-Apr-23	Americium-241	3.02 ± 4.01	6.97	U	EPA 901.1
CINT	2238A	13-Apr-23	Beryllium-7	-3.66 ± 11.9	21.2	U	EPA 901.1
CINT	2238A	13-Apr-23	Beta, gross	3.11 ± 2.25	3.7	U	EPA 900.0/SW846 9310
CINT	2238A	13-Apr-23	Bismuth-212	30.6 ± 42.9	36.6	U	EPA 901.1
CINT	2238A	13-Apr-23	Bismuth-214	15.6 ± 9.9	5.39		EPA 901.1
CINT	2238A	13-Apr-23	Cesium-137	0.702 ± 1.61	2.95	U	EPA 901.1
CINT	2238A	13-Apr-23	Cobalt-60	0.773 ± 1.81	3.27	U	EPA 901.1
CINT	2238A	13-Apr-23	Lead-212	-2.94 ± 5.39	6.3	U	EPA 901.1
CINT	2238A	13-Apr-23	Lead-214	14.1 ± 8.74	8.08	X	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	13-Apr-23	Neptunium-237	-0.913 ± 3	4.93	U	EPA 901.1
CINT	2238A	13-Apr-23	Potassium-40	-40.2 ± 38.5	53.9	U	EPA 901.1
CINT	2238A	13-Apr-23	Radium-223	2.97 ± 29.9	50.5	U	EPA 901.1
CINT	2238A	13-Apr-23	Radium-224	-97.8 ± 55.8	49.9	U	EPA 901.1
CINT	2238A	13-Apr-23	Radium-226	29.8 ± 71.5	50.8	U	EPA 901.1
CINT	2238A	13-Apr-23	Radium-228	-5.72 ± 11.4	13.9	U	EPA 901.1
CINT	2238A	13-Apr-23	Sodium-22	0.103 ± 1.61	2.88	U	EPA 901.1
CINT	2238A	13-Apr-23	Thorium-227	10.8 ± 24.2	21.3	U	EPA 901.1
CINT	2238A	13-Apr-23	Thorium-231	-10.2 ± 28.5	30.5	U	EPA 901.1
CINT	2238A	13-Apr-23	Thorium-234	1.84 ± 84	63	U	EPA 901.1
CINT	2238A	13-Apr-23	Tritium	-8.61 ± 104	198	U	EPA 906.0 Modified
CINT	2238A	13-Apr-23	Uranium-235	-15.9 ± 18.2	16.8	U	EPA 901.1
CINT	2238A	13-Apr-23	Uranium-238	1.84 ± 84	63	U	EPA 901.1
CINT	2238A	14-Apr-23	Actinium-228	-2.29 ± 12	13	U	EPA 901.1
CINT	2238A	14-Apr-23	Alpha, gross	0.374 ± 0.83	1.45	U	EPA 900.0/SW846 9310
CINT	2238A	14-Apr-23	Americium-241	2.18 ± 5.6	9.58	U	EPA 901.1
CINT	2238A	14-Apr-23	Beryllium-7	-4.81 ± 14	23.8	U	EPA 901.1
CINT	2238A	14-Apr-23	Beta, gross	0.782 ± 0.784	1.31	U	EPA 900.0/SW846 9310
CINT	2238A	14-Apr-23	Bismuth-212	48.4 ± 36.6	35.4	X	EPA 901.1
CINT	2238A	14-Apr-23	Bismuth-214	9.84 ± 8.16	5.38		EPA 901.1
CINT	2238A	14-Apr-23	Cesium-137	-0.835 ± 2.56	2.92	U	EPA 901.1
CINT	2238A	14-Apr-23	Cobalt-60	0.0165 ± 1.68	3.07	U	EPA 901.1
CINT	2238A	14-Apr-23	Lead-212	0.966 ± 7.45	5.83	U	EPA 901.1
CINT	2238A	14-Apr-23	Lead-214	4.4 ± 7.65	6.61	U	EPA 901.1
CINT	2238A	14-Apr-23	Neptunium-237	-0.605 ± 2.83	4.97	U	EPA 901.1
CINT	2238A	14-Apr-23	Potassium-40	6.72 ± 42.7	26.5	U	EPA 901.1
CINT	2238A	14-Apr-23	Radium-223	-12.8 ± 28.2	48	U	EPA 901.1
CINT	2238A	14-Apr-23	Radium-224	26.6 ± 30.6	47.6	U	EPA 901.1
CINT	2238A	14-Apr-23	Radium-226	16.9 ± 68.5	48.5	U	EPA 901.1
CINT	2238A	14-Apr-23	Radium-228	-2.29 ± 12	13	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	14-Apr-23	Sodium-22	0.107 ± 1.62	2.78	U	EPA 901.1
CINT	2238A	14-Apr-23	Thorium-227	-1.71 ± 10.7	19.1	U	EPA 901.1
CINT	2238A	14-Apr-23	Thorium-231	-13.3 ± 29.8	30.7	U	EPA 901.1
CINT	2238A	14-Apr-23	Thorium-234	-58.3 ± 83.8	113	U	EPA 901.1
CINT	2238A	14-Apr-23	Tritium	-52.8 ± 99	200	U	EPA 906.0 Modified
CINT	2238A	14-Apr-23	Uranium-235	-0.233 ± 14.2	16	U	EPA 901.1
CINT	2238A	14-Apr-23	Uranium-238	-58.3 ± 83.8	113	U	EPA 901.1
WW001	2069A	11-Apr-23	Actinium-228	-14.2 ± 14.7	16.8	U	EPA 901.1
WW001	2069A	11-Apr-23	Alpha, gross	2.82 ± 2.02	3.27	U	EPA 900.0/SW846 9310
WW001	2069A	11-Apr-23	Americium-241	5.62 ± 14.5	22.1	U	EPA 901.1
WW001	2069A	11-Apr-23	Beryllium-7	6.57 ± 16.1	28.4	U	EPA 901.1
WW001	2069A	11-Apr-23	Beta, gross	7.55 ± 1.21	1.62		EPA 900.0/SW846 9310
WW001	2069A	11-Apr-23	Bismuth-212	22 ± 32.2	53.4	U	EPA 901.1
WW001	2069A	11-Apr-23	Bismuth-214	1.04 ± 8.44	7.63	U	EPA 901.1
WW001	2069A	11-Apr-23	Cesium-137	1.64 ± 5.08	3.61	U	EPA 901.1
WW001	2069A	11-Apr-23	Cobalt-60	-1.22 ± 2.71	4	U	EPA 901.1
WW001	2069A	11-Apr-23	Lead-212	-0.942 ± 5.73	7	U	EPA 901.1
WW001	2069A	11-Apr-23	Lead-214	11.6 ± 8.39	8.93	X	EPA 901.1
WW001	2069A	11-Apr-23	Neptunium-237	-0.829 ± 3.8	6.57	U	EPA 901.1
WW001	2069A	11-Apr-23	Potassium-40	13.5 ± 57.8	41.4	U	EPA 901.1
WW001	2069A	11-Apr-23	Radium-223	-17.5 ± 52.1	61.8	U	EPA 901.1
WW001	2069A	11-Apr-23	Radium-224	-87.4 ± 54.5	59.4	U	EPA 901.1
WW001	2069A	11-Apr-23	Radium-226	21.2 ± 102	64.6	U	EPA 901.1
WW001	2069A	11-Apr-23	Radium-228	-14.2 ± 14.7	16.8	U	EPA 901.1
WW001	2069A	11-Apr-23	Sodium-22	-2.76 ± 3.53	3.65	U	EPA 901.1
WW001	2069A	11-Apr-23	Thorium-227	4.09 ± 14.5	25.6	U	EPA 901.1
WW001	2069A	11-Apr-23	Thorium-231	21.3 ± 33.6	53.6	U	EPA 901.1
WW001	2069A	11-Apr-23	Thorium-234	25.7 ± 269	229	U	EPA 901.1
WW001	2069A	11-Apr-23	Tritium	-61.6 ± 109	231	U	EPA 906.0 Modified
WW001	2069A	11-Apr-23	Uranium-235	-13.6 ± 20.6	22.6	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	11-Apr-23	Uranium-238	25.7 ± 269	229	U	EPA 901.1
WW001	2069A	12-Apr-23	Actinium-228	-5.21 ± 11.5	14.6	U	EPA 901.1
WW001	2069A	12-Apr-23	Alpha, gross	1.48 ± 1.54	2.55	U	EPA 900.0/SW846 9310
WW001	2069A	12-Apr-23	Americium-241	-3.45 ± 7.21	11.4	U	EPA 901.1
WW001	2069A	12-Apr-23	Beryllium-7	-3.33 ± 12.4	21.6	U	EPA 901.1
WW001	2069A	12-Apr-23	Beta, gross	8.22 ± 1.19	1.43		EPA 900.0/SW846 9310
WW001	2069A	12-Apr-23	Bismuth-212	4.05 ± 24.8	43.2	U	EPA 901.1
WW001	2069A	12-Apr-23	Bismuth-214	3.55 ± 8.22	6.15	U	EPA 901.1
WW001	2069A	12-Apr-23	Cesium-137	-0.819 ± 3.64	4.24	U	EPA 901.1
WW001	2069A	12-Apr-23	Cobalt-60	0.637 ± 1.78	3.31	U	EPA 901.1
WW001	2069A	12-Apr-23	Lead-212	-1.6 ± 4.34	6.16	U	EPA 901.1
WW001	2069A	12-Apr-23	Lead-214	0.43 ± 7.08	6.84	U	EPA 901.1
WW001	2069A	12-Apr-23	Neptunium-237	-1.08 ± 3.02	5.3	U	EPA 901.1
WW001	2069A	12-Apr-23	Potassium-40	11.4 ± 51.8	31.8	U	EPA 901.1
WW001	2069A	12-Apr-23	Radium-223	4.31 ± 29.9	54.1	U	EPA 901.1
WW001	2069A	12-Apr-23	Radium-224	-131 ± 76.9	50.9	U	EPA 901.1
WW001	2069A	12-Apr-23	Radium-226	-9.92 ± 63.6	77.5	U	EPA 901.1
WW001	2069A	12-Apr-23	Radium-228	-5.21 ± 11.5	14.6	U	EPA 901.1
WW001	2069A	12-Apr-23	Sodium-22	1.29 ± 1.78	3.3	U	EPA 901.1
WW001	2069A	12-Apr-23	Thorium-227	-2.76 ± 13	21	U	EPA 901.1
WW001	2069A	12-Apr-23	Thorium-231	9.49 ± 37.5	31.5	U	EPA 901.1
WW001	2069A	12-Apr-23	Thorium-234	22.5 ± 111	96.5	U	EPA 901.1
WW001	2069A	12-Apr-23	Tritium	-51.3 ± 110	231	U	EPA 906.0 Modified
WW001	2069A	12-Apr-23	Uranium-235	-4.49 ± 16.3	17.8	U	EPA 901.1
WW001	2069A	12-Apr-23	Uranium-238	22.5 ± 111	96.5	U	EPA 901.1
WW001	2069A	13-Apr-23	Actinium-228	5.96 ± 13.4	12.1	U	EPA 901.1
WW001	2069A	13-Apr-23	Alpha, gross	1.02 ± 1.33	2.25	U	EPA 900.0/SW846 9310
WW001	2069A	13-Apr-23	Americium-241	1.5 ± 6.03	9.83	U	EPA 901.1
WW001	2069A	13-Apr-23	Beryllium-7	4.96 ± 10.4	18.7	U	EPA 901.1
WW001	2069A	13-Apr-23	Beta, gross	9.3 ± 1.29	1.68		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	13-Apr-23	Bismuth-212	18.8 ± 22.1	38.2	U	EPA 901.1
WW001	2069A	13-Apr-23	Bismuth-214	7.1 ± 6.94	5.1	X	EPA 901.1
WW001	2069A	13-Apr-23	Cesium-137	1.09 ± 1.67	2.93	U	EPA 901.1
WW001	2069A	13-Apr-23	Cobalt-60	0.182 ± 1.54	2.9	U	EPA 901.1
WW001	2069A	13-Apr-23	Lead-212	0.0267 ± 5.77	3.98	U	EPA 901.1
WW001	2069A	13-Apr-23	Lead-214	4.04 ± 6.37	5.34	U	EPA 901.1
WW001	2069A	13-Apr-23	Neptunium-237	0.229 ± 2.48	4.52	U	EPA 901.1
WW001	2069A	13-Apr-23	Potassium-40	-36.1 ± 36	41.9	U	EPA 901.1
WW001	2069A	13-Apr-23	Radium-223	-29.3 ± 28.6	43.2	U	EPA 901.1
WW001	2069A	13-Apr-23	Radium-224	36.7 ± 34.3	42	U	EPA 901.1
WW001	2069A	13-Apr-23	Radium-226	12 ± 64.4	42.5	U	EPA 901.1
WW001	2069A	13-Apr-23	Radium-228	5.96 ± 13.4	12.1	U	EPA 901.1
WW001	2069A	13-Apr-23	Sodium-22	-0.479 ± 1.47	2.62	U	EPA 901.1
WW001	2069A	13-Apr-23	Thorium-227	-3.42 ± 11	17.7	U	EPA 901.1
WW001	2069A	13-Apr-23	Thorium-231	0.205 ± 25.3	29.8	U	EPA 901.1
WW001	2069A	13-Apr-23	Thorium-234	-3.27 ± 117	108	U	EPA 901.1
WW001	2069A	13-Apr-23	Tritium	-4.13 ± 104	198	U	EPA 906.0 Modified
WW001	2069A	13-Apr-23	Uranium-235	-11.2 ± 13.8	14.5	U	EPA 901.1
WW001	2069A	13-Apr-23	Uranium-238	-3.27 ± 117	108	U	EPA 901.1
WW001	2069A	14-Apr-23	Actinium-228	8.19 ± 17.5	10.4	U	EPA 901.1
WW001	2069A	14-Apr-23	Alpha, gross	0.238 ± 1.12	2.02	U	EPA 900.0/SW846 9310
WW001	2069A	14-Apr-23	Americium-241	2.23 ± 4.01	7.14	U	EPA 901.1
WW001	2069A	14-Apr-23	Beryllium-7	-1.78 ± 13.8	25.2	U	EPA 901.1
WW001	2069A	14-Apr-23	Beta, gross	8.62 ± 1.66	2.39		EPA 900.0/SW846 9310
WW001	2069A	14-Apr-23	Bismuth-212	31.1 ± 48.2	39.3	U	EPA 901.1
WW001	2069A	14-Apr-23	Bismuth-214	-0.965 ± 6.52	8.18	U	EPA 901.1
WW001	2069A	14-Apr-23	Cesium-137	-0.588 ± 1.53	2.67	U	EPA 901.1
WW001	2069A	14-Apr-23	Cobalt-60	0.626 ± 1.75	3.17	U	EPA 901.1
WW001	2069A	14-Apr-23	Lead-212	6.02 ± 6.39	4.37	X	EPA 901.1
WW001	2069A	14-Apr-23	Lead-214	-8.32 ± 8.51	6.77	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	14-Apr-23	Neptunium-237	1.75 ± 3.03	5.1	U	EPA 901.1
WW001	2069A	14-Apr-23	Potassium-40	6.72 ± 47.8	27.6	U	EPA 901.1
WW001	2069A	14-Apr-23	Radium-223	11.1 ± 30.2	51.2	U	EPA 901.1
WW001	2069A	14-Apr-23	Radium-224	47 ± 41	46.8	X	EPA 901.1
WW001	2069A	14-Apr-23	Radium-226	-56.7 ± 69.1	67.9	U	EPA 901.1
WW001	2069A	14-Apr-23	Radium-228	8.19 ± 17.5	10.4	U	EPA 901.1
WW001	2069A	14-Apr-23	Sodium-22	-0.176 ± 1.55	2.72	U	EPA 901.1
WW001	2069A	14-Apr-23	Thorium-227	-7.73 ± 11.9	18.7	U	EPA 901.1
WW001	2069A	14-Apr-23	Thorium-231	10.6 ± 17.6	30.7	U	EPA 901.1
WW001	2069A	14-Apr-23	Thorium-234	-29.9 ± 73.7	78.5	U	EPA 901.1
WW001	2069A	14-Apr-23	Tritium	-70 ± 95.2	199	U	EPA 906.0 Modified
WW001	2069A	14-Apr-23	Uranium-235	10.2 ± 18.3	18	U	EPA 901.1
WW001	2069A	14-Apr-23	Uranium-238	-29.9 ± 73.7	78.5	U	EPA 901.1
WW006	2069F	11-Apr-23	Actinium-228	3.51 ± 16.6	12.6	U	EPA 901.1
WW006	2069F	11-Apr-23	Alpha, gross	2.03 ± 1.43	2.26	U	EPA 900.0/SW846 9310
WW006	2069F	11-Apr-23	Americium-241	-5.51 ± 15	26.3	U	EPA 901.1
WW006	2069F	11-Apr-23	Beryllium-7	0.688 ± 16.2	29.1	U	EPA 901.1
WW006	2069F	11-Apr-23	Beta, gross	21.5 ± 1.73	1.85		EPA 900.0/SW846 9310
WW006	2069F	11-Apr-23	Bismuth-212	13 ± 28.2	50.1	U	EPA 901.1
WW006	2069F	11-Apr-23	Bismuth-214	2.49 ± 10.8	6.54	U	EPA 901.1
WW006	2069F	11-Apr-23	Cesium-137	0.535 ± 2.08	3.72	U	EPA 901.1
WW006	2069F	11-Apr-23	Cobalt-60	0.611 ± 2.05	3.84	U	EPA 901.1
WW006	2069F	11-Apr-23	Lead-212	3.51 ± 8.81	5.59	U	EPA 901.1
WW006	2069F	11-Apr-23	Lead-214	-1.01 ± 6.78	8.29	U	EPA 901.1
WW006	2069F	11-Apr-23	Neptunium-237	0.525 ± 3.83	6.53	U	EPA 901.1
WW006	2069F	11-Apr-23	Potassium-40	45.6 ± 56.3	39.9	X	EPA 901.1
WW006	2069F	11-Apr-23	Radium-223	14.6 ± 37.7	64.1	U	EPA 901.1
WW006	2069F	11-Apr-23	Radium-224	60.6 ± 49.2	66.4	U	EPA 901.1
WW006	2069F	11-Apr-23	Radium-226	33.6 ± 101	62.9	U	EPA 901.1
WW006	2069F	11-Apr-23	Radium-228	3.51 ± 16.6	12.6	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	11-Apr-23	Sodium-22	1.2 ± 2.08	3.89	U	EPA 901.1
WW006	2069F	11-Apr-23	Thorium-227	-16.5 ± 16.9	24.2	U	EPA 901.1
WW006	2069F	11-Apr-23	Thorium-231	13.7 ± 47.2	49.2	U	EPA 901.1
WW006	2069F	11-Apr-23	Thorium-234	-125 ± 227	257	U	EPA 901.1
WW006	2069F	11-Apr-23	Tritium	-41.8 ± 110	227	U	EPA 906.0 Modified
WW006	2069F	11-Apr-23	Uranium-235	1.98 ± 26.3	20.1	U	EPA 901.1
WW006	2069F	11-Apr-23	Uranium-238	-125 ± 227	257	U	EPA 901.1
WW006	2069F	12-Apr-23	Actinium-228	-12 ± 12.5	13.8	U	EPA 901.1
WW006	2069F	12-Apr-23	Alpha, gross	0.975 ± 1.34	2.28	U	EPA 900.0/SW846 9310
WW006	2069F	12-Apr-23	Americium-241	1.93 ± 9.02	16.2	U	EPA 901.1
WW006	2069F	12-Apr-23	Beryllium-7	-8.26 ± 13.1	21.9	U	EPA 901.1
WW006	2069F	12-Apr-23	Beta, gross	21.5 ± 2.03	2.23		EPA 900.0/SW846 9310
WW006	2069F	12-Apr-23	Bismuth-212	24.3 ± 26	44.9	U	EPA 901.1
WW006	2069F	12-Apr-23	Bismuth-214	7.71 ± 7.34	5.49	X	EPA 901.1
WW006	2069F	12-Apr-23	Cesium-137	1.18 ± 1.74	3.12	U	EPA 901.1
WW006	2069F	12-Apr-23	Cobalt-60	0.581 ± 2.52	3.66	U	EPA 901.1
WW006	2069F	12-Apr-23	Lead-212	3.38 ± 6.42	5.97	U	EPA 901.1
