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ENVIRONMENTAL RADIATION DATA

REPORT 145

January - March 2011

United States Environmental Protection Agency

Office of Radiation and Indoor Air

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Preface

Environmental Radiation Data(ERD) is compiled and published quarterly by the Office of Radiation and Indoor Air's National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama, and contains data from the RadNet monitoring system (formerly ERAMS). ERD is published in both hard-copy and electronic formats. Electronic reports are available online at www.epa.gov/narel.

The United States Environmental Protection Agency established RadNet in 1973 with an emphasis on identifying trends in the accumulation of long-lived radionuclides in the environment. RadNet is comprised of a nationwide network of sampling stations that provide air particulate, precipitation, drinking water, and milk samples.

Sampling locations are selected to provide population and geographic coverage for the United States. The radiation analyses performed on these samples include gross alpha and gross beta analysis, gamma analyses, and radionuclide-specific analyses for uranium, plutonium, strontium, iodine, radium, and tritium. This monitoring effort also provides ancillary information on natural background levels and on routine and accidental releases into the environment from stationary sources.

The radiochemical procedures used by NAREL to analyze the RadNet samples are contained in the *NAREL Radiochemistry Procedures Manual*. Station operation and sample collection are in accordance with procedures contained in the *ERAMS Manual*(EPA 520/5-84-007, 008, 009).

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Acknowledgments

All sampling for the RadNet monitoring system (formerly ERAMS) is performed by volunteer collectors who are frequently members of health departments or related environmental agencies of their respective states. The National Air and Radiation Environmental Laboratory (NAREL), on behalf of the U.S. Environmental Protection Agency, would like to acknowledge the time and effort of these volunteer collectors, who are so essential to the successful operation of RadNet. The efforts of the sample collectors are especially appreciated during times of emergency operation when sampling frequencies are increased and schedules are sometimes demanding.

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Data Reporting Conventions

Every laboratory measurement involves uncertainty. When there is little or no radioactivity in a sample, one consequence of measurement uncertainty is the possibility of obtaining a measured value that is less than zero. Such a negative result occurs when random effects in the measurement process cause the measured value for the sample to be less than that of the blank or background, which is subtracted from it. From April 1991 to December 1995, negative results were reported as "not detected" or "ND," and gamma analysis results that were less than their estimated measurement uncertainties were also reported as "ND." In January 1996, both of these practices were discontinued. Although negative activities are physically impossible, the inclusion of negative results in the report allows better statistical analysis of the data.

Results of gamma analyses are still reported as "ND" when gamma-emitting radionuclides are not detected.

Measurement Uncertainty

Each measured value $y$is reported with an expanded uncertainty $U = k\,u_c(y)$, which is determined from the combined standard uncertainty $u_c(y)$ and the coverage factor $k = 2$. The interval from $y - U$to $y + U$is estimated to have a level of confidence of approximately 95 %.

Significant Figures

Expanded uncertainties are reported to two significant figures. Measurement results are rounded to the corresponding number of decimal places.

Detection Capability

The minimum detectable concentrations (MDCs) for each radionuclide are shown in Table 1. The MDC is defined as the minimum concentration that gives a 95 % probability of detection when the detection criteria are chosen to give only a 5 % probability of false detection in a sample that is analyte-free.

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Table 1

Reporting Units and Minimum Detectable Concentrations for Radionuclide Analyses

Radionuclide	Media	Reporting Unit	Minimum Detectable Concentration
Gross Alpha	Water	pCi/L	2
Gross Beta	Air	pCi/m³	0.0015
	Water	pCi/L	2
	Precipitation	pCi/L	2
Tritium	Water	pCi/L	150
	Milk	pCi/L	150
* Plutonium-238,239/240	Air	aCi/m³	0.75
	Water	pCi/L	0.1
† Uranium-234,235,238	Air	aCi/m³	0.75
	Water	pCi/L	0.1
Radium-226	Water	pCi/L	0.02
Strontium-90	Milk	pCi/L	2
	Water	pCi/L	1
‡ Iodine-131	Milk (gamma)	pCi/L	4
	Water (gamma)	pCi/L	4
	Water	pCi/L	0.3
Cesium-137	Milk	pCi/L	5
	Water	pCi/L	5
‡ Barium-140	Milk	pCi/L	15
	Water	pCi/L	15
Potassium	Milk	g/L	0.06
	Water	g/L	0.06
Potassium-40	Water	pCi/L	50

* The MDC for air is based on an assumed total sample volume of 120,000 m³. Measurement by alpha spectrometry includes combined activities of ^{239}Pu and ^{240}Pu, since the relative contributions of these two isotopes cannot be determined.