WW006	2069F	12-Apr-23	Lead-214	10.9 ± 8.74	10.9	U	EPA 901.1
WW006	2069F	12-Apr-23	Neptunium-237	0.285 ± 3.09	5.16	U	EPA 901.1
WW006	2069F	12-Apr-23	Potassium-40	12 ± 47.8	30.4	U	EPA 901.1
WW006	2069F	12-Apr-23	Radium-223	-30.4 ± 34.8	49.6	U	EPA 901.1
WW006	2069F	12-Apr-23	Radium-224	10.1 ± 31.6	49.3	U	EPA 901.1
WW006	2069F	12-Apr-23	Radium-226	45.1 ± 69.2	48.3	U	EPA 901.1
WW006	2069F	12-Apr-23	Radium-228	-12 ± 12.5	13.8	U	EPA 901.1
WW006	2069F	12-Apr-23	Sodium-22	0.425 ± 1.78	3.4	U	EPA 901.1
WW006	2069F	12-Apr-23	Thorium-227	1.34 ± 12.2	20.5	U	EPA 901.1
WW006	2069F	12-Apr-23	Thorium-231	41.1 ± 28.2	41.1	U	EPA 901.1
WW006	2069F	12-Apr-23	Thorium-234	36.2 ± 151	124	U	EPA 901.1
WW006	2069F	12-Apr-23	Tritium	26 ± 122	229	U	EPA 906.0 Modified
WW006	2069F	12-Apr-23	Uranium-235	0.697 ± 19.5	15.7	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	12-Apr-23	Uranium-238	36.2 ± 151	124	U	EPA 901.1
WW006	2069F	13-Apr-23	Actinium-228	4.65 ± 12	11.8	U	EPA 901.1
WW006	2069F	13-Apr-23	Alpha, gross	2.47 ± 1.36	2.09		EPA 900.0/SW846 9310
WW006	2069F	13-Apr-23	Americium-241	4.92 ± 13.3	21.2	U	EPA 901.1
WW006	2069F	13-Apr-23	Beryllium-7	-8.49 ± 14.1	23	U	EPA 901.1
WW006	2069F	13-Apr-23	Beta, gross	18.2 ± 1.76	1.58		EPA 900.0/SW846 9310
WW006	2069F	13-Apr-23	Bismuth-212	60.2 ± 51.3	36.7	X	EPA 901.1
WW006	2069F	13-Apr-23	Bismuth-214	10.5 ± 9.74	6.35	X	EPA 901.1
WW006	2069F	13-Apr-23	Cesium-137	0.583 ± 2.82	3.35	U	EPA 901.1
WW006	2069F	13-Apr-23	Cobalt-60	0.47 ± 1.87	3.49	U	EPA 901.1
WW006	2069F	13-Apr-23	Lead-212	-0.0973 ± 5.66	6.46	U	EPA 901.1
WW006	2069F	13-Apr-23	Lead-214	12.5 ± 9.5	8.71	X	EPA 901.1
WW006	2069F	13-Apr-23	Neptunium-237	0.474 ± 3.25	5.84	U	EPA 901.1
WW006	2069F	13-Apr-23	Potassium-40	5.93 ± 46.1	31.1	U	EPA 901.1
WW006	2069F	13-Apr-23	Radium-223	13.5 ± 34.4	55.9	U	EPA 901.1
WW006	2069F	13-Apr-23	Radium-224	9.13 ± 47.8	69.5	U	EPA 901.1
WW006	2069F	13-Apr-23	Radium-226	5.43 ± 90.2	55.1	U	EPA 901.1
WW006	2069F	13-Apr-23	Radium-228	4.65 ± 12	11.8	U	EPA 901.1
WW006	2069F	13-Apr-23	Sodium-22	0.859 ± 1.86	3.49	U	EPA 901.1
WW006	2069F	13-Apr-23	Thorium-227	-7.26 ± 17.3	22.7	U	EPA 901.1
WW006	2069F	13-Apr-23	Thorium-231	-1.98 ± 42.8	48.1	U	EPA 901.1
WW006	2069F	13-Apr-23	Thorium-234	175 ± 270	167	X	EPA 901.1
WW006	2069F	13-Apr-23	Tritium	-29.4 ± 101	199	U	EPA 906.0 Modified
WW006	2069F	13-Apr-23	Uranium-235	10.7 ± 22.6	17	U	EPA 901.1
WW006	2069F	13-Apr-23	Uranium-238	175 ± 270	167	X	EPA 901.1
WW006	2069F	14-Apr-23	Actinium-228	15.1 ± 19.1	15.2	U	EPA 901.1
WW006	2069F	14-Apr-23	Alpha, gross	5.25 ± 2.01	2.83		EPA 900.0/SW846 9310
WW006	2069F	14-Apr-23	Americium-241	3.43 ± 6.83	12.1	U	EPA 901.1
WW006	2069F	14-Apr-23	Beryllium-7	1.53 ± 24.1	28.7	U	EPA 901.1
WW006	2069F	14-Apr-23	Beta, gross	19.5 ± 2.83	3.96		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	14-Apr-23	Bismuth-212	56 ± 74.8	39.2	X	EPA 901.1
WW006	2069F	14-Apr-23	Bismuth-214	-4.75 ± 7.87	7.53	U	EPA 901.1
WW006	2069F	14-Apr-23	Cesium-137	-0.808 ± 3.26	4.45	U	EPA 901.1
WW006	2069F	14-Apr-23	Cobalt-60	-0.669 ± 2.65	3.45	U	EPA 901.1
WW006	2069F	14-Apr-23	Lead-212	5.52 ± 7.4	4.89	X	EPA 901.1
WW006	2069F	14-Apr-23	Lead-214	0.101 ± 7.42	6.89	U	EPA 901.1
WW006	2069F	14-Apr-23	Neptunium-237	-0.0456 ± 2.95	5.35	U	EPA 901.1
WW006	2069F	14-Apr-23	Potassium-40	51.4 ± 44.7	29.4		EPA 901.1
WW006	2069F	14-Apr-23	Radium-223	-11.2 ± 34.9	54.9	U	EPA 901.1
WW006	2069F	14-Apr-23	Radium-224	5.35 ± 46.7	53.1	U	EPA 901.1
WW006	2069F	14-Apr-23	Radium-226	6.53 ± 91.3	49.9	U	EPA 901.1
WW006	2069F	14-Apr-23	Radium-228	15.1 ± 19.1	15.2	U	EPA 901.1
WW006	2069F	14-Apr-23	Sodium-22	-0.438 ± 1.74	3.07	U	EPA 901.1
WW006	2069F	14-Apr-23	Thorium-227	0.606 ± 12.7	21	U	EPA 901.1
WW006	2069F	14-Apr-23	Thorium-231	-21.6 ± 31.9	34.4	U	EPA 901.1
WW006	2069F	14-Apr-23	Thorium-234	-9.79 ± 102	136	U	EPA 901.1
WW006	2069F	14-Apr-23	Tritium	-26.4 ± 101	199	U	EPA 906.0 Modified
WW006	2069F	14-Apr-23	Uranium-235	4.86 ± 21.6	14.7	U	EPA 901.1
WW006	2069F	14-Apr-23	Uranium-238	-9.79 ± 102	136	U	EPA 901.1
WW007	2069G	11-Apr-23	Actinium-228	-5.48 ± 12.5	14.8	U	EPA 901.1
WW007	2069G	11-Apr-23	Alpha, gross	2.47 ± 0.738	0.887		EPA 900.0/SW846 9310
WW007	2069G	11-Apr-23	Americium-241	4.84 ± 9.54	15.7	U	EPA 901.1
WW007	2069G	11-Apr-23	Beryllium-7	9.83 ± 16.3	28.1	U	EPA 901.1
WW007	2069G	11-Apr-23	Beta, gross	2.77 ± 1.14	1.83		EPA 900.0/SW846 9310
WW007	2069G	11-Apr-23	Bismuth-212	20.7 ± 25.6	45.6	U	EPA 901.1
WW007	2069G	11-Apr-23	Bismuth-214	7.05 ± 8.34	6.29	X	EPA 901.1
WW007	2069G	11-Apr-23	Cesium-137	1.22 ± 2.4	3.12	U	EPA 901.1
WW007	2069G	11-Apr-23	Cobalt-60	0.154 ± 2.1	3.3	U	EPA 901.1
WW007	2069G	11-Apr-23	Lead-212	3.13 ± 6.33	6.53	U	EPA 901.1
WW007	2069G	11-Apr-23	Lead-214	1.46 ± 7.73	7.84	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	11-Apr-23	Neptunium-237	-3.61 ± 3.69	5.62	U	EPA 901.1
WW007	2069G	11-Apr-23	Potassium-40	-49.8 ± 47.6	50.4	U	EPA 901.1
WW007	2069G	11-Apr-23	Radium-223	1.26 ± 34.4	61.3	U	EPA 901.1
WW007	2069G	11-Apr-23	Radium-224	9.88 ± 33.5	54.9	U	EPA 901.1
WW007	2069G	11-Apr-23	Radium-226	5.12 ± 83.9	60.5	U	EPA 901.1
WW007	2069G	11-Apr-23	Radium-228	-5.48 ± 12.5	14.8	U	EPA 901.1
WW007	2069G	11-Apr-23	Sodium-22	-0.408 ± 1.78	3.08	U	EPA 901.1
WW007	2069G	11-Apr-23	Thorium-227	-3.32 ± 13.1	23.1	U	EPA 901.1
WW007	2069G	11-Apr-23	Thorium-231	3.12 ± 37.4	39.3	U	EPA 901.1
WW007	2069G	11-Apr-23	Thorium-234	-50 ± 143	155	U	EPA 901.1
WW007	2069G	11-Apr-23	Tritium	27.3 ± 122	228	U	EPA 906.0 Modified
WW007	2069G	11-Apr-23	Uranium-235	-13.9 ± 18.6	19.2	U	EPA 901.1
WW007	2069G	11-Apr-23	Uranium-238	-50 ± 143	155	U	EPA 901.1
WW007	2069G	12-Apr-23	Actinium-228	-7.25 ± 12.1	12.2	U	EPA 901.1
WW007	2069G	12-Apr-23	Alpha, gross	1.46 ± 0.688	0.998		EPA 900.0/SW846 9310
WW007	2069G	12-Apr-23	Americium-241	-0.00726 ± 5.8	9.2	U	EPA 901.1
WW007	2069G	12-Apr-23	Beryllium-7	15.2 ± 14	18.4	U	EPA 901.1
WW007	2069G	12-Apr-23	Beta, gross	2.44 ± 1.1	1.78		EPA 900.0/SW846 9310
WW007	2069G	12-Apr-23	Bismuth-212	-8.12 ± 19.7	32.4	U	EPA 901.1
WW007	2069G	12-Apr-23	Bismuth-214	4.97 ± 7.28	6.86	U	EPA 901.1
WW007	2069G	12-Apr-23	Cesium-137	3.39 ± 1.93	2.58	X	EPA 901.1
WW007	2069G	12-Apr-23	Cobalt-60	0.374 ± 1.64	3.05	U	EPA 901.1
WW007	2069G	12-Apr-23	Lead-212	2.1 ± 5.88	3.99	U	EPA 901.1
WW007	2069G	12-Apr-23	Lead-214	2.38 ± 7.41	6.51	U	EPA 901.1
WW007	2069G	12-Apr-23	Neptunium-237	1.97 ± 2.85	4.99	U	EPA 901.1
WW007	2069G	12-Apr-23	Potassium-40	-30.4 ± 34.5	40.4	U	EPA 901.1
WW007	2069G	12-Apr-23	Radium-223	-17.1 ± 28.2	46.8	U	EPA 901.1
WW007	2069G	12-Apr-23	Radium-224	9.5 ± 27	44.1	U	EPA 901.1
WW007	2069G	12-Apr-23	Radium-226	13.8 ± 75.2	44.8	U	EPA 901.1
WW007	2069G	12-Apr-23	Radium-228	-7.25 ± 12.1	12.2	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	12-Apr-23	Sodium-22	0.181 ± 1.64	3.02	U	EPA 901.1
WW007	2069G	12-Apr-23	Thorium-227	-3.82 ± 10.6	18.4	U	EPA 901.1
WW007	2069G	12-Apr-23	Thorium-231	-13.3 ± 26	29.8	U	EPA 901.1
WW007	2069G	12-Apr-23	Thorium-234	53.7 ± 105	79.5	U	EPA 901.1
WW007	2069G	12-Apr-23	Tritium	-37.1 ± 112	230	U	EPA 906.0 Modified
WW007	2069G	12-Apr-23	Uranium-235	-4.61 ± 15	16.3	U	EPA 901.1
WW007	2069G	12-Apr-23	Uranium-238	53.7 ± 105	79.5	U	EPA 901.1
WW007	2069G	13-Apr-23	Actinium-228	2.33 ± 14.8	15.8	U	EPA 901.1
WW007	2069G	13-Apr-23	Alpha, gross	2.02 ± 0.947	1.39		EPA 900.0/SW846 9310
WW007	2069G	13-Apr-23	Americium-241	8.73 ± 17	29.6	U	EPA 901.1
WW007	2069G	13-Apr-23	Beryllium-7	7.67 ± 14.8	26.6	U	EPA 901.1
WW007	2069G	13-Apr-23	Beta, gross	2.1 ± 0.776	1.2		EPA 900.0/SW846 9310
WW007	2069G	13-Apr-23	Bismuth-212	36.2 ± 36.3	44.2	U	EPA 901.1
WW007	2069G	13-Apr-23	Bismuth-214	-12.4 ± 10.8	8.56	U	EPA 901.1
WW007	2069G	13-Apr-23	Cesium-137	-0.624 ± 2.05	3.5	U	EPA 901.1
WW007	2069G	13-Apr-23	Cobalt-60	0.243 ± 2.49	4.1	U	EPA 901.1
WW007	2069G	13-Apr-23	Lead-212	5.8 ± 8.97	5.64	X	EPA 901.1
WW007	2069G	13-Apr-23	Lead-214	12.1 ± 9.1	12.1	U	EPA 901.1
WW007	2069G	13-Apr-23	Neptunium-237	-0.214 ± 3.6	6.52	U	EPA 901.1
WW007	2069G	13-Apr-23	Potassium-40	-71 ± 54.8	60.8	U	EPA 901.1
WW007	2069G	13-Apr-23	Radium-223	-6.14 ± 34.8	62.3	U	EPA 901.1
WW007	2069G	13-Apr-23	Radium-224	3.45 ± 40.3	61.4	U	EPA 901.1
WW007	2069G	13-Apr-23	Radium-226	17.1 ± 97.9	66.2	U	EPA 901.1
WW007	2069G	13-Apr-23	Radium-228	2.33 ± 14.8	15.8	U	EPA 901.1
WW007	2069G	13-Apr-23	Sodium-22	1.4 ± 2.05	3.9	U	EPA 901.1
WW007	2069G	13-Apr-23	Thorium-227	-8.15 ± 16	24.9	U	EPA 901.1
WW007	2069G	13-Apr-23	Thorium-231	15.7 ± 31	49.5	U	EPA 901.1
WW007	2069G	13-Apr-23	Thorium-234	-95.3 ± 219	236	U	EPA 901.1
WW007	2069G	13-Apr-23	Tritium	0.625 ± 106	200	U	EPA 906.0 Modified
WW007	2069G	13-Apr-23	Uranium-235	30.2 ± 20.7	18	X	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	13-Apr-23	Uranium-238	-95.3 ± 219	236	U	EPA 901.1
WW007	2069G	14-Apr-23	Actinium-228	17.8 ± 13.2	11	X	EPA 901.1
WW007	2069G	14-Apr-23	Alpha, gross	1.92 ± 0.927	1.34		EPA 900.0/SW846 9310
WW007	2069G	14-Apr-23	Americium-241	26.5 ± 18.6	15.3	X	EPA 901.1
WW007	2069G	14-Apr-23	Beryllium-7	7.36 ± 14.9	27.1	U	EPA 901.1
WW007	2069G	14-Apr-23	Beta, gross	2.77 ± 1.12	1.81		EPA 900.0/SW846 9310
WW007	2069G	14-Apr-23	Bismuth-212	9.26 ± 24.3	43.7	U	EPA 901.1
WW007	2069G	14-Apr-23	Bismuth-214	4.47 ± 7.45	5.9	U	EPA 901.1
WW007	2069G	14-Apr-23	Cesium-137	0.798 ± 2.73	3.15	U	EPA 901.1
WW007	2069G	14-Apr-23	Cobalt-60	-1.04 ± 2.92	3.45	U	EPA 901.1
WW007	2069G	14-Apr-23	Lead-212	7.06 ± 6.99	7.06	U	EPA 901.1
WW007	2069G	14-Apr-23	Lead-214	0.999 ± 7.35	6.59	U	EPA 901.1
WW007	2069G	14-Apr-23	Neptunium-237	0.573 ± 3.24	5.43	U	EPA 901.1
WW007	2069G	14-Apr-23	Potassium-40	7.47 ± 42.3	30.8	U	EPA 901.1
WW007	2069G	14-Apr-23	Radium-223	-38.1 ± 35.7	47.5	U	EPA 901.1
WW007	2069G	14-Apr-23	Radium-224	14.1 ± 32.1	50	U	EPA 901.1
WW007	2069G	14-Apr-23	Radium-226	13.3 ± 95.6	47.2	U	EPA 901.1
WW007	2069G	14-Apr-23	Radium-228	17.8 ± 13.2	11	X	EPA 901.1
WW007	2069G	14-Apr-23	Sodium-22	-1.52 ± 1.82	2.86	U	EPA 901.1
WW007	2069G	14-Apr-23	Thorium-227	6.58 ± 12.5	20.9	U	EPA 901.1
WW007	2069G	14-Apr-23	Thorium-231	-22.4 ± 31.6	36	U	EPA 901.1
WW007	2069G	14-Apr-23	Thorium-234	12.3 ± 164	130	U	EPA 901.1
WW007	2069G	14-Apr-23	Tritium	-27.9 ± 101	199	U	EPA 906.0 Modified
WW007	2069G	14-Apr-23	Uranium-235	-7.26 ± 15.2	16.8	U	EPA 901.1
WW007	2069G	14-Apr-23	Uranium-238	12.3 ± 164	130	U	EPA 901.1
WW008	2069I	11-Apr-23	Actinium-228	-6.76 ± 12.7	15.5	U	EPA 901.1
WW008	2069I	11-Apr-23	Alpha, gross	0.498 ± 1	1.73	U	EPA 900.0/SW846 9310
WW008	2069I	11-Apr-23	Americium-241	3.06 ± 16.2	27.5	U	EPA 901.1
WW008	2069I	11-Apr-23	Beryllium-7	-15 ± 16.6	25.7	U	EPA 901.1
WW008	2069I	11-Apr-23	Beta, gross	11.4 ± 1.09	1.37		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	11-Apr-23	Bismuth-212	7.45 ± 26	47.1	U	EPA 901.1
WW008	2069I	11-Apr-23	Bismuth-214	0.155 ± 9.37	8.9	U	EPA 901.1
WW008	2069I	11-Apr-23	Cesium-137	0.567 ± 2.11	3.8	U	EPA 901.1
WW008	2069I	11-Apr-23	Cobalt-60	0.104 ± 2.19	4.1	U	EPA 901.1
WW008	2069I	11-Apr-23	Lead-212	3 ± 7.69	6.87	U	EPA 901.1
WW008	2069I	11-Apr-23	Lead-214	-3.93 ± 7.51	8.16	U	EPA 901.1
WW008	2069I	11-Apr-23	Neptunium-237	1.08 ± 4.08	6.84	U	EPA 901.1
WW008	2069I	11-Apr-23	Potassium-40	33.7 ± 57.3	36.8	U	EPA 901.1
WW008	2069I	11-Apr-23	Radium-223	-6.83 ± 39.9	65.4	U	EPA 901.1
WW008	2069I	11-Apr-23	Radium-224	-19 ± 40.7	59.9	U	EPA 901.1
WW008	2069I	11-Apr-23	Radium-226	51.8 ± 98.8	61	U	EPA 901.1
WW008	2069I	11-Apr-23	Radium-228	-6.76 ± 12.7	15.5	U	EPA 901.1