† The MDC for air is based on an assumed total sample volume of 120,000 m^3.

‡ Activity as of the day of counting.

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1. Air Program

Airborne Particulates and Precipitation

Gross beta radioactivity measurements and certain specific analyses are performed on air particulates and precipitation samples as indicator measurements in assessing the general (national) impact of all contributing sources on environmental levels of radiation. Airborne particulates are collected continuously at field stations representing wide geographic coverage throughout the United States.

Filters (10-cm diameter synthetic fiber) from air samplers are changed twice weekly and field measurements are made with a dual-phosphor scintillation counter 5 hours after collection to allow natural radon isotopes and their progeny to decay. Field estimates are reported to appropriate EPA officials by telephone or mail depending on the activity levels found.

The filters are sent to NAREL for more sensitive analysis in a low background proportional counter. Gamma scans are performed on all filters showing gross beta activity greater than 1 pCi/m^3. The laboratory obtained values are usually lower than the field estimates because of the decay of naturally occurring radionuclides during the time between the two measurements.

All stations routinely submit precipitation samples as rainfall, snow, or sleet occurs. The precipitation samples are composited at NAREL into single monthly samples for each station. Each month that precipitation occurs, an aliquant of the composited sample is analyzed for tritium and gamma-emitting radionuclides. NAREL discontinued gross beta analysis of precipitation in January, 2010.

A compilation of individual measurements is available from the National Air and Radiation Environmental Laboratory, 540 South Morris Avenue, Montgomery, AL 36115-2601.

Table 2
Gross Beta in Airborne Particulates
January 2011

Location	Number of Samples	5-hour Field Estimate (pCi/m³) Max	Min	Avg	NAREL Lab Measurement (pCi/m³) Max	Min	Avg
AK: Anchorage	9	0.0	-0.0	0.0	0.005	0.001	0.003
AK: Fairbanks	4	0.0	0.0	0.0	0.011	0.006	0.008
AK: Juneau	8	0.0	-0.0	0.0	0.008	0.000	0.003
AL: Birmingham	8	0.0	0.0	0.0	0.032	0.006	0.013
AL: Montgomery/408	9	0.1	0.0	0.0	0.020	0.008	0.015
AR: Little Rock	7	0.1	0.0	0.0	0.023	0.009	0.013
AZ: Phoenix	8	4.7	0.0	1.3	0.029	0.010	0.016
AZ: Phoenix/956	5	1.4	0.5	1.1	0.029	0.012	0.021
AZ: Tucson	8	0.0	0.0	0.0	0.017	0.010	0.012
CA: Anaheim	4	0.0	0.0	0.0	0.008	0.003	0.005
CA: Bakersfield	9	1.5	0.2	0.9	0.031	0.004	0.019
CA: Eureka	5	0.0	-0.0	-0.0	0.004	0.002	0.003
CA: Fresno	5	0.2	0.0	0.1	0.024	0.006	0.017
CA: Los Angeles	7	0.2	0.0	0.1	0.013	0.004	0.009
CA: Richmond	4	0.4	0.1	0.2	0.016	0.004	0.011
CA: Riverside	8	0.0	0.0	0.0	0.012	0.004	0.006
CA: Sacramento	9	0.5	0.0	0.2	0.025	0.004	0.013
CA: San Bernardino Cty.	1	0.0	0.0	0.0	0.009	0.009	0.009
CA: San Francisco	4	0.0	0.0	0.0	0.010	0.003	0.007
CA: San Jose	4	0.1	0.0	0.0	0.011	0.004	0.008
CO: Colorado Springs	5				0.011	0.006	0.008
CO: Denver	9	0.4	0.1	0.1	0.011	0.003	0.006
CO: Grand Junction	6	0.3	0.2	0.2	0.039	0.008	0.024
DC: Washington	8	0.0	0.0	0.0	0.009	0.003	0.006
DE: Dover	7	0.0	0.0	0.0	0.013	0.005	0.009
FL: Jacksonville	8	0.0	0.0	0.0	0.008	0.004	0.006
FL: Miami	6	0.0	0.0	0.0	0.009	0.003	0.006
FL: Orlando	9	0.0	0.0	0.0	0.011	0.006	0.008
FL: Tallahassee	4	0.0	0.0	0.0	0.019	0.008	0.013
FL: Tampa	2	0.0	0.0	0.0	0.009	0.008	0.009
GA: Atlanta	3	0.0	0.0	0.0	0.015	0.011	0.013
GA: Augusta	4	0.1	0.0	0.1	0.007	0.005	0.006
HI: Hilo	7	0.1	0.0	0.0	0.004	0.001	0.003
HI: Honolulu	9	0.0	0.0	0.0	0.004	0.001	0.003
IA: Des Moines	9	0.1	0.0	0.1	0.022	0.011	0.016
IA: Mason City	2	0.0	0.0	0.0	0.019	0.011	0.015
ID: Idaho Falls	4	0.0	-0.0	0.0	0.016	0.002	0.008
IL: Aurora	7	0.3	-0.1	0.1	0.032	0.011	0.020

Table 2 (continued)
Gross Beta in Airborne Particulates
January 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg (pCi/m³)	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg (pCi/m³)
IL: Chicago	7	0.1	0.0	0.0	0.024	0.006	0.014
IN: Indianapolis	9	0.1	0.0	0.1	0.022	0.011	0.016
KS: Kansas City	7	0.2	0.0	0.1	0.015	0.007	0.011
KS: Topeka	8	0.4	0.1	0.2	0.030	0.009	0.019
KY: Lexington	8	0.0	0.0	0.0	0.022	0.008	0.013
KY: Louisville	7	0.2	0.0	0.1	0.022	0.009	0.013
LA: Baton Rouge	9	0.0	0.0	0.0	0.010	0.004	0.007
LA: Shreveport	10	0.1	0.0	0.0	0.021	0.007	0.011
MA: Worcester	7	0.0	0.0	0.0	0.011	0.005	0.008
MD: Baltimore	6	0.0	0.0	0.0	0.016	0.005	0.010
ME: Orono	5	0.0	0.0	0.0	0.016	0.002	0.009
ME: Portland	4	0.0	-0.0	0.0	0.013	0.004	0.008
MI: Bay City 48708	8	0.1	0.0	0.0	0.017	0.007	0.011
MI: Detroit	9	0.1	0.0	0.0	0.017	0.006	0.011
MI: Grand Rapids	7	0.0	0.0	0.0	0.018	0.008	0.011
MN: Duluth	4	0.0	0.0	0.0	0.016	0.007	0.011
MN: Welch/510	5	0.0	0.0	0.0	0.025	0.016	0.019
MO: Jefferson City	9	0.2	0.0	0.1	0.019	0.007	0.013
MO: Springfield	9	0.2	0.0	0.1	0.031	0.009	0.015
MS: Jackson/Deq	9	0.1	0.0	0.1	0.016	0.006	0.010
MT: Billings	3	0.0	0.0	0.0	0.022	0.010	0.015
NC: Charlotte	7	0.0	0.0	0.0	0.012	0.005	0.009
NC: Wilmington	4				0.010	0.006	0.008
ND: Bismarck	6	0.0	0.0	0.0	0.011	0.006	0.009
NE: Lincoln	6	0.6	0.0	0.2	0.012	0.007	0.009
NJ: Edison	8	0.0	0.0	0.0	0.012	0.003	0.007
NJ: Trenton	7	0.4	0.0	0.1	0.026	0.006	0.015
NM: Albuquerque	7	0.0	0.0	0.0	0.010	0.004	0.007
NM: Navajo Lake St Park	3	0.0	0.0	0.0	0.012	0.004	0.009
NM: Santa Fe	4	0.4	0.0	0.1	0.011	0.005	0.007
NV: Las Vegas/913	6	0.1	0.0	0.0	0.011	0.005	0.008
NV: Reno	4	0.3	0.2	0.3	0.024	0.009	0.016
NY: Albany	8	0.0	0.0	0.0	0.030	0.003	0.012
NY: Hauppauge	5	0.0	0.0	0.0	0.019	0.007	0.013
NY: Lockport	6	0.0	0.0	0.0	0.017	0.004	0.012
NY: New York City	3				0.010	0.005	0.007
NY: Rochester	3	0.0	0.0	0.0	0.007	0.004	0.006
NY: Yaphank	4	0.0	0.0	0.0	0.006	0.003	0.005