WW008	2069I	11-Apr-23	Sodium-22	-0.0136 ± 2.02	3.79	U	EPA 901.1
WW008	2069I	11-Apr-23	Thorium-227	5.96 ± 15.4	26	U	EPA 901.1
WW008	2069I	11-Apr-23	Thorium-231	26.6 ± 44.7	46.8	U	EPA 901.1
WW008	2069I	11-Apr-23	Thorium-234	495 ± 472	495	U	EPA 901.1
WW008	2069I	11-Apr-23	Tritium	-14.4 ± 116	230	U	EPA 906.0 Modified
WW008	2069I	11-Apr-23	Uranium-235	10.3 ± 12.9	21.4	U	EPA 901.1
WW008	2069I	11-Apr-23	Uranium-238	495 ± 472	495	U	EPA 901.1
WW008	2069I	12-Apr-23	Actinium-228	-10.2 ± 12.4	13.4	U	EPA 901.1
WW008	2069I	12-Apr-23	Alpha, gross	1.01 ± 0.681	1.08	U	EPA 900.0/SW846 9310
WW008	2069I	12-Apr-23	Americium-241	2.93 ± 4.93	7.9	U	EPA 901.1
WW008	2069I	12-Apr-23	Beryllium-7	8.51 ± 12.1	21.1	U	EPA 901.1
WW008	2069I	12-Apr-23	Beta, gross	9.14 ± 1.01	1.35		EPA 900.0/SW846 9310
WW008	2069I	12-Apr-23	Bismuth-212	11.1 ± 22	38.3	U	EPA 901.1
WW008	2069I	12-Apr-23	Bismuth-214	4.38 ± 9.1	7.2	U	EPA 901.1
WW008	2069I	12-Apr-23	Cesium-137	-0.0263 ± 1.61	2.79	U	EPA 901.1
WW008	2069I	12-Apr-23	Cobalt-60	-0.271 ± 1.63	2.89	U	EPA 901.1
WW008	2069I	12-Apr-23	Lead-212	0.419 ± 5.12	5.3	U	EPA 901.1
WW008	2069I	12-Apr-23	Lead-214	-3.8 ± 6.14	6.22	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	12-Apr-23	Neptunium-237	-0.967 ± 2.79	4.87	U	EPA 901.1
WW008	2069I	12-Apr-23	Potassium-40	-13.3 ± 35	46.2	U	EPA 901.1
WW008	2069I	12-Apr-23	Radium-223	0.102 ± 30.2	48.6	U	EPA 901.1
WW008	2069I	12-Apr-23	Radium-224	16.7 ± 29.2	47.2	U	EPA 901.1
WW008	2069I	12-Apr-23	Radium-226	30 ± 77.3	47.6	U	EPA 901.1
WW008	2069I	12-Apr-23	Radium-228	-10.2 ± 12.4	13.4	U	EPA 901.1
WW008	2069I	12-Apr-23	Sodium-22	-.724 ± 1.55	2.64	U	EPA 901.1
WW008	2069I	12-Apr-23	Thorium-227	-2.03 ± 10.6	18.9	U	EPA 901.1
WW008	2069I	12-Apr-23	Thorium-231	10.1 ± 31.8	27.3	U	EPA 901.1
WW008	2069I	12-Apr-23	Thorium-234	11.1 ± 82.5	67.5	U	EPA 901.1
WW008	2069I	12-Apr-23	Tritium	43.1 ± 126	230	U	EPA 906.0 Modified
WW008	2069I	12-Apr-23	Uranium-235	7.41 ± 18.1	13.4	U	EPA 901.1
WW008	2069I	12-Apr-23	Uranium-238	11.1 ± 82.5	67.5	U	EPA 901.1
WW008	2069I	13-Apr-23	Actinium-228	-2.79 ± 16.4	16.9	U	EPA 901.1
WW008	2069I	13-Apr-23	Alpha, gross	1.22 ± 1.03	1.68	U	EPA 900.0/SW846 9310
WW008	2069I	13-Apr-23	Americium-241	0.301 ± 2.87	5.1	U	EPA 901.1
WW008	2069I	13-Apr-23	Beryllium-7	4.17 ± 16.7	29.7	U	EPA 901.1
WW008	2069I	13-Apr-23	Beta, gross	11.1 ± 1.55	2.15		EPA 900.0/SW846 9310
WW008	2069I	13-Apr-23	Bismuth-212	13.1 ± 32.5	56.8	U	EPA 901.1
WW008	2069I	13-Apr-23	Bismuth-214	4.01 ± 13.7	9.14	U	EPA 901.1
WW008	2069I	13-Apr-23	Cesium-137	-0.273 ± 2.41	4.13	U	EPA 901.1
WW008	2069I	13-Apr-23	Cobalt-60	1.58 ± 2.46	4.57	U	EPA 901.1
WW008	2069I	13-Apr-23	Lead-212	5.45 ± 7.18	4.66	X	EPA 901.1
WW008	2069I	13-Apr-23	Lead-214	2.05 ± 9	7.63	U	EPA 901.1
WW008	2069I	13-Apr-23	Neptunium-237	-1.65 ± 3.46	5.94	U	EPA 901.1
WW008	2069I	13-Apr-23	Potassium-40	78.1 ± 70.5	30.1	X	EPA 901.1
WW008	2069I	13-Apr-23	Radium-223	-54.9 ± 71.4	61.1	U	EPA 901.1
WW008	2069I	13-Apr-23	Radium-224	-12.6 ± 35.6	52	U	EPA 901.1
WW008	2069I	13-Apr-23	Radium-226	-82.6 ± 74.1	95.5	U	EPA 901.1
WW008	2069I	13-Apr-23	Radium-228	-2.79 ± 16.4	16.9	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	13-Apr-23	Sodium-22	0.643 ± 2.89	4.66	U	EPA 901.1
WW008	2069I	13-Apr-23	Thorium-227	0.532 ± 12.6	22.1	U	EPA 901.1
WW008	2069I	13-Apr-23	Thorium-231	-22.8 ± 29.6	29	U	EPA 901.1
WW008	2069I	13-Apr-23	Thorium-234	-65.5 ± 74.3	94.3	U	EPA 901.1
WW008	2069I	13-Apr-23	Tritium	-41.2 ± 99	199	U	EPA 906.0 Modified
WW008	2069I	13-Apr-23	Uranium-235	2.76 ± 20.2	19.3	U	EPA 901.1
WW008	2069I	13-Apr-23	Uranium-238	-65.5 ± 74.3	94.3	U	EPA 901.1
WW008	2069I	14-Apr-23	Actinium-228	0.556 ± 19	16.7	U	EPA 901.1
WW008	2069I	14-Apr-23	Alpha, gross	2.88 ± 1.25	1.84		EPA 900.0/SW846 9310
WW008	2069I	14-Apr-23	Americium-241	8.83 ± 10.5	16.6	U	EPA 901.1
WW008	2069I	14-Apr-23	Beryllium-7	4.84 ± 17.9	31.2	U	EPA 901.1
WW008	2069I	14-Apr-23	Beta, gross	7.83 ± 1.7	2.6		EPA 900.0/SW846 9310
WW008	2069I	14-Apr-23	Bismuth-212	35 ± 31.6	52.6	U	EPA 901.1
WW008	2069I	14-Apr-23	Bismuth-214	14 ± 11.4	6.55	X	EPA 901.1
WW008	2069I	14-Apr-23	Cesium-137	0.454 ± 2.07	3.55	U	EPA 901.1
WW008	2069I	14-Apr-23	Cobalt-60	-1.08 ± 2.31	3.78	U	EPA 901.1
WW008	2069I	14-Apr-23	Lead-212	7.46 ± 7.47	5.81	X	EPA 901.1
WW008	2069I	14-Apr-23	Lead-214	-6.55 ± 10.1	8.04	U	EPA 901.1
WW008	2069I	14-Apr-23	Neptunium-237	-0.901 ± 3.49	6.12	U	EPA 901.1
WW008	2069I	14-Apr-23	Potassium-40	44.7 ± 53.5	28.6	X	EPA 901.1
WW008	2069I	14-Apr-23	Radium-223	-16.2 ± 36.3	61.9	U	EPA 901.1
WW008	2069I	14-Apr-23	Radium-224	32.4 ± 40.7	63.6	U	EPA 901.1
WW008	2069I	14-Apr-23	Radium-226	-60.8 ± 76.3	82	U	EPA 901.1
WW008	2069I	14-Apr-23	Radium-228	0.556 ± 19	16.7	U	EPA 901.1
WW008	2069I	14-Apr-23	Sodium-22	-0.631 ± 1.89	3.21	U	EPA 901.1
WW008	2069I	14-Apr-23	Thorium-227	1.88 ± 13.5	24.3	U	EPA 901.1
WW008	2069I	14-Apr-23	Thorium-231	-16.3 ± 33.7	39.9	U	EPA 901.1
WW008	2069I	14-Apr-23	Thorium-234	161 ± 181	164	U	EPA 901.1
WW008	2069I	14-Apr-23	Tritium	24.1 ± 108	199	U	EPA 906.0 Modified
WW008	2069I	14-Apr-23	Uranium-235	-9.06 ± 19.2	20.1	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	14-Apr-23	Uranium-238	161 ± 181	164	U	EPA 901.1
WW011	2069K	11-Apr-23	Actinium-228	-4.37 ± 10.1	13.7	U	EPA 901.1
WW011	2069K	11-Apr-23	Alpha, gross	1.3 ± 1.09	1.77	U	EPA 900.0/SW846 9310
WW011	2069K	11-Apr-23	Americium-241	13.4 ± 13	11.9	X	EPA 901.1
WW011	2069K	11-Apr-23	Beryllium-7	1.26 ± 12.6	22.6	U	EPA 901.1
WW011	2069K	11-Apr-23	Beta, gross	15.3 ± 1.52	1.53		EPA 900.0/SW846 9310
WW011	2069K	11-Apr-23	Bismuth-212	11.7 ± 52.7	40.6	U	EPA 901.1
WW011	2069K	11-Apr-23	Bismuth-214	-6.97 ± 6.81	6.41	U	EPA 901.1
WW011	2069K	11-Apr-23	Cesium-137	2.05 ± 1.98	3.31	U	EPA 901.1
WW011	2069K	11-Apr-23	Cobalt-60	-0.189 ± 1.82	3.31	U	EPA 901.1
WW011	2069K	11-Apr-23	Lead-212	-5.47 ± 6.85	7.2	U	EPA 901.1
WW011	2069K	11-Apr-23	Lead-214	2.33 ± 7.02	6.11	U	EPA 901.1
WW011	2069K	11-Apr-23	Neptunium-237	0.585 ± 2.93	5.33	U	EPA 901.1
WW011	2069K	11-Apr-23	Potassium-40	53.1 ± 58.4	29.9	X	EPA 901.1
WW011	2069K	11-Apr-23	Radium-223	-9.62 ± 28.9	50.8	U	EPA 901.1
WW011	2069K	11-Apr-23	Radium-224	32.5 ± 47.1	44.8	U	EPA 901.1
WW011	2069K	11-Apr-23	Radium-226	-46 ± 60.7	64.1	U	EPA 901.1
WW011	2069K	11-Apr-23	Radium-228	-4.37 ± 10.1	13.7	U	EPA 901.1
WW011	2069K	11-Apr-23	Sodium-22	-0.296 ± 1.7	3.08	U	EPA 901.1
WW011	2069K	11-Apr-23	Thorium-227	-0.792 ± 11	20.1	U	EPA 901.1
WW011	2069K	11-Apr-23	Thorium-231	-30.2 ± 34.3	35.3	U	EPA 901.1
WW011	2069K	11-Apr-23	Thorium-234	64.2 ± 129	131	U	EPA 901.1
WW011	2069K	11-Apr-23	Tritium	15.9 ± 121	229	U	EPA 906.0 Modified
WW011	2069K	11-Apr-23	Uranium-235	10.1 ± 10.8	16	U	EPA 901.1
WW011	2069K	11-Apr-23	Uranium-238	64.2 ± 129	131	U	EPA 901.1
WW011	2069K	12-Apr-23	Actinium-228	-14.1 ± 13.7	11.8	U	EPA 901.1
WW011	2069K	12-Apr-23	Alpha, gross	0.992 ± 1.19	2	U	EPA 900.0/SW846 9310
WW011	2069K	12-Apr-23	Americium-241	-0.956 ± 6.6	10.7	U	EPA 901.1
WW011	2069K	12-Apr-23	Beryllium-7	10.3 ± 12	20.8	U	EPA 901.1
WW011	2069K	12-Apr-23	Beta, gross	20.5 ± 1.97	2.59		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	12-Apr-23	Bismuth-212	18 ± 22.3	38.4	U	EPA 901.1
WW011	2069K	12-Apr-23	Bismuth-214	2.43 ± 7.32	5.33	U	EPA 901.1
WW011	2069K	12-Apr-23	Cesium-137	0.109 ± 1.65	2.62	U	EPA 901.1
WW011	2069K	12-Apr-23	Cobalt-60	-1.33 ± 1.94	2.68	U	EPA 901.1
WW011	2069K	12-Apr-23	Lead-212	2.53 ± 6.1	6.18	U	EPA 901.1
WW011	2069K	12-Apr-23	Lead-214	0.482 ± 7.16	5.95	U	EPA 901.1
WW011	2069K	12-Apr-23	Neptunium-237	-0.0626 ± 2.53	4.6	U	EPA 901.1
WW011	2069K	12-Apr-23	Potassium-40	-6.73 ± 33.5	44.5	U	EPA 901.1
WW011	2069K	12-Apr-23	Radium-223	-6.08 ± 25.4	45.2	U	EPA 901.1
WW011	2069K	12-Apr-23	Radium-224	-0.607 ± 29.6	44.9	U	EPA 901.1
WW011	2069K	12-Apr-23	Radium-226	-30.5 ± 55.8	72.5	U	EPA 901.1
WW011	2069K	12-Apr-23	Radium-228	-14.1 ± 13.7	11.8	U	EPA 901.1
WW011	2069K	12-Apr-23	Sodium-22	0.762 ± 1.6	2.99	U	EPA 901.1
WW011	2069K	12-Apr-23	Thorium-227	-4.29 ± 11	17.5	U	EPA 901.1
WW011	2069K	12-Apr-23	Thorium-231	-12 ± 29.6	33.6	U	EPA 901.1
WW011	2069K	12-Apr-23	Thorium-234	84.9 ± 118	90.8	U	EPA 901.1
WW011	2069K	12-Apr-23	Tritium	-51.7 ± 109	228	U	EPA 906.0 Modified
WW011	2069K	12-Apr-23	Uranium-235	-5.32 ± 12.6	16.6	U	EPA 901.1
WW011	2069K	12-Apr-23	Uranium-238	84.9 ± 118	90.8	U	EPA 901.1
WW011	2069K	13-Apr-23	Actinium-228	-10.1 ± 16.8	16.6	U	EPA 901.1
WW011	2069K	13-Apr-23	Alpha, gross	2.17 ± 1.26	1.98		EPA 900.0/SW846 9310
WW011	2069K	13-Apr-23	Americium-241	12.8 ± 14.2	23.3	U	EPA 901.1
WW011	2069K	13-Apr-23	Beryllium-7	10.3 ± 15.6	26.7	U	EPA 901.1
WW011	2069K	13-Apr-23	Beta, gross	18.3 ± 1.59	1.83		EPA 900.0/SW846 9310
WW011	2069K	13-Apr-23	Bismuth-212	12.5 ± 29.3	52.6	U	EPA 901.1
WW011	2069K	13-Apr-23	Bismuth-214	13.5 ± 8.53	13.5	U	EPA 901.1
WW011	2069K	13-Apr-23	Cesium-137	1.68 ± 2.21	3.92	U	EPA 901.1
WW011	2069K	13-Apr-23	Cobalt-60	-2 ± 2.61	4.01	U	EPA 901.1
WW011	2069K	13-Apr-23	Lead-212	2.41 ± 8.3	7.07	U	EPA 901.1
WW011	2069K	13-Apr-23	Lead-214	2.98 ± 7.86	8.18	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	13-Apr-23	Neptunium-237	0.185 ± 3.51	6.22	U	EPA 901.1
WW011	2069K	13-Apr-23	Potassium-40	57.5 ± 54.1	40.1	X	EPA 901.1
WW011	2069K	13-Apr-23	Radium-223	-31.2 ± 47.5	59.2	U	EPA 901.1
WW011	2069K	13-Apr-23	Radium-224	15.8 ± 36.4	59.1	U	EPA 901.1
WW011	2069K	13-Apr-23	Radium-226	-11.6 ± 65.5	81.5	U	EPA 901.1
WW011	2069K	13-Apr-23	Radium-228	-10.1 ± 16.8	16.6	U	EPA 901.1
WW011	2069K	13-Apr-23	Sodium-22	-0.475 ± 2.33	4.11	U	EPA 901.1
WW011	2069K	13-Apr-23	Thorium-227	-2.77 ± 13.5	23.9	U	EPA 901.1
WW011	2069K	13-Apr-23	Thorium-231	-26.3 ± 36.9	42.3	U	EPA 901.1
WW011	2069K	13-Apr-23	Thorium-234	19.3 ± 219	200	U	EPA 901.1
WW011	2069K	13-Apr-23	Tritium	-42 ± 98.7	199	U	EPA 906.0 Modified
WW011	2069K	13-Apr-23	Uranium-235	13.2 ± 15.8	18.4	U	EPA 901.1
WW011	2069K	13-Apr-23	Uranium-238	19.3 ± 219	200	U	EPA 901.1
WW011	2069K	14-Apr-23	Actinium-228	1.19 ± 12.1	15.1	U	EPA 901.1
WW011	2069K	14-Apr-23	Alpha, gross	2.35 ± 1.36	2.13		EPA 900.0/SW846 9310
WW011	2069K	14-Apr-23	Americium-241	6.12 ± 8.4	14.4	U	EPA 901.1
WW011	2069K	14-Apr-23	Beryllium-7	4.15 ± 16.1	29	U	EPA 901.1
WW011	2069K	14-Apr-23	Beta, gross	25.1 ± 2.32	2.97		EPA 900.0/SW846 9310
WW011	2069K	14-Apr-23	Bismuth-212	11.6 ± 28.1	49.3	U	EPA 901.1
WW011	2069K	14-Apr-23	Bismuth-214	8.67 ± 7.36	5.74	X	EPA 901.1
WW011	2069K	14-Apr-23	Cesium-137	0.34 ± 1.89	3.35	U	EPA 901.1
WW011	2069K	14-Apr-23	Cobalt-60	0.38 ± 1.83	3.44	U	EPA 901.1
WW011	2069K	14-Apr-23	Lead-212	8.65 ± 7.31	8.66	U	EPA 901.1
WW011	2069K	14-Apr-23	Lead-214	-0.911 ± 6.87	7.53	U	EPA 901.1
WW011	2069K	14-Apr-23	Neptunium-237	-0.966 ± 3.63	5.84	U	EPA 901.1
WW011	2069K	14-Apr-23	Potassium-40	22.7 ± 52.1	32.6	U	EPA 901.1
WW011	2069K	14-Apr-23	Radium-223	-9.1 ± 34.4	61.2	U	EPA 901.1
WW011	2069K	14-Apr-23	Radium-224	1.25 ± 34.3	52.6	U	EPA 901.1
WW011	2069K	14-Apr-23	Radium-226	-48.9 ± 65.9	72.7	U	EPA 901.1
WW011	2069K	14-Apr-23	Radium-228	1.19 ± 12.1	15.1	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	14-Apr-23	Sodium-22	0.312 ± 1.65	3.13	U	EPA 901.1
WW011	2069K	14-Apr-23	Thorium-227	0.518 ± 15.2	23.3	U	EPA 901.1
WW011	2069K	14-Apr-23	Thorium-231	3.83 ± 33	38.5	U	EPA 901.1
WW011	2069K	14-Apr-23	Thorium-234	36.6 ± 149	111	U	EPA 901.1
WW011	2069K	14-Apr-23	Tritium	-59.8 ± 98.6	201	U	EPA 906.0 Modified
WW011	2069K	14-Apr-23	Uranium-235	17.4 ± 22.6	19.6	U	EPA 901.1
WW011	2069K	14-Apr-23	Uranium-238	36.6 ± 149	111	U	EPA 901.1