Table 2 (continued)
Gross Beta in Airborne Particulates
January 2011

Location	Number of Samples	5-hour Field Estimate (pCi/m³) Max	Min	Avg	NAREL Lab Measurement (pCi/m³) Max	Min	Avg
OH: Cincinnati	8	0.0	0.0	0.0	0.022	0.009	0.015
OH: Cleveland	9	0.0	0.0	0.0	0.017	0.006	0.010
OH: Columbus	2	0.0	0.0	0.0	0.015	0.013	0.014
OH: Painesville	7	0.0	0.0	0.0	0.018	0.007	0.012
OH: Toledo	9	0.1	0.0	0.0	0.021	0.009	0.016
OK: Tulsa	6	0.0	0.0	0.0	0.037	0.010	0.017
OR: Corvallis	4	0.1	-0.0	0.0	0.010	0.001	0.006
OR: Portland	7	0.1	0.0	0.0	0.036	0.003	0.012
PA: Pittsburgh	4	0.0	0.0	0.0	0.013	0.007	0.010
SC: Columbia	2	0.1	0.0	0.1	0.017	0.009	0.013
SD: Pierre	9	0.0	0.0	0.0	0.018	0.006	0.011
SD: Rapid City	7	0.1	0.0	0.1	0.033	0.004	0.012
TN: Knoxville	7	0.2	0.0	0.1	0.019	0.009	0.013
TN: Memphis	6	0.0	0.0	0.0	0.023	0.010	0.017
TN: Nashville	1	0.0	0.0	0.0	0.008	0.008	0.008
TN: Oak Ridge/Bethel	7	0.2	0.0	0.1	0.023	0.010	0.015
TN: Oak Ridge/K25	8	0.5	0.1	0.2	0.020	0.010	0.014
TN: Oak Ridge/Melton	7	0.1	0.0	0.1	0.022	0.010	0.013
TN: Oak Ridge/Y12 E	7	0.1	0.0	0.1	0.022	0.010	0.013
TN: Oak Ridge/Y12 W	7	0.1	0.0	0.1	0.020	0.009	0.013
TX: Amarillo	6	1.5	0.4	0.9	0.011	0.004	0.008
TX: Austin	4	0.3	0.0	0.1	0.014	0.013	0.014
TX: Dallas	6	0.3	0.0	0.2	0.014	0.008	0.010
TX: El Paso	6	1.4	0.1	1.1	0.027	0.014	0.020
TX: Ft. Worth	6	0.1	0.0	0.1	0.025	0.008	0.015
TX: Houston	8	0.1	0.0	0.1	0.010	0.005	0.008
TX: Laredo	8	0.5	0.0	0.2	0.063	0.007	0.016
TX: Lubbock	1	0.9	0.9	0.9	0.018	0.018	0.018
TX: San Angelo	6	0.0	0.0	0.0	0.016	0.004	0.010
TX: San Antonio	9	0.5	0.1	0.3	0.012	0.006	0.009
VA: Lynchburg	9	0.5	0.1	0.3	0.017	0.010	0.014
VA: Richmond	6	0.0	0.0	0.0	0.015	0.003	0.008
VA: Virginia Beach	3	0.1	0.0	0.0	0.011	0.008	0.010
WA: Olympia	9	0.1	0.0	0.0	0.011	0.001	0.004
WA: Seattle	6	0.0	0.0	0.0	0.006	0.001	0.003
WA: Spokane	8	0.1	0.0	0.0	0.020	0.001	0.008
WI: Milwaukee	5	0.0	0.0	0.0	0.023	0.005	0.012
WV: Charleston	3	0.0	0.0	0.0	0.014	0.012	0.013