^a Blank cells indicate that the data did not require a data qualifier.

CINT = Center for Integrated Nanotechnologies

MDA = minimal detectable activity or minimum measured activity in a sample required to ensure a 95 percent probability that the measured activity is accurately quantified above the critical level

Laboratory Data Qualifier

* = A replicate was outside limits.

N = A spike was outside limits.

U = The analyte was absent or below the method detection limit.

X = The data was rejected due to the peak not meeting identification criteria.

Analytical Method

EPA 900.0/SW-846 9310 (EPA 1980) (EPA 1986)

EPA 901.1 (EPA 1980)

EPA 906.0 Modified (EPA 1980)

Table E-4. Radiological results for permitted sanitary outfalls, fourth quarter of calendar year 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	10-Oct-23	Actinium-228	-5.61 ± 16.7	20.7	U	EPA 901.1
CINT	2238A	10-Oct-23	Alpha, gross	-0.201 ± 2.5	4.51	U*	EPA 900.0/SW846 9310
CINT	2238A	10-Oct-23	Americium-241	0.0976 ± 3.29	5.26	U	EPA 901.1
CINT	2238A	10-Oct-23	Beryllium-7	-9.23 ± 23.9	39.7	U	EPA 901.1
CINT	2238A	10-Oct-23	Beta, gross	4.67 ± 2.42	3.93		EPA 900.0/SW846 9310
CINT	2238A	10-Oct-23	Bismuth-212	25.8 ± 41.1	74.6	U	EPA 901.1
CINT	2238A	10-Oct-23	Bismuth-214	12.4 ± 9.95	9.08		EPA 901.1
CINT	2238A	10-Oct-23	Cesium-137	5.58 ± 5.28	4.73	X	EPA 901.1
CINT	2238A	10-Oct-23	Cobalt-60	2.15 ± 3.15	5.79	U	EPA 901.1
CINT	2238A	10-Oct-23	Lead-212	0.498 ± 6.18	7.67	U	EPA 901.1
CINT	2238A	10-Oct-23	Lead-214	-5.7 ± 9.54	9.88	U	EPA 901.1
CINT	2238A	10-Oct-23	Neptunium-237	2.3 ± 4.43	7.81	U	EPA 901.1
CINT	2238A	10-Oct-23	Potassium-40	-54.7 ± 61.6	83.3	U	EPA 901.1
CINT	2238A	10-Oct-23	Radium-223	-4.64 ± 41.4	72.7	U	EPA 901.1
CINT	2238A	10-Oct-23	Radium-224	-91.7 ± 57.8	64.3	U	EPA 901.1
CINT	2238A	10-Oct-23	Radium-226	31.9 ± 95	64.9	U	EPA 901.1
CINT	2238A	10-Oct-23	Radium-228	-5.61 ± 16.7	20.7	U	EPA 901.1
CINT	2238A	10-Oct-23	Sodium-22	1.32 ± 2.83	5.28	U	EPA 901.1
CINT	2238A	10-Oct-23	Thorium-227	7.79 ± 16.4	29.1	U	EPA 901.1
CINT	2238A	10-Oct-23	Thorium-231	10.7 ± 35.3	27.6	U	EPA 901.1
CINT	2238A	10-Oct-23	Thorium-234	10.5 ± 64.4	49.4	U	EPA 901.1
CINT	2238A	10-Oct-23	Tritium	30.4 ± 89.5	169	U	EPA 906.0 Modified
CINT	2238A	10-Oct-23	Uranium-235	-9.81 ± 19.1	20.6	U	EPA 901.1
CINT	2238A	10-Oct-23	Uranium-238	10.5 ± 64.4	49.4	U	EPA 901.1
CINT	2238A	11-Oct-23	Actinium-228	5.24 ± 18.7	12.6	U	EPA 901.1
CINT	2238A	11-Oct-23	Alpha, gross	0.423 ± 0.0372	0.602	U*	EPA 900.0/SW846 9310
CINT	2238A	11-Oct-23	Americium-241	7.02 ± 16.8	28.4	U	EPA 901.1
CINT	2238A	11-Oct-23	Beryllium-7	5.7 ± 18	32.8	U	EPA 901.1
CINT	2238A	11-Oct-23	Beta, gross	1.23 ± 0.407	0.63		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	11-Oct-23	Bismuth-212	9.99 ± 30	53.7	U	EPA 901.1
CINT	2238A	11-Oct-23	Bismuth-214	2.81 ± 10.4	7.32	U	EPA 901.1
CINT	2238A	11-Oct-23	Cesium-137	1.44 ± 2.28	4.06	U	EPA 901.1
CINT	2238A	11-Oct-23	Cobalt-60	0.163 ± 2.26	4.23	U	EPA 901.1
CINT	2238A	11-Oct-23	Lead-212	-0.0618 ± 6.23	7.11	U	EPA 901.1
CINT	2238A	11-Oct-23	Lead-214	8.32 ± 12	8.72	U	EPA 901.1
CINT	2238A	11-Oct-23	Neptunium-237	4.06 ± 5.11	7.16	U	EPA 901.1
CINT	2238A	11-Oct-23	Potassium-40	-42.3 ± 52.8	61.9	U	EPA 901.1
CINT	2238A	11-Oct-23	Radium-223	-49.6 ± 44.4	57.9	U	EPA 901.1
CINT	2238A	11-Oct-23	Radium-224	-135 ± 82.4	59.8	U	EPA 901.1
CINT	2238A	11-Oct-23	Radium-226	55.8 ± 89.4	65.1	U	EPA 901.1
CINT	2238A	11-Oct-23	Radium-228	5.24 ± 18.7	12.6	U	EPA 901.1
CINT	2238A	11-Oct-23	Sodium-22	1.36 ± 2.1	4.02	U	EPA 901.1
CINT	2238A	11-Oct-23	Thorium-227	0.925 ± 15.1	25.4	U	EPA 901.1
CINT	2238A	11-Oct-23	Thorium-231	-48.1 ± 53.6	50.9	U	EPA 901.1
CINT	2238A	11-Oct-23	Thorium-234	261 ± 241	202	X	EPA 901.1
CINT	2238A	11-Oct-23	Tritium	-92.6 ± 75.2	192	U	EPA 906.0 Modified
CINT	2238A	11-Oct-23	Uranium-235	10.3 ± 23.3	19.9	U	EPA 901.1
CINT	2238A	11-Oct-23	Uranium-238	261 ± 241	202	X	EPA 901.1
CINT	2238A	12-Oct-23	Actinium-228	-12.8 ± 22.3	24.1	U	EPA 901.1
CINT	2238A	12-Oct-23	Alpha, gross	0.557 ± 1.09	1.92	UN	EPA 900.0/SW846 9310
CINT	2238A	12-Oct-23	Americium-241	0.611 ± 3.39	5.9	U	EPA 901.1
CINT	2238A	12-Oct-23	Beryllium-7	-5.9 ± 25.6	43.7	U	EPA 901.1
CINT	2238A	12-Oct-23	Beta, gross	1.65 ± 1.19	1.95	U	EPA 900.0/SW846 9310
CINT	2238A	12-Oct-23	Bismuth-212	17.5 ± 39.2	73.4	U	EPA 901.1
CINT	2238A	12-Oct-23	Bismuth-214	25.1 ± 14.2	10.5		EPA 901.1
CINT	2238A	12-Oct-23	Cesium-137	1.15 ± 3.24	6.02	U	EPA 901.1
CINT	2238A	12-Oct-23	Cobalt-60	-0.293 ± 3.36	5.99	U	EPA 901.1
CINT	2238A	12-Oct-23	Lead-212	10.6 ± 9.3	6.37		EPA 901.1
CINT	2238A	12-Oct-23	Lead-214	2 ± 15.1	12	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	12-Oct-23	Neptunium-237	7.95 ± 7.74	8.98	U	EPA 901.1
CINT	2238A	12-Oct-23	Potassium-40	-58.7 ± 66.2	84.4	U	EPA 901.1
CINT	2238A	12-Oct-23	Radium-223	-2.22 ± 48.1	85	U	EPA 901.1
CINT	2238A	12-Oct-23	Radium-224	32.6 ± 60.5	66.6	U	EPA 901.1
CINT	2238A	12-Oct-23	Radium-226	3.33 ± 87.3	69.3	U	EPA 901.1
CINT	2238A	12-Oct-23	Radium-228	-12.8 ± 22.3	24.1	U	EPA 901.1
CINT	2238A	12-Oct-23	Sodium-22	-0.592 ± 3.23	5.71	U	EPA 901.1
CINT	2238A	12-Oct-23	Thorium-227	-3.17 ± 17	30.1	U	EPA 901.1
CINT	2238A	12-Oct-23	Thorium-231	-6.1 ± 27	35.5	U	EPA 901.1
CINT	2238A	12-Oct-23	Thorium-234	5.77 ± 60.7	85	U	EPA 901.1
CINT	2238A	12-Oct-23	Tritium	-24.5 ± 94	198	U	EPA 906.0 Modified
CINT	2238A	12-Oct-23	Uranium-235	23.2 ± 20.6	20.4	X	EPA 901.1
CINT	2238A	12-Oct-23	Uranium-238	5.77 ± 60.7	85	U	EPA 901.1
CINT	2238A	13-Oct-23	Actinium-228	-8.1 ± 12	12.2	U	EPA 901.1
CINT	2238A	13-Oct-23	Alpha, gross	-0.785 ± 1.5	2.87	UN	EPA 900.0/SW846 9310
CINT	2238A	13-Oct-23	Americium-241	3.51 ± 12.1	21.6	U	EPA 901.1
CINT	2238A	13-Oct-23	Beryllium-7	-5.61 ± 13.5	23.3	U	EPA 901.1
CINT	2238A	13-Oct-23	Beta, gross	3.53 ± 1.21	1.84		EPA 900.0/SW846 9310
CINT	2238A	13-Oct-23	Bismuth-212	16.8 ± 23.3	41.1	U	EPA 901.1
CINT	2238A	13-Oct-23	Bismuth-214	1.32 ± 7.67	5.53	U	EPA 901.1
CINT	2238A	13-Oct-23	Cesium-137	0.233 ± 1.38	2.5	U	EPA 901.1
CINT	2238A	13-Oct-23	Cobalt-60	0.648 ± 1.74	3.32	U	EPA 901.1
CINT	2238A	13-Oct-23	Lead-212	-3.05 ± 5.15	5.65	U	EPA 901.1
CINT	2238A	13-Oct-23	Lead-214	3.2 ± 7.82	7.06	U	EPA 901.1
CINT	2238A	13-Oct-23	Neptunium-237	-1.71 ± 2.77	4.71	U	EPA 901.1
CINT	2238A	13-Oct-23	Potassium-40	-44.5 ± 43.5	43	U	EPA 901.1
CINT	2238A	13-Oct-23	Radium-223	-12.6 ± 28.4	49.6	U	EPA 901.1
CINT	2238A	13-Oct-23	Radium-224	-92.2 ± 66.5	47.1	U	EPA 901.1
CINT	2238A	13-Oct-23	Radium-226	-82.9 ± 76.1	71.7	U	EPA 901.1
CINT	2238A	13-Oct-23	Radium-228	-8.1 ± 12	12.2	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
CINT	2238A	13-Oct-23	Sodium-22	-0.86 ± 3.02	2.72	U	EPA 901.1
CINT	2238A	13-Oct-23	Thorium-227	-9.15 ± 12.7	18.9	U	EPA 901.1
CINT	2238A	13-Oct-23	Thorium-231	-21.7 ± 40.2	37.6	U	EPA 901.1
CINT	2238A	13-Oct-23	Thorium-234	1.76 ± 207	199	U	EPA 901.1
CINT	2238A	13-Oct-23	Tritium	4.6 ± 99	196	U	EPA 906.0 Modified
CINT	2238A	13-Oct-23	Uranium-235	-7.39 ± 17.3	17.3	U	EPA 901.1
CINT	2238A	13-Oct-23	Uranium-238	1.76 ± 207	199	U	EPA 901.1
WW001	2069A	10-Oct-23	Actinium-228	9.42 ± 12.3	9.07	X	EPA 901.1
WW001	2069A	10-Oct-23	Alpha, gross	1.92 ± 0.994	1.42	*	EPA 900.0/SW846 9310
WW001	2069A	10-Oct-23	Americium-241	-3.96 ± 7.32	11.1	U	EPA 901.1
WW001	2069A	10-Oct-23	Beryllium-7	3.01 ± 12.1	21.8	U	EPA 901.1
WW001	2069A	10-Oct-23	Beta, gross	9.39 ± 1.44	2.1		EPA 900.0/SW846 9310
WW001	2069A	10-Oct-23	Bismuth-212	28.4 ± 26	36.6	U	EPA 901.1
WW001	2069A	10-Oct-23	Bismuth-214	2.13 ± 8.4	4.79	U	EPA 901.1
WW001	2069A	10-Oct-23	Cesium-137	0.629 ± 1.49	2.64	U	EPA 901.1
WW001	2069A	10-Oct-23	Cobalt-60	-2.79 ± 4.5	2.88	U	EPA 901.1
WW001	2069A	10-Oct-23	Lead-212	-0.695 ± 5.93	6.26	U	EPA 901.1
WW001	2069A	10-Oct-23	Lead-214	1.85 ± 7.56	5.64	U	EPA 901.1
WW001	2069A	10-Oct-23	Neptunium-237	-0.263 ± 2.58	4.64	U	EPA 901.1
WW001	2069A	10-Oct-23	Potassium-40	33.4 ± 42.2	26.3	X	EPA 901.1
WW001	2069A	10-Oct-23	Radium-223	-17.1 ± 27.9	46.9	U	EPA 901.1
WW001	2069A	10-Oct-23	Radium-224	-120 ± 64.8	48.1	U	EPA 901.1
WW001	2069A	10-Oct-23	Radium-226	-41.6 ± 63.9	72.8	U	EPA 901.1
WW001	2069A	10-Oct-23	Radium-228	9.42 ± 12.3	9.07	X	EPA 901.1
WW001	2069A	10-Oct-23	Sodium-22	0.157 ± 1.56	2.9	U	EPA 901.1
WW001	2069A	10-Oct-23	Thorium-227	-4.07 ± 10.2	17.9	U	EPA 901.1
WW001	2069A	10-Oct-23	Thorium-231	-2.06 ± 30.3	32.8	U	EPA 901.1
WW001	2069A	10-Oct-23	Thorium-234	-57.8 ± 114	132	U	EPA 901.1
WW001	2069A	10-Oct-23	Tritium	25.5 ± 89.8	172	U	EPA 906.0 Modified
WW001	2069A	10-Oct-23	Uranium-235	12.9 ± 17.9	15.9	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	10-Oct-23	Uranium-238	-57.8 ± 114	132	U	EPA 901.1
WW001	2069A	11-Oct-23	Actinium-228	12.7 ± 21.8	16.7	U	EPA 901.1
WW001	2069A	11-Oct-23	Alpha, gross	1.7 ± 1.02	1.52	*	EPA 900.0/SW846 9310
WW001	2069A	11-Oct-23	Americium-241	-6.63 ± 17.9	28.1	U	EPA 901.1
WW001	2069A	11-Oct-23	Beryllium-7	-11.9 ± 17.7	28.9	U	EPA 901.1
WW001	2069A	11-Oct-23	Beta, gross	9.87 ± 1.23	1.5		EPA 900.0/SW846 9310
WW001	2069A	11-Oct-23	Bismuth-212	1.1 ± 27.3	48.3	U	EPA 901.1
WW001	2069A	11-Oct-23	Bismuth-214	1.3 ± 9.02	8.46	U	EPA 901.1
WW001	2069A	11-Oct-23	Cesium-137	-0.21 ± 2.05	3.6	U	EPA 901.1
WW001	2069A	11-Oct-23	Cobalt-60	0.241 ± 2.09	3.93	U	EPA 901.1
WW001	2069A	11-Oct-23	Lead-212	6.13 ± 8.91	5.74	X	EPA 901.1
WW001	2069A	11-Oct-23	Lead-214	-8.18 ± 9.71	8.16	U	EPA 901.1
WW001	2069A	11-Oct-23	Neptunium-237	5.79 ± 6.03	6.88	U	EPA 901.1
WW001	2069A	11-Oct-23	Potassium-40	-11.9 ± 45.1	64.4	U	EPA 901.1
WW001	2069A	11-Oct-23	Radium-223	-10.3 ± 35.6	63.1	U	EPA 901.1
WW001	2069A	11-Oct-23	Radium-224	-12.1 ± 41	60.5	U	EPA 901.1
WW001	2069A	11-Oct-23	Radium-226	18.5 ± 90	63.1	U	EPA 901.1
WW001	2069A	11-Oct-23	Radium-228	12.7 ± 21.8	16.7	U	EPA 901.1
WW001	2069A	11-Oct-23	Sodium-22	-0.117 ± 1.68	3.17	U	EPA 901.1
WW001	2069A	11-Oct-23	Thorium-227	-4.3 ± 15.7	25.2	U	EPA 901.1
WW001	2069A	11-Oct-23	Thorium-231	9.63 ± 28.8	49.9	U	EPA 901.1
WW001	2069A	11-Oct-23	Thorium-234	64.7 ± 283	234	U	EPA 901.1
WW001	2069A	11-Oct-23	Tritium	38.7 ± 107	198	U	EPA 906.0 Modified
WW001	2069A	11-Oct-23	Uranium-235	5.34 ± 12.2	20.5	U	EPA 901.1
WW001	2069A	11-Oct-23	Uranium-238	64.7 ± 283	234	U	EPA 901.1
WW001	2069A	12-Oct-23	Actinium-228	9.69 ± 10.6	12.6	U	EPA 901.1
WW001	2069A	12-Oct-23	Alpha, gross	4.16 ± 1.27	1.45	N	EPA 900.0/SW846 9310
WW001	2069A	12-Oct-23	Americium-241	0.472 ± 6.66	10.8	U	EPA 901.1
WW001	2069A	12-Oct-23	Beryllium-7	-7.36 ± 13.1	21.6	U	EPA 901.1
WW001	2069A	12-Oct-23	Beta, gross	8.01 ± 1.13	1.4		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	12-Oct-23	Bismuth-212	14.8 ± 21.8	37.9	U	EPA 901.1
WW001	2069A	12-Oct-23	Bismuth-214	-0.888 ± 5.78	6.75	U	EPA 901.1
WW001	2069A	12-Oct-23	Cesium-137	0.341 ± 1.45	2.58	U	EPA 901.1
WW001	2069A	12-Oct-23	Cobalt-60	-0.477 ± 1.59	2.81	U	EPA 901.1
WW001	2069A	12-Oct-23	Lead-212	0.678 ± 6.06	5.96	U	EPA 901.1
WW001	2069A	12-Oct-23	Lead-214	0.087 ± 7.43	5.38	U	EPA 901.1
WW001	2069A	12-Oct-23	Neptunium-237	0.567 ± 2.7	4.44	U	EPA 901.1
WW001	2069A	12-Oct-23	Potassium-40	0.473 ± 40.6	29.1	U	EPA 901.1
WW001	2069A	12-Oct-23	Radium-223	-16.1 ± 26	43.7	U	EPA 901.1
WW001	2069A	12-Oct-23	Radium-224	14.3 ± 30.3	45.9	U	EPA 901.1
WW001	2069A	12-Oct-23	Radium-226	20.8 ± 76	43.2	U	EPA 901.1
WW001	2069A	12-Oct-23	Radium-228	9.69 ± 10.6	12.6	U	EPA 901.1
WW001	2069A	12-Oct-23	Sodium-22	-0.944 ± 1.57	2.61	U	EPA 901.1
WW001	2069A	12-Oct-23	Thorium-227	4.36 ± 10.3	18.6	U	EPA 901.1
WW001	2069A	12-Oct-23	Thorium-231	-15.7 ± 30.2	32.5	U	EPA 901.1
WW001	2069A	12-Oct-23	Thorium-234	31.1 ± 123	128	U	EPA 901.1
WW001	2069A	12-Oct-23	Tritium	24.7 ± 102	194	U	EPA 906.0 Modified
WW001	2069A	12-Oct-23	Uranium-235	-15.2 ± 15.1	15.7	U	EPA 901.1
WW001	2069A	12-Oct-23	Uranium-238	31.1 ± 123	128	U	EPA 901.1
WW001	2069A	13-Oct-23	Actinium-228	-3.82 ± 10.7	12.1	U	EPA 901.1
WW001	2069A	13-Oct-23	Alpha, gross	1.4 ± 0.712	0.962	N	EPA 900.0/SW846 9310
WW001	2069A	13-Oct-23	Americium-241	-4.76 ± 6.95	10.3	U	EPA 901.1
WW001	2069A	13-Oct-23	Beryllium-7	-14.2 ± 21	23.4	U	EPA 901.1
WW001	2069A	13-Oct-23	Beta, gross	7.07 ± 1.24	1.78		EPA 900.0/SW846 9310
WW001	2069A	13-Oct-23	Bismuth-212	7.75 ± 44.4	35.2	U	EPA 901.1
WW001	2069A	13-Oct-23	Bismuth-214	-8.03 ± 9.85	6.64	U	EPA 901.1
WW001	2069A	13-Oct-23	Cesium-137	0.0346 ± 1.56	2.73	U	EPA 901.1
WW001	2069A	13-Oct-23	Cobalt-60	-0.245 ± 1.41	2.57	U	EPA 901.1
WW001	2069A	13-Oct-23	Lead-212	5.86 ± 7.43	6.3	U	EPA 901.1
WW001	2069A	13-Oct-23	Lead-214	-1.17 ± 5.29	5.98	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW001	2069A	13-Oct-23	Neptunium-237	1.66 ± 2.82	4.59	U	EPA 901.1
WW001	2069A	13-Oct-23	Potassium-40	-9.98 ± 29.3	41.7	U	EPA 901.1
WW001	2069A	13-Oct-23	Radium-223	-15 ± 28.7	43.7	U	EPA 901.1
WW001	2069A	13-Oct-23	Radium-224	13.5 ± 30.3	45.9	U	EPA 901.1
WW001	2069A	13-Oct-23	Radium-226	18.7 ± 75.1	46.2	U	EPA 901.1
WW001	2069A	13-Oct-23	Radium-228	-3.82 ± 10.7	12.1	U	EPA 901.1
WW001	2069A	13-Oct-23	Sodium-22	-0.0555 ± 1.54	2.82	U	EPA 901.1
WW001	2069A	13-Oct-23	Thorium-227	-3.26 ± 9.86	17.5	U	EPA 901.1
WW001	2069A	13-Oct-23	Thorium-231	0.887 ± 41.9	30.7	U	EPA 901.1
WW001	2069A	13-Oct-23	Thorium-234	2.29 ± 111	86.7	U	EPA 901.1
WW001	2069A	13-Oct-23	Tritium	-34.5 ± 88	189	U	EPA 906.0 Modified
WW001	2069A	13-Oct-23	Uranium-235	4.37 ± 14.4	14.2	U	EPA 901.1
WW001	2069A	13-Oct-23	Uranium-238	2.29 ± 111	86.7	U	EPA 901.1
WW006	2069F	10-Oct-23	Actinium-228	2.21 ± 17.2	10.5	U	EPA 901.1
WW006	2069F	10-Oct-23	Alpha, gross	16.6 ± 3.58	3.48	*	EPA 900.0/SW846 9310
WW006	2069F	10-Oct-23	Americium-241	1.93 ± 4.99	7.99	U	EPA 901.1
WW006	2069F	10-Oct-23	Beryllium-7	13.3 ± 15.5	23.8	U	EPA 901.1
WW006	2069F	10-Oct-23	Beta, gross	13.1 ± 3.98	6.3		EPA 900.0/SW846 9310
WW006	2069F	10-Oct-23	Bismuth-212	34.5 ± 26.2	40	U	EPA 901.1
WW006	2069F	10-Oct-23	Bismuth-214	9.98 ± 9.24	5.56		EPA 901.1
WW006	2069F	10-Oct-23	Cesium-137	0.914 ± 1.7	2.93	U	EPA 901.1
WW006	2069F	10-Oct-23	Cobalt-60	-2.17 ± 2.02	2.75	U	EPA 901.1
WW006	2069F	10-Oct-23	Lead-212	-3.85 ± 5.2	5.42	U	EPA 901.1
WW006	2069F	10-Oct-23	Lead-214	1.77 ± 7.58	6.89	U	EPA 901.1
WW006	2069F	10-Oct-23	Neptunium-237	2.46 ± 3	5.12	U	EPA 901.1
WW006	2069F	10-Oct-23	Potassium-40	32 ± 44.1	29.2	X	EPA 901.1
WW006	2069F	10-Oct-23	Radium-223	-0.0292 ± 28.4	50.3	U	EPA 901.1
WW006	2069F	10-Oct-23	Radium-224	10.7 ± 53.2	54.7	U	EPA 901.1
WW006	2069F	10-Oct-23	Radium-226	13.5 ± 67	49.1	U	EPA 901.1
WW006	2069F	10-Oct-23	Radium-228	2.21 ± 17.2	10.5	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	10-Oct-23	Sodium-22	0.88 ± 1.73	3.17	U	EPA 901.1
WW006	2069F	10-Oct-23	Thorium-227	-20.2 ± 19.8	18.1	U	EPA 901.1
WW006	2069F	10-Oct-23	Thorium-231	-28.3 ± 31.1	28.7	U	EPA 901.1
WW006	2069F	10-Oct-23	Thorium-234	27.4 ± 90.5	68.8	U	EPA 901.1
WW006	2069F	10-Oct-23	Tritium	20.3 ± 87.3	169	U	EPA 906.0 Modified
WW006	2069F	10-Oct-23	Uranium-235	-7.26 ± 15.2	16	U	EPA 901.1
WW006	2069F	10-Oct-23	Uranium-238	27.4 ± 90.5	68.8	U	EPA 901.1
WW006	2069F	11-Oct-23	Actinium-228	-7.81 ± 13.8	14.6	U	EPA 901.1
WW006	2069F	11-Oct-23	Alpha, gross	2.57 ± 1.45	2.19	*	EPA 900.0/SW846 9310
WW006	2069F	11-Oct-23	Americium-241	-12.1 ± 13.4	12.2	U	EPA 901.1
WW006	2069F	11-Oct-23	Beryllium-7	9.88 ± 14.4	25.5	U	EPA 901.1
WW006	2069F	11-Oct-23	Beta, gross	17.1 ± 2.11	2.55		EPA 900.0/SW846 9310
WW006	2069F	11-Oct-23	Bismuth-212	47.4 ± 31.4	37.3		EPA 901.1
WW006	2069F	11-Oct-23	Bismuth-214	6.5 ± 7.99	5.75	X	EPA 901.1
WW006	2069F	11-Oct-23	Cesium-137	-0.467 ± 1.76	2.99	U	EPA 901.1
WW006	2069F	11-Oct-23	Cobalt-60	1.66 ± 2.07	3.81	U	EPA 901.1
WW006	2069F	11-Oct-23	Lead-212	0.209 ± 7.11	4.76	U	EPA 901.1
WW006	2069F	11-Oct-23	Lead-214	2.08 ± 7.75	6.81	U	EPA 901.1
WW006	2069F	11-Oct-23	Neptunium-237	-0.728 ± 2.78	4.93	U	EPA 901.1
WW006	2069F	11-Oct-23	Potassium-40	5.41 ± 44	55.1	U	EPA 901.1
WW006	2069F	11-Oct-23	Radium-223	-7.53 ± 29.3	51.7	U	EPA 901.1
WW006	2069F	11-Oct-23	Radium-224	36.1 ± 34.1	52	U	EPA 901.1
WW006	2069F	11-Oct-23	Radium-226	-48.3 ± 67.3	66.5	U	EPA 901.1
WW006	2069F	11-Oct-23	Radium-228	-7.81 ± 13.8	14.6	U	EPA 901.1
WW006	2069F	11-Oct-23	Sodium-22	-2.78 ± 2.84	3.16	U	EPA 901.1
WW006	2069F	11-Oct-23	Thorium-227	5.59 ± 11.6	21	U	EPA 901.1
WW006	2069F	11-Oct-23	Thorium-231	-20.9 ± 31.5	34.4	U	EPA 901.1
WW006	2069F	11-Oct-23	Thorium-234	136 ± 189	101	X	EPA 901.1
WW006	2069F	11-Oct-23	Tritium	75.7 ± 114	196	U	EPA 906.0 Modified
WW006	2069F	11-Oct-23	Uranium-235	-19.7 ± 20.3	15.8	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	11-Oct-23	Uranium-238	136 ± 189	101	X	EPA 901.1
WW006	2069F	12-Oct-23	Actinium-228	-6.98 ± 12.5	12.7	U	EPA 901.1
WW006	2069F	12-Oct-23	Alpha, gross	1.45 ± 0.942	1.43	N	EPA 900.0/SW846 9310
WW006	2069F	12-Oct-23	Americium-241	0.306 ± 6.41	9.71	U	EPA 901.1
WW006	2069F	12-Oct-23	Beryllium-7	-3.48 ± 14	23.4	U	EPA 901.1
WW006	2069F	12-Oct-23	Beta, gross	14.3 ± 1.34	1.37		EPA 900.0/SW846 9310
WW006	2069F	12-Oct-23	Bismuth-212	20.7 ± 23.6	41.5	U	EPA 901.1
WW006	2069F	12-Oct-23	Bismuth-214	6.47 ± 7.93	5.53	X	EPA 901.1
WW006	2069F	12-Oct-23	Cesium-137	2.04 ± 1.78	2.99	U	EPA 901.1
WW006	2069F	12-Oct-23	Cobalt-60	2.43 ± 1.97	3.35	U	EPA 901.1
WW006	2069F	12-Oct-23	Lead-212	2.99 ± 4.89	5.31	U	EPA 901.1
WW006	2069F	12-Oct-23	Lead-214	4.33 ± 8.03	6.65	U	EPA 901.1
WW006	2069F	12-Oct-23	Neptunium-237	-2.65 ± 3.17	4.86	U	EPA 901.1
WW006	2069F	12-Oct-23	Potassium-40	-3.65 ± 37	43.7	U	EPA 901.1
WW006	2069F	12-Oct-23	Radium-223	9.06 ± 28.8	50.1	U	EPA 901.1
WW006	2069F	12-Oct-23	Radium-224	46.6 ± 53.5	43.3	X	EPA 901.1
WW006	2069F	12-Oct-23	Radium-226	-58.7 ± 61.4	70.2	U	EPA 901.1
WW006	2069F	12-Oct-23	Radium-228	-6.98 ± 12.5	12.7	U	EPA 901.1
WW006	2069F	12-Oct-23	Sodium-22	-0.175 ± 1.62	2.89	U	EPA 901.1
WW006	2069F	12-Oct-23	Thorium-227	-4.31 ± 11	18.6	U	EPA 901.1
WW006	2069F	12-Oct-23	Thorium-231	-13.3 ± 29.9	32.8	U	EPA 901.1
WW006	2069F	12-Oct-23	Thorium-234	194 ± 139	194	U	EPA 901.1
WW006	2069F	12-Oct-23	Tritium	-39.1 ± 89.8	196	U	EPA 906.0 Modified
WW006	2069F	12-Oct-23	Uranium-235	15 ± 25.5	16.3	U	EPA 901.1
WW006	2069F	12-Oct-23	Uranium-238	194 ± 139	194	U	EPA 901.1
WW006	2069F	13-Oct-23	Actinium-228	5.51 ± 14.3	10.3	U	EPA 901.1
WW006	2069F	13-Oct-23	Alpha, gross	2.19 ± 1.05	1.46	N	EPA 900.0/SW846 9310
WW006	2069F	13-Oct-23	Americium-241	3.85 ± 5.33	7.75	U	EPA 901.1
WW006	2069F	13-Oct-23	Beryllium-7	8.06 ± 15.2	26.5	U	EPA 901.1
WW006	2069F	13-Oct-23	Beta, gross	13.6 ± 1.59	1.97		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW006	2069F	13-Oct-23	Bismuth-212	8.17 ± 22.3	38.6	U	EPA 901.1
WW006	2069F	13-Oct-23	Bismuth-214	-3.56 ± 6.81	7.22	U	EPA 901.1
WW006	2069F	13-Oct-23	Cesium-137	2.05 ± 1.8	2.76	U	EPA 901.1
WW006	2069F	13-Oct-23	Cobalt-60	0.944 ± 1.79	3.27	U	EPA 901.1
WW006	2069F	13-Oct-23	Lead-212	6.47 ± 8.08	6.47	U	EPA 901.1
WW006	2069F	13-Oct-23	Lead-214	6.59 ± 9.21	6.59	U	EPA 901.1
WW006	2069F	13-Oct-23	Neptunium-237	-1.71 ± 2.94	4.91	U	EPA 901.1
WW006	2069F	13-Oct-23	Potassium-40	13.2 ± 45.8	27.2	U	EPA 901.1
WW006	2069F	13-Oct-23	Radium-223	-16.4 ± 28.7	47.9	U	EPA 901.1
WW006	2069F	13-Oct-23	Radium-224	9.84 ± 42.2	49.4	U	EPA 901.1
WW006	2069F	13-Oct-23	Radium-226	17.6 ± 68	48.1	U	EPA 901.1
WW006	2069F	13-Oct-23	Radium-228	5.51 ± 14.3	10.3	U	EPA 901.1
WW006	2069F	13-Oct-23	Sodium-22	-0.0463 ± 1.92	3.01	U	EPA 901.1
WW006	2069F	13-Oct-23	Thorium-227	1.54 ± 11	19.8	U	EPA 901.1
WW006	2069F	13-Oct-23	Thorium-231	1.59 ± 28.9	28.9	U	EPA 901.1
WW006	2069F	13-Oct-23	Thorium-234	55.4 ± 85.1	67.8	U	EPA 901.1
WW006	2069F	13-Oct-23	Tritium	83.8 ± 113	191	U	EPA 906.0 Modified
WW006	2069F	13-Oct-23	Uranium-235	2.89 ± 19.7	13.9	U	EPA 901.1
WW006	2069F	13-Oct-23	Uranium-238	55.4 ± 85.1	67.8	U	EPA 901.1
WW007	2069G	10-Oct-23	Actinium-228	0.594 ± 11.5	15.4	U	EPA 901.1
WW007	2069G	10-Oct-23	Alpha, gross	-0.464 ± 0.873	1.57	U*	EPA 900.0/SW846 9310
WW007	2069G	10-Oct-23	Americium-241	2.46 ± 8.98	15.5	U	EPA 901.1
WW007	2069G	10-Oct-23	Beryllium-7	2.57 ± 14.5	25.7	U	EPA 901.1
WW007	2069G	10-Oct-23	Beta, gross	1.44 ± 0.808	1.32		EPA 900.0/SW846 9310
WW007	2069G	10-Oct-23	Bismuth-212	-27.6 ± 39	40.1	U	EPA 901.1
WW007	2069G	10-Oct-23	Bismuth-214	-2.85 ± 8.71	7.75	U	EPA 901.1
WW007	2069G	10-Oct-23	Cesium-137	-2.87 ± 3.71	3.59	U	EPA 901.1
WW007	2069G	10-Oct-23	Cobalt-60	0.078 ± 1.7	3.13	U	EPA 901.1
WW007	2069G	10-Oct-23	Lead-212	2.88 ± 5.73	6	U	EPA 901.1
WW007	2069G	10-Oct-23	Lead-214	-3 ± 5.75	6.98	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	10-Oct-23	Neptunium-237	10.4 ± 9.67	10.5	U	EPA 901.1
WW007	2069G	10-Oct-23	Potassium-40	-20.4 ± 37.1	50.4	U	EPA 901.1
WW007	2069G	10-Oct-23	Radium-223	-29.9 ± 50.3	52.1	U	EPA 901.1
WW007	2069G	10-Oct-23	Radium-224	2.89 ± 30.5	49.9	U	EPA 901.1
WW007	2069G	10-Oct-23	Radium-226	45.6 ± 88.5	48.8	U	EPA 901.1
WW007	2069G	10-Oct-23	Radium-228	0.594 ± 11.5	15.4	U	EPA 901.1
WW007	2069G	10-Oct-23	Sodium-22	0.284 ± 1.79	2.96	U	EPA 901.1
WW007	2069G	10-Oct-23	Thorium-227	1.75 ± 12.1	21.9	U	EPA 901.1
WW007	2069G	10-Oct-23	Thorium-231	-6.97 ± 36.4	38.8	U	EPA 901.1
WW007	2069G	10-Oct-23	Thorium-234	31.5 ± 154	152	U	EPA 901.1
WW007	2069G	10-Oct-23	Tritium	19.8 ± 86.8	169	U	EPA 906.0 Modified
WW007	2069G	10-Oct-23	Uranium-235	-0.922 ± 18.4	18.2	U	EPA 901.1
WW007	2069G	10-Oct-23	Uranium-238	31.5 ± 154	152	U	EPA 901.1
WW007	2069G	11-Oct-23	Actinium-228	-8.87 ± 17.4	17	U	EPA 901.1
WW007	2069G	11-Oct-23	Alpha, gross	.636 ± 1.06	1.83	U*	EPA 900.0/SW846 9310
WW007	2069G	11-Oct-23	Americium-241	7.84 ± 13.1	21	U	EPA 901.1
WW007	2069G	11-Oct-23	Beryllium-7	12.1 ± 19.3	33.4	U	EPA 901.1
WW007	2069G	11-Oct-23	Beta, gross	1.87 ± 0.616	0.938		EPA 900.0/SW846 9310
WW007	2069G	11-Oct-23	Bismuth-212	23.4 ± 29.4	50.8	U	EPA 901.1
WW007	2069G	11-Oct-23	Bismuth-214	-11.4 ± 11.4	8.96	U	EPA 901.1
WW007	2069G	11-Oct-23	Cesium-137	2.13 ± 6.22	3.56	U	EPA 901.1
WW007	2069G	11-Oct-23	Cobalt-60	-3.44 ± 3.71	3.87	U	EPA 901.1
WW007	2069G	11-Oct-23	Lead-212	1.04 ± 6.94	7.12	U	EPA 901.1
WW007	2069G	11-Oct-23	Lead-214	1.99 ± 8.5	8.32	U	EPA 901.1
WW007	2069G	11-Oct-23	Neptunium-237	0.246 ± 3.56	6.24	U	EPA 901.1
WW007	2069G	11-Oct-23	Potassium-40	-36.1 ± 48.9	56.3	U	EPA 901.1
WW007	2069G	11-Oct-23	Radium-223	-7.56 ± 37	63.5	U	EPA 901.1
WW007	2069G	11-Oct-23	Radium-224	22 ± 38.7	60.4	U	EPA 901.1
WW007	2069G	11-Oct-23	Radium-226	-42.2 ± 77.3	95.9	U	EPA 901.1
WW007	2069G	11-Oct-23	Radium-228	-8.87 ± 17.4	17	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	11-Oct-23	Sodium-22	0.00187 ± 1.91	3.57	U	EPA 901.1
WW007	2069G	11-Oct-23	Thorium-227	-1.52 ± 14.4	25	U	EPA 901.1
WW007	2069G	11-Oct-23	Thorium-231	-21.5 ± 42.7	55	U	EPA 901.1
WW007	2069G	11-Oct-23	Thorium-234	57.5 ± 237	222	U	EPA 901.1
WW007	2069G	11-Oct-23	Tritium	-118 ± 69.4	194	U	EPA 906.0 Modified
WW007	2069G	11-Oct-23	Uranium-235	-7.14 ± 22.7	23.6	U	EPA 901.1