Table 3
Gross Beta in Airborne Particulates
February 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg (pCi/m³)	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg (pCi/m³)
AK: Anchorage	7	0.0	-0.0	0.0	0.005	0.002	0.003
AK: Fairbanks	4	0.0	0.0	0.0	0.017	0.006	0.010
AK: Juneau	7	0.0	0.0	0.0	0.008	0.001	0.004
AL: Birmingham	8	0.0	0.0	0.0	0.014	0.009	0.010
AL: Montgomery/408	7	0.2	0.0	0.1	0.015	0.010	0.012
AR: Little Rock	6	0.1	0.0	0.0	0.013	0.007	0.010
AZ: Phoenix	6	3.9	0.4	1.5	0.032	0.008	0.016
AZ: Phoenix/956	1	0.6	0.6	0.6	0.015	0.015	0.015
AZ: Tucson	8	0.0	-0.0	0.0	0.012	0.006	0.009
CA: Anaheim	1	0.0	0.0	0.0	0.002	0.002	0.002
CA: Bakersfield	7	1.7	0.0	0.6	0.026	0.003	0.010
CA: Eureka	4	0.0	0.0	0.0	0.004	0.001	0.002
CA: Fresno	5	0.2	0.0	0.1	0.017	0.003	0.009
CA: Los Angeles	4	0.0	0.0	0.0	0.012	0.004	0.007
CA: Richmond	4	0.1	0.0	0.1	0.013	0.003	0.008
CA: Riverside	7	0.0	0.0	0.0	0.008	0.002	0.005
CA: Sacramento	8	0.2	0.0	0.1	0.012	0.002	0.006
CA: San Bernardino Cty.	2	0.0	0.0	0.0	0.008	0.007	0.007
CA: San Francisco	4	0.0	0.0	0.0	0.006	0.001	0.004
CA: San Jose	4	0.1	0.0	0.0	0.012	0.002	0.007
CO: Colorado Springs	4				0.010	0.007	0.008
CO: Denver	6	0.4	0.0	0.1	0.010	0.003	0.007
CO: Grand Junction	4	0.5	0.5	0.5	0.011	0.007	0.009
DC: Washington	8	0.0	0.0	0.0	0.005	0.003	0.004
DE: Dover	6	0.0	0.0	0.0	0.007	0.005	0.006
FL: Jacksonville	1	0.0	0.0	0.0	0.007	0.007	0.007
FL: Miami	5	0.0	0.0	0.0	0.006	0.004	0.004
FL: Orlando	6	0.1	0.0	0.0	0.011	0.006	0.009
FL: Tallahassee	3	0.0	0.0	0.0	0.013	0.008	0.010
FL: Tampa	6	0.1	0.0	0.0	0.011	0.007	0.009
GA: Atlanta	4	0.0	0.0	0.0	0.015	0.009	0.011
GA: Augusta	4	0.1	0.0	0.1	0.007	0.002	0.005
HI: Hilo	8	0.1	0.0	0.0	0.004	0.002	0.003
HI: Honolulu	8	0.1	0.0	0.0	0.004	0.001	0.002
IA: Des Moines	8	0.1	0.0	0.1	0.016	0.009	0.012
IA: Mason City	2	0.3	0.0	0.1	0.015	0.009	0.012
ID: Idaho Falls	7	0.0	0.0	0.0	0.024	0.004	0.011
IL: Aurora	3	0.0	0.0	0.0	0.016	0.010	0.012

Table 3 (continued)
Gross Beta in Airborne Particulates
February 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg (pCi/m³)	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg (pCi/m³)
IL: Chicago	1	0.0	0.0	0.0	0.010	0.010	0.010
IN: Indianapolis	8	0.1	0.0	0.0	0.013	0.007	0.010
KS: Kansas City	5	0.1	0.0	0.1	0.022	0.005	0.011
KS: Topeka	8	0.2	0.0	0.1	0.013	0.007	0.010
KS: Wichita	2	0.3	0.2	0.2	0.019	0.010	0.014
KY: Lexington	7	0.0	-0.0	0.0	0.010	0.005	0.007
KY: Louisville	6	0.2	0.0	0.0	0.009	0.005	0.007
LA: Baton Rouge	7	0.2	0.0	0.1	0.008	0.004	0.006
LA: Shreveport	8	0.0	0.0	0.0	0.010	0.005	0.008
MA: Worcester	6	0.0	0.0	0.0	0.009	0.007	0.008
MD: Baltimore	6	0.1	0.0	0.0	0.009	0.006	0.007
ME: Orono	3	0.0	0.0	0.0	0.010	0.007	0.009
MI: Bay City 48708	8	0.0	0.0	0.0	0.014	0.008	0.010
MI: Detroit	6	0.0	0.0	0.0	0.011	0.006	0.008
MI: Grand Rapids	7	0.0	0.0	0.0	0.012	0.004	0.008
MN: Duluth	4	0.0	0.0	0.0	0.008	0.007	0.008
MN: Welch/510	8	0.1	0.0	0.0	0.021	0.012	0.016
MO: Jefferson City	8	0.1	0.0	0.0	0.013	0.006	0.008
MO: Springfield	8	0.0	0.0	0.0	0.016	0.007	0.010
MS: Jackson/Deq	7	0.1	0.0	0.0	0.011	0.007	0.009
MT: Billings	1	-0.0	-0.0	-0.0	0.013	0.013	0.013
NC: Charlotte	8	0.0	0.0	0.0	0.009	0.004	0.006
NC: Wilmington	4				0.008	0.005	0.006
ND: Bismarck	6	0.0	0.0	0.0	0.009	0.004	0.007
NE: Lincoln	6	0.2	0.0	0.1	0.012	0.006	0.008
NH: Concord	1				0.007	0.007	0.007
NJ: Edison	7	0.0	0.0	0.0	0.007	0.001	0.005
NJ: Trenton	5	0.2	0.0	0.1	0.012	0.009	0.011
NM: Albuquerque	4	0.0	0.0	0.0	0.014	0.006	0.009
NM: Navajo Lake St Park	4	0.0	0.0	0.0	0.008	0.005	0.007
NM: Santa Fe	3	0.4	0.0	0.1	0.015	0.009	0.011
NV: Las Vegas/913	9	0.3	0.0	0.1	0.186	0.002	0.026
NY: Albany	7	0.0	0.0	0.0	0.011	0.009	0.009
NY: Hauppauge	1	0.0	0.0	0.0	0.013	0.013	0.013
NY: Lockport	5	0.0	0.0	0.0	0.014	0.008	0.009
NY: New York City	4				0.007	0.005	0.006
NY: Rochester	7	0.0	0.0	0.0	0.007	0.004	0.005
NY: Yaphank	4	0.0	0.0	0.0	0.006	0.003	0.004