WW007	2069G	11-Oct-23	Uranium-238	57.5 ± 237	222	U	EPA 901.1
WW007	2069G	12-Oct-23	Actinium-228	6.14 ± 15.6	14.5	U	EPA 901.1
WW007	2069G	12-Oct-23	Alpha, gross	1.49 ± 0.857	1.25	N	EPA 900.0/SW846 9310
WW007	2069G	12-Oct-23	Americium-241	-1.37 ± 7.25	8.66	U	EPA 901.1
WW007	2069G	12-Oct-23	Beryllium-7	-4.37 ± 15	25.5	U	EPA 901.1
WW007	2069G	12-Oct-23	Beta, gross	2.37 ± 0.744	1.13		EPA 900.0/SW846 9310
WW007	2069G	12-Oct-23	Bismuth-212	31.2 ± 28.6	46.4	U	EPA 901.1
WW007	2069G	12-Oct-23	Bismuth-214	6.07 ± 8.54	8.91	U	EPA 901.1
WW007	2069G	12-Oct-23	Cesium-137	0.71 ± 2.07	3.24	U	EPA 901.1
WW007	2069G	12-Oct-23	Cobalt-60	0.427 ± 1.94	3.55	U	EPA 901.1
WW007	2069G	12-Oct-23	Lead-212	-1.78 ± 5.04	6.02	U	EPA 901.1
WW007	2069G	12-Oct-23	Lead-214	7.73 ± 9.11	8.07	U	EPA 901.1
WW007	2069G	12-Oct-23	Neptunium-237	0.78 ± 3.19	5.71	U	EPA 901.1
WW007	2069G	12-Oct-23	Potassium-40	-5.29 ± 37.7	50.7	U	EPA 901.1
WW007	2069G	12-Oct-23	Radium-223	1.42 ± 30.5	54.4	U	EPA 901.1
WW007	2069G	12-Oct-23	Radium-224	-153 ± 84.6	51.5	U	EPA 901.1
WW007	2069G	12-Oct-23	Radium-226	-24.3 ± 65.7	72.2	U	EPA 901.1
WW007	2069G	12-Oct-23	Radium-228	6.14 ± 15.6	14.5	U	EPA 901.1
WW007	2069G	12-Oct-23	Sodium-22	2.04 ± 2.24	3.97	U	EPA 901.1
WW007	2069G	12-Oct-23	Thorium-227	-7.23 ± 12.2	20.5	U	EPA 901.1
WW007	2069G	12-Oct-23	Thorium-231	20.9 ± 32.7	29.1	U	EPA 901.1
WW007	2069G	12-Oct-23	Thorium-234	56.1 ± 94.8	102	U	EPA 901.1
WW007	2069G	12-Oct-23	Tritium	-105 ± 72.5	193	U	EPA 906.0 Modified
WW007	2069G	12-Oct-23	Uranium-235	3.74 ± 19.7	17.8	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW007	2069G	12-Oct-23	Uranium-238	56.1 ± 94.8	102	U	EPA 901.1
WW007	2069G	13-Oct-23	Actinium-228	10.1 ± 15.1	10.7	U	EPA 901.1
WW007	2069G	13-Oct-23	Alpha, gross	1.28 ± 0.667	0.93	N	EPA 900.0/SW846 9310
WW007	2069G	13-Oct-23	Americium-241	-2.31 ± 8.98	15.2	U	EPA 901.1
WW007	2069G	13-Oct-23	Beryllium-7	-1.34 ± 16.1	28.2	U	EPA 901.1
WW007	2069G	13-Oct-23	Beta, gross	2.35 ± 0.805	1.25		EPA 900.0/SW846 9310
WW007	2069G	13-Oct-23	Bismuth-212	34.3 ± 30.2	44.4	U	EPA 901.1
WW007	2069G	13-Oct-23	Bismuth-214	2.93 ± 8.38	6	U	EPA 901.1
WW007	2069G	13-Oct-23	Cesium-137	-0.818 ± 3.48	3.87	U	EPA 901.1
WW007	2069G	13-Oct-23	Cobalt-60	0.113 ± 1.69	3.13	U	EPA 901.1
WW007	2069G	13-Oct-23	Lead-212	1.71 ± 5.82	6.01	U	EPA 901.1
WW007	2069G	13-Oct-23	Lead-214	-7.2 ± 7.95	6.99	U	EPA 901.1
WW007	2069G	13-Oct-23	Neptunium-237	-0.608 ± 3.03	5.36	U	EPA 901.1
WW007	2069G	13-Oct-23	Potassium-40	-24.2 ± 38	51.1	U	EPA 901.1
WW007	2069G	13-Oct-23	Radium-223	13.6 ± 31.3	55.8	U	EPA 901.1
WW007	2069G	13-Oct-23	Radium-224	-0.162 ± 32.7	53.2	U	EPA 901.1
WW007	2069G	13-Oct-23	Radium-226	-40.2 ± 67.9	75	U	EPA 901.1
WW007	2069G	13-Oct-23	Radium-228	10.1 ± 15.1	10.7	U	EPA 901.1
WW007	2069G	13-Oct-23	Sodium-22	1.01 ± 1.75	3.26	U	EPA 901.1
WW007	2069G	13-Oct-23	Thorium-227	8.08 ± 12.8	22.4	U	EPA 901.1
WW007	2069G	13-Oct-23	Thorium-231	11.4 ± 47.5	36.9	U	EPA 901.1
WW007	2069G	13-Oct-23	Thorium-234	25.8 ± 129	152	U	EPA 901.1
WW007	2069G	13-Oct-23	Tritium	-51.8 ± 87.7	198	U	EPA 906.0 Modified
WW007	2069G	13-Oct-23	Uranium-235	10.3 ± 24.7	17.9	U	EPA 901.1
WW007	2069G	13-Oct-23	Uranium-238	25.8 ± 129	152	U	EPA 901.1
WW008	2069I	10-Oct-23	Actinium-228	7.27 ± 16.7	14.2	U	EPA 901.1
WW008	2069I	10-Oct-23	Alpha, gross	1.74 ± 0.744	1.05	*	EPA 900.0/SW846 9310
WW008	2069I	10-Oct-23	Americium-241	1.53 ± 8.4	14	U	EPA 901.1
WW008	2069I	10-Oct-23	Beryllium-7	7.6 ± 16.4	26.7	U	EPA 901.1
WW008	2069I	10-Oct-23	Beta, gross	11.3 ± 1.15	1.34		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	10-Oct-23	Bismuth-212	-10.8 ± 25.5	42.6	U	EPA 901.1
WW008	2069I	10-Oct-23	Bismuth-214	1.9 ± 7.33	5.58	U	EPA 901.1
WW008	2069I	10-Oct-23	Cesium-137	-0.155 ± 1.86	3.26	U	EPA 901.1
WW008	2069I	10-Oct-23	Cobalt-60	.954 ± 1.94	3.3	U	EPA 901.1
WW008	2069I	10-Oct-23	Lead-212	10.3 ± 7.97	10.3	U	EPA 901.1
WW008	2069I	10-Oct-23	Lead-214	0.857 ± 6.84	7.46	U	EPA 901.1
WW008	2069I	10-Oct-23	Neptunium-237	-0.508 ± 3.46	5.63	U	EPA 901.1
WW008	2069I	10-Oct-23	Potassium-40	8.47 ± 43.2	32.4	U	EPA 901.1
WW008	2069I	10-Oct-23	Radium-223	8.71 ± 46.1	59.8	U	EPA 901.1
WW008	2069I	10-Oct-23	Radium-224	3.37 ± 35	53.9	U	EPA 901.1
WW008	2069I	10-Oct-23	Radium-226	43.5 ± 80.7	54.4	U	EPA 901.1
WW008	2069I	10-Oct-23	Radium-228	7.27 ± 16.7	14.2	U	EPA 901.1
WW008	2069I	10-Oct-23	Sodium-22	0.474 ± 1.78	3.36	U	EPA 901.1
WW008	2069I	10-Oct-23	Thorium-227	-5.68 ± 14.3	22.8	U	EPA 901.1
WW008	2069I	10-Oct-23	Thorium-231	-5.57 ± 35.1	35.7	U	EPA 901.1
WW008	2069I	10-Oct-23	Thorium-234	46.2 ± 127	140	U	EPA 901.1
WW008	2069I	10-Oct-23	Tritium	38.8 ± 91.5	169	U	EPA 906.0 Modified
WW008	2069I	10-Oct-23	Uranium-235	2.09 ± 16.6	18.1	U	EPA 901.1
WW008	2069I	10-Oct-23	Uranium-238	46.2 ± 127	140	U	EPA 901.1
WW008	2069I	11-Oct-23	Actinium-228	-11 ± 19.3	17.7	U	EPA 901.1
WW008	2069I	11-Oct-23	Alpha, gross	1.29 ± 0.819	1.28	*	EPA 900.0/SW846 9310
WW008	2069I	11-Oct-23	Americium-241	0.361 ± 12.6	20.5	U	EPA 901.1
WW008	2069I	11-Oct-23	Beryllium-7	4.73 ± 19.4	34.1	U	EPA 901.1
WW008	2069I	11-Oct-23	Beta, gross	12.7 ± 1.2	1.53		EPA 900.0/SW846 9310
WW008	2069I	11-Oct-23	Bismuth-212	41.9 ± 68.4	53.6	U	EPA 901.1
WW008	2069I	11-Oct-23	Bismuth-214	-10.3 ± 9.64	9.94	U	EPA 901.1
WW008	2069I	11-Oct-23	Cesium-137	1.56 ± 5.96	3.65	U	EPA 901.1
WW008	2069I	11-Oct-23	Cobalt-60	2.03 ± 2.56	4.57	U	EPA 901.1
WW008	2069I	11-Oct-23	Lead-212	7.28 ± 8.13	8.06	U	EPA 901.1
WW008	2069I	11-Oct-23	Lead-214	-2.61 ± 9.72	9.54	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	11-Oct-23	Neptunium-237	1.78 ± 4	7.1	U	EPA 901.1
WW008	2069I	11-Oct-23	Potassium-40	109 ± 66.4	38.2		EPA 901.1
WW008	2069I	11-Oct-23	Radium-223	-8.46 ± 38.7	67.8	U	EPA 901.1
WW008	2069I	11-Oct-23	Radium-224	26.4 ± 43.5	69.4	U	EPA 901.1
WW008	2069I	11-Oct-23	Radium-226	61.3 ± 104	65.3	U	EPA 901.1
WW008	2069I	11-Oct-23	Radium-228	-11 ± 19.3	17.7	U	EPA 901.1
WW008	2069I	11-Oct-23	Sodium-22	1.33 ± 2.31	4.21	U	EPA 901.1
WW008	2069I	11-Oct-23	Thorium-227	-13.7 ± 16.5	26.5	U	EPA 901.1
WW008	2069I	11-Oct-23	Thorium-231	-68.7 ± 60	57	U	EPA 901.1
WW008	2069I	11-Oct-23	Thorium-234	19 ± 271	252	U	EPA 901.1
WW008	2069I	11-Oct-23	Tritium	-47.5 ± 88.1	196	U	EPA 906.0 Modified
WW008	2069I	11-Oct-23	Uranium-235	0.585 ± 24.2	21	U	EPA 901.1
WW008	2069I	11-Oct-23	Uranium-238	19 ± 271	252	U	EPA 901.1
WW008	2069I	12-Oct-23	Actinium-228	5.19 ± 16.7	12.6	U	EPA 901.1
WW008	2069I	12-Oct-23	Alpha, gross	1.64 ± 0.955	1.42	N	EPA 900.0/SW846 9310
WW008	2069I	12-Oct-23	Americium-241	-8.89 ± 10.9	16	U	EPA 901.1
WW008	2069I	12-Oct-23	Beryllium-7	4.02 ± 17.5	30.5	U	EPA 901.1
WW008	2069I	12-Oct-23	Beta, gross	18.7 ± 1.58	1.54		EPA 900.0/SW846 9310
WW008	2069I	12-Oct-23	Bismuth-212	102 ± 48.3	46.4	X	EPA 901.1
WW008	2069I	12-Oct-23	Bismuth-214	0.00358 ± 11.1	9.53	U	EPA 901.1
WW008	2069I	12-Oct-23	Cesium-137	0.839 ± 2.07	3.55	U	EPA 901.1
WW008	2069I	12-Oct-23	Cobalt-60	0.279 ± 1.98	3.55	U	EPA 901.1
WW008	2069I	12-Oct-23	Lead-212	2.36 ± 8	7.05	U	EPA 901.1
WW008	2069I	12-Oct-23	Lead-214	-4.79 ± 7.51	8.37	U	EPA 901.1
WW008	2069I	12-Oct-23	Neptunium-237	-2.25 ± 3.71	6.19	U	EPA 901.1
WW008	2069I	12-Oct-23	Potassium-40	18.5 ± 56.2	38.9	U	EPA 901.1
WW008	2069I	12-Oct-23	Radium-223	-36.6 ± 39.4	60.7	U	EPA 901.1
WW008	2069I	12-Oct-23	Radium-224	15.4 ± 37.4	60.7	U	EPA 901.1
WW008	2069I	12-Oct-23	Radium-226	23.5 ± 98.5	62.1	U	EPA 901.1
WW008	2069I	12-Oct-23	Radium-228	5.19 ± 16.7	12.6	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	12-Oct-23	Sodium-22	0.253 ± 1.98	3.54	U	EPA 901.1
WW008	2069I	12-Oct-23	Thorium-227	-5.37 ± 14.6	25.5	U	EPA 901.1
WW008	2069I	12-Oct-23	Thorium-231	11.1 ± 24.1	41.5	U	EPA 901.1
WW008	2069I	12-Oct-23	Thorium-234	27.6 ± 193	134	U	EPA 901.1
WW008	2069I	12-Oct-23	Tritium	-88.6 ± 76.9	193	U	EPA 906.0 Modified
WW008	2069I	12-Oct-23	Uranium-235	15 ± 23.5	18.5	U	EPA 901.1
WW008	2069I	12-Oct-23	Uranium-238	27.6 ± 193	134	U	EPA 901.1
WW008	2069I	13-Oct-23	Actinium-228	-1.58 ± 12.2	15.1	U	EPA 901.1
WW008	2069I	13-Oct-23	Alpha, gross	1.28 ± 1.17	1.91	UN	EPA 900.0/SW846 9310
WW008	2069I	13-Oct-23	Americium-241	-13.6 ± 18.5	25.9	U	EPA 901.1
WW008	2069I	13-Oct-23	Beryllium-7	-15.6 ± 19.1	30.4	U	EPA 901.1
WW008	2069I	13-Oct-23	Beta, gross	18.3 ± 1.71	1.89		EPA 900.0/SW846 9310
WW008	2069I	13-Oct-23	Bismuth-212	30.3 ± 30.6	52	U	EPA 901.1
WW008	2069I	13-Oct-23	Bismuth-214	6.03 ± 8.4	6.41	U	EPA 901.1
WW008	2069I	13-Oct-23	Cesium-137	1.87 ± 2.17	3.77	U	EPA 901.1
WW008	2069I	13-Oct-23	Cobalt-60	-0.881 ± 2.01	3.37	U	EPA 901.1
WW008	2069I	13-Oct-23	Lead-212	8.99 ± 8.58	8.99	U	EPA 901.1
WW008	2069I	13-Oct-23	Lead-214	5.36 ± 7.42	8.18	U	EPA 901.1
WW008	2069I	13-Oct-23	Neptunium-237	2.3 ± 3.81	6.35	U	EPA 901.1
WW008	2069I	13-Oct-23	Potassium-40	6.62 ± 49.5	34.8	U	EPA 901.1
WW008	2069I	13-Oct-23	Radium-223	24 ± 38.9	64.6	U	EPA 901.1
WW008	2069I	13-Oct-23	Radium-224	49.6 ± 43.8	60.3	U	EPA 901.1
WW008	2069I	13-Oct-23	Radium-226	-44.5 ± 74	84.7	U	EPA 901.1
WW008	2069I	13-Oct-23	Radium-228	-1.58 ± 12.2	15.1	U	EPA 901.1
WW008	2069I	13-Oct-23	Sodium-22	0.348 ± 2.05	3.72	U	EPA 901.1
WW008	2069I	13-Oct-23	Thorium-227	1.15 ± 14.2	24.1	U	EPA 901.1
WW008	2069I	13-Oct-23	Thorium-231	43.5 ± 60.7	52.4	U	EPA 901.1
WW008	2069I	13-Oct-23	Thorium-234	166 ± 255	202	U	EPA 901.1
WW008	2069I	13-Oct-23	Tritium	129 ± 125	198	U	EPA 906.0 Modified
WW008	2069I	13-Oct-23	Uranium-235	1.1 ± 20.4	21.3	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW008	2069I	13-Oct-23	Uranium-238	166 ± 255	202	U	EPA 901.1
WW011	2069K	10-Oct-23	Actinium-228	2.83 ± 15.2	16.9	U	EPA 901.1
WW011	2069K	10-Oct-23	Alpha, gross	0.449 ± 0.858	1.51	U*	EPA 900.0/SW846 9310
WW011	2069K	10-Oct-23	Americium-241	-0.546 ± 9.68	16.4	U	EPA 901.1
WW011	2069K	10-Oct-23	Beryllium-7	9.19 ± 16.7	29.7	U	EPA 901.1
WW011	2069K	10-Oct-23	Beta, gross	19.7 ± 1.97	2.33		EPA 900.0/SW846 9310
WW011	2069K	10-Oct-23	Bismuth-212	20.1 ± 29.1	50.3	U	EPA 901.1
WW011	2069K	10-Oct-23	Bismuth-214	-6.64 ± 9.87	8.57	U	EPA 901.1
WW011	2069K	10-Oct-23	Cesium-137	0.413 ± 2.03	3.57	U	EPA 901.1
WW011	2069K	10-Oct-23	Cobalt-60	-1.06 ± 2.21	3.68	U	EPA 901.1
WW011	2069K	10-Oct-23	Lead-212	0.738 ± 7.13	6.82	U	EPA 901.1
WW011	2069K	10-Oct-23	Lead-214	4.53 ± 10	8.36	U	EPA 901.1
WW011	2069K	10-Oct-23	Neptunium-237	0.0152 ± 3.21	5.85	U	EPA 901.1
WW011	2069K	10-Oct-23	Potassium-40	28.4 ± 53.9	39.4	U	EPA 901.1
WW011	2069K	10-Oct-23	Radium-223	4.59 ± 32.1	58.6	U	EPA 901.1
WW011	2069K	10-Oct-23	Radium-224	15.8 ± 36.1	55.8	U	EPA 901.1
WW011	2069K	10-Oct-23	Radium-226	-3.3 ± 70.9	76.7	U	EPA 901.1
WW011	2069K	10-Oct-23	Radium-228	2.83 ± 15.2	16.9	U	EPA 901.1
WW011	2069K	10-Oct-23	Sodium-22	1.19 ± 2.12	3.93	U	EPA 901.1
WW011	2069K	10-Oct-23	Thorium-227	-15.4 ± 16	22.3	U	EPA 901.1
WW011	2069K	10-Oct-23	Thorium-231	-3.56 ± 29.3	38.3	U	EPA 901.1
WW011	2069K	10-Oct-23	Thorium-234	263 ± 264	263	U	EPA 901.1
WW011	2069K	10-Oct-23	Tritium	26.8 ± 89.2	170	U	EPA 906.0 Modified
WW011	2069K	10-Oct-23	Uranium-235	1.84 ± 20	18.4	U	EPA 901.1
WW011	2069K	10-Oct-23	Uranium-238	263 ± 264	263	U	EPA 901.1
WW011	2069K	11-Oct-23	Actinium-228	-7.02 ± 17.2	19.9	U	EPA 901.1
WW011	2069K	11-Oct-23	Alpha, gross	2.58 ± 1.05	1.43	*	EPA 900.0/SW846 9310
WW011	2069K	11-Oct-23	Americium-241	0.869 ± 12.8	20.9	U	EPA 901.1
WW011	2069K	11-Oct-23	Beryllium-7	16.6 ± 20.2	34	U	EPA 901.1
WW011	2069K	11-Oct-23	Beta, gross	20.6 ± 1.63	1.89		EPA 900.0/SW846 9310

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	11-Oct-23	Bismuth-212	15.8 ± 30.7	55.9	U	EPA 901.1
WW011	2069K	11-Oct-23	Bismuth-214	6.29 ± 10	7.54	U	EPA 901.1
WW011	2069K	11-Oct-23	Cesium-137	-1.13 ± 4.55	5.28	U	EPA 901.1
WW011	2069K	11-Oct-23	Cobalt-60	-0.315 ± 2.36	4.14	U	EPA 901.1
WW011	2069K	11-Oct-23	Lead-212	6.84 ± 9.48	5.97	X	EPA 901.1
WW011	2069K	11-Oct-23	Lead-214	3.42 ± 9.96	9.5	U	EPA 901.1
WW011	2069K	11-Oct-23	Neptunium-237	-3.65 ± 6.85	6.9	U	EPA 901.1
WW011	2069K	11-Oct-23	Potassium-40	31.3 ± 63.6	37.1	U	EPA 901.1
WW011	2069K	11-Oct-23	Radium-223	-1.04 ± 40.1	64	U	EPA 901.1
WW011	2069K	11-Oct-23	Radium-224	72.7 ± 101	63.9	X	EPA 901.1
WW011	2069K	11-Oct-23	Radium-226	-35.6 ± 86.4	115	U	EPA 901.1
WW011	2069K	11-Oct-23	Radium-228	-7.02 ± 17.2	19.9	U	EPA 901.1
WW011	2069K	11-Oct-23	Sodium-22	-0.812 ± 2.37	4.04	U	EPA 901.1
WW011	2069K	11-Oct-23	Thorium-227	-6.51 ± 15.3	26.5	U	EPA 901.1
WW011	2069K	11-Oct-23	Thorium-231	23.1 ± 63.2	49	U	EPA 901.1
WW011	2069K	11-Oct-23	Thorium-234	85 ± 220	253	U	EPA 901.1
WW011	2069K	11-Oct-23	Tritium	2.14 ± 97.9	195	U	EPA 906.0 Modified
WW011	2069K	11-Oct-23	Uranium-235	7.04 ± 27.4	24.3	U	EPA 901.1
WW011	2069K	11-Oct-23	Uranium-238	85 ± 220	253	U	EPA 901.1
WW011	2069K	12-Oct-23	Actinium-228	-11.9 ± 14.1	14.1	U	EPA 901.1
WW011	2069K	12-Oct-23	Alpha, gross	0.514 ± 1.09	1.88	UN	EPA 900.0/SW846 9310
WW011	2069K	12-Oct-23	Americium-241	-2.55 ± 7.26	11.5	U	EPA 901.1
WW011	2069K	12-Oct-23	Beryllium-7	-1.62 ± 25.4	26.6	U	EPA 901.1
WW011	2069K	12-Oct-23	Beta, gross	21.3 ± 1.67	1.5		EPA 900.0/SW846 9310
WW011	2069K	12-Oct-23	Bismuth-212	16.9 ± 25.9	44.3	U	EPA 901.1
WW011	2069K	12-Oct-23	Bismuth-214	1.29 ± 10.3	5.7	U	EPA 901.1
WW011	2069K	12-Oct-23	Cesium-137	-1.01 ± 3.78	4.38	U	EPA 901.1
WW011	2069K	12-Oct-23	Cobalt-60	2.42 ± 2.71	3.58	U	EPA 901.1
WW011	2069K	12-Oct-23	Lead-212	-1.44 ± 5.32	6.23	U	EPA 901.1
WW011	2069K	12-Oct-23	Lead-214	2.77 ± 8.45	7.11	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	12-Oct-23	Neptunium-237	0.358 ± 3.04	5.47	U	EPA 901.1
WW011	2069K	12-Oct-23	Potassium-40	34.2 ± 56.8	29.8	X	EPA 901.1
WW011	2069K	12-Oct-23	Radium-223	5.5 ± 30.7	55.1	U	EPA 901.1
WW011	2069K	12-Oct-23	Radium-224	-108 ± 64.5	52.1	U	EPA 901.1
WW011	2069K	12-Oct-23	Radium-226	6.66 ± 61.4	76.3	U	EPA 901.1
WW011	2069K	12-Oct-23	Radium-228	-11.9 ± 14.1	14.1	U	EPA 901.1
WW011	2069K	12-Oct-23	Sodium-22	1.91 ± 1.88	3.36	U	EPA 901.1
WW011	2069K	12-Oct-23	Thorium-227	1.02 ± 11.8	21.4	U	EPA 901.1
WW011	2069K	12-Oct-23	Thorium-231	16.1 ± 31	34.8	U	EPA 901.1
WW011	2069K	12-Oct-23	Thorium-234	-13.7 ± 102	132	U	EPA 901.1
WW011	2069K	12-Oct-23	Tritium	-18.7 ± 93.3	194	U	EPA 906.0 Modified
WW011	2069K	12-Oct-23	Uranium-235	2.71 ± 17.1	17.7	U	EPA 901.1
WW011	2069K	12-Oct-23	Uranium-238	-13.7 ± 102	132	U	EPA 901.1
WW011	2069K	13-Oct-23	Actinium-228	-0.34 ± 13.3	20.5	U	EPA 901.1
WW011	2069K	13-Oct-23	Alpha, gross	-0.105 ± 0.839	1.6	UN	EPA 900.0/SW846 9310
WW011	2069K	13-Oct-23	Americium-241	0.836 ± 6.3	10.3	U	EPA 901.1
WW011	2069K	13-Oct-23	Beryllium-7	7.71 ± 21.2	39.3	U	EPA 901.1
WW011	2069K	13-Oct-23	Beta, gross	19.4 ± 1.51	1.45		EPA 900.0/SW846 9310
WW011	2069K	13-Oct-23	Bismuth-212	-10.5 ± 42.8	64.4	U	EPA 901.1
WW011	2069K	13-Oct-23	Bismuth-214	23.3 ± 15	23.3	U	EPA 901.1
WW011	2069K	13-Oct-23	Cesium-137	0.189 ± 2.23	4.08	U	EPA 901.1
WW011	2069K	13-Oct-23	Cobalt-60	-0.0473 ± 1.97	3.85	U	EPA 901.1
WW011	2069K	13-Oct-23	Lead-212	0.717 ± 7.73	5.93	U	EPA 901.1
WW011	2069K	13-Oct-23	Lead-214	23.5 ± 13.1	12	X	EPA 901.1
WW011	2069K	13-Oct-23	Neptunium-237	-1.02 ± 3.73	6.69	U	EPA 901.1
WW011	2069K	13-Oct-23	Potassium-40	48.7 ± 51.4	33	X	EPA 901.1
WW011	2069K	13-Oct-23	Radium-223	0.291 ± 34.8	64.2	U	EPA 901.1
WW011	2069K	13-Oct-23	Radium-224	18.5 ± 43	71.9	U	EPA 901.1
WW011	2069K	13-Oct-23	Radium-226	36.7 ± 88	69.6	U	EPA 901.1
WW011	2069K	13-Oct-23	Radium-228	-0.34 ± 13.3	20.5	U	EPA 901.1

Appendix E. Sanitary Outfalls Monitoring Results in 2023

Station	Permit Number	Date Collected	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Data Qualifiers ^a	Analytical Method
WW011	2069K	13-Oct-23	Sodium-22	0.193 ± 1.97	3.7	U	EPA 901.1
WW011	2069K	13-Oct-23	Thorium-227	-4.45 ± 14.4	25.9	U	EPA 901.1
WW011	2069K	13-Oct-23	Thorium-231	-8.71 ± 29.9	40.6	U	EPA 901.1
WW011	2069K	13-Oct-23	Thorium-234	31.3 ± 111	91.9	U	EPA 901.1
WW011	2069K	13-Oct-23	Tritium	36.1 ± 106	196	U	EPA 906.0 Modified
WW011	2069K	13-Oct-23	Uranium-235	1.53 ± 21.3	18.7	U	EPA 901.1
WW011	2069K	13-Oct-23	Uranium-238	31.3 ± 111	91.9	U	EPA 901.1

^a Blank cells indicate that the data did not require a data qualifier.

CINT = Center for Integrated Nanotechnologies

MDA = minimal detectable activity or minimum measured activity in a sample required to ensure a 95 percent probability that the measured activity is accurately quantified above the critical level

Laboratory Data Qualifier

N A spike was outside limits.

U = The analyte was absent or below the method detection limit.

X = The data was rejected due to the peak not meeting identification criteria.

Analytical Method

DOE EML HASL-300, Th (Environmental Measurement Laboratory, U.S. Department of Energy 1997)

EPA 900.0/SW-846 9310 (EPA 1980) (EPA 1986)

EPA 901.1 (EPA 1980)

EPA 906.0 Modified (EPA 1980)

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Appendix F. Climate Hazard Risks



Sandia Mountains fall colors

Table F-1. Climate hazard risks by asset and infrastructure type

Asset and Infrastructure System Type	Number of Assets	Cold Wave	Ice Storm	Hail	Winter Weather	Strong Wind	Drought	Wildfire	Heat Wave	Precipitation	Riverine Flooding	Other, Flooding: Precip. = 6-hr 100-yr event	Other, Mean # of Days with Min. Temp. < 32°F	Other, Mean # of Days with Max. Temp. ≥ 95°F
Specialized or mission-critical equipment (e.g., lasers, high-performance computers, or particle accelerators)	66	7.3	5.4	7.1	6.7	7.1	8.6	8.2	9.4	7.0	7.0	8.1	None	7.1
Buildings, may be broken down by type (e.g., those with critical functions or office buildings)	37	6.3	2.7	5.7	5.7	6.2	7.7	6.4	8.5	None	6.0	7.2	None	6.2
Water and wastewater systems	6	6.5	4.0	4.9	7.3	5.3	7.8	5.0	7.7	None	6.0	7.0	5.5	8.5
On-site waste disposal facility	4	5.5	1.8	4.8	4.8	5.3	7.5	8.0	7.5	None	None	6.8	None	5.3
Other	4	6.0	1.8	4.8	4.8	5.3	6.8	6.0	7.7	None	None	6.0	None	5.3
Workforce (e.g., outdoor workers, researchers, or office staff)	1	6.5	4.5	6.5	6.5	7.0	7.5	9.3	7.5	6.0	8.0	7.5	6.5	7.0
Energy generation and distribution systems	1	7.3	2.5	None	5.5	6.0	None	7.0	6.5	6.0	6.0	5.5	None	6.0
IT and telecommunication Systems	1	None	None	None	None	6.0	None	7.0	7.0	None	6.0	7.0	None	None
Transportation and fleet infrastructure	1	4.5	4.0	None	7.0	None	None	8.3	5.5	7.8	8.8	8.3	None	6.0
Ecology and land preservation	1	8.3	None	None	None	6.0	10.0	9.3	9.3	None	8.8	8.3	8.3	9.8

Risk Score and Color Key	
High	≥ 7
Medium	3.5 ≤ 7
Low	< 3.5
None	Zero calculated risk

Appendix References



Rainbow over the Manzanita Mountains

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