Table 3 (continued)
Gross Beta in Airborne Particulates
February 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg (pCi/m³)	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg (pCi/m³)
OH: Cincinnati	8	0.1	0.0	0.0	0.010	0.007	0.009
OH: Cleveland	8	0.0	0.0	0.0	0.013	0.007	0.008
OH: Columbus	2	0.0	0.0	0.0	0.008	0.007	0.008
OH: Painesville	7	0.0	0.0	0.0	0.012	0.007	0.009
OH: Toledo	8	0.1	0.0	0.0	0.016	0.008	0.012
OR: Corvallis	3	0.0	0.0	0.0	0.004	0.001	0.003
OR: Portland	7	0.1	0.0	0.0	0.023	0.001	0.008
PA: Pittsburgh	5	0.0	0.0	0.0	0.012	0.006	0.008
SC: Barnwell	4	0.1	0.0	0.0	0.009	0.008	0.008
SC: Columbia	4	0.1	0.0	0.0	0.015	0.009	0.011
SD: Pierre	8	0.1	0.0	0.0	0.014	0.005	0.009
SD: Rapid City	7	0.2	0.0	0.1	0.016	0.003	0.010
TN: Knoxville	5	0.3	0.1	0.2	0.013	0.008	0.009
TN: Memphis	5	0.0	0.0	0.0	0.012	0.009	0.010
TN: Oak Ridge/Bethel	7	0.6	0.1	0.2	0.012	0.009	0.010
TN: Oak Ridge/K25	7	0.6	0.1	0.3	0.010	0.008	0.009
TN: Oak Ridge/Melton	7	0.4	0.1	0.2	0.012	0.007	0.009
TN: Oak Ridge/Y12 E	7	0.6	0.0	0.2	0.013	0.008	0.010
TN: Oak Ridge/Y12 W	7	0.2	0.1	0.1	0.014	0.008	0.009
TX: Amarillo	2	0.1	0.0	0.1	0.007	0.007	0.007
TX: Austin	4	0.1	0.0	0.0	0.014	0.008	0.011
TX: Dallas	6	0.2	0.0	0.1	0.028	0.006	0.010
TX: Ft. Worth	2	0.3	0.0	0.2	0.018	0.010	0.014
TX: Houston	7				0.009	0.006	0.007
TX: Laredo	7	0.3	0.1	0.2	0.010	0.005	0.007
TX: San Angelo	8	0.0	0.0	0.0	0.014	0.007	0.010
TX: San Antonio	8	0.5	0.2	0.3	0.011	0.003	0.007
UT: Salt Lake City	6	0.2	0.0	0.1	0.023	0.015	0.017
VA: Harrisonburg	8	0.3	0.0	0.2	0.011	0.006	0.008
VA: Lynchburg	8	0.7	0.2	0.4	0.014	0.007	0.009
VA: Richmond	8	0.0	-0.0	0.0	0.008	0.003	0.005
VA: Virginia Beach	9	0.0	0.0	0.0	0.009	0.006	0.007
WA: Olympia	6	0.0	0.0	0.0	0.007	0.001	0.004
WA: Richland	1	0.0	0.0	0.0	0.003	0.003	0.003
WA: Seattle	2	0.0	0.0	0.0	0.006	0.005	0.005
WA: Spokane	9	0.1	0.0	0.0	0.015	0.003	0.007

Table 3 (continued)
Gross Beta in Airborne Particulates
February 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg (pCi/m³)	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg (pCi/m³)
WI: Madison	3	0.0	0.0	0.0	0.014	0.007	0.010
WI: Milwaukee	1	0.0	0.0	0.0	0.009	0.009	0.009
WV: Charleston	6	0.0	-0.0	0.0	0.017	0.003	0.010

Table 4
Gross Beta in Airborne Particulates
March 2011

Location	Number of Samples	5-hour Field Estimate (pCi/m³) Max	Min	Avg	NAREL Lab Measurement (pCi/m³) Max	Min	Avg
AK: Anchorage	4	0.0	-0.0	0.0	0.011	0.004	0.007
AK: Fairbanks	2	0.0	0.0	0.0	0.013	0.009	0.011
AK: Juneau	2	0.0	0.0	0.0	0.019	0.006	0.012
AL: Birmingham	5	0.0	0.0	0.0	0.012	0.006	0.009
AL: Montgomery/408	5	0.1	0.0	0.0	0.012	0.007	0.009
AR: Little Rock	5	0.0	0.0	0.0	0.017	0.005	0.010
AZ: Phoenix	5	3.0	0.4	1.5	0.016	0.011	0.013
AZ: Tucson	4	0.0	0.0	0.0	0.011	0.008	0.009
CA: Anaheim	4	0.0	0.0	0.0	0.054	0.003	0.017
CA: Bakersfield	5	2.5	0.1	0.9	0.013	0.004	0.008
CA: Eureka	2	0.0	0.0	0.0	0.003	0.002	0.002
CA: Fresno	3	0.2	0.0	0.1	0.005	0.005	0.005
CA: Los Angeles	1	0.0	0.0	0.0	0.005	0.005	0.005
CA: Richmond	3	0.1	0.0	0.1	0.005	0.003	0.004
CA: Riverside	6	0.0	0.0	0.0	0.022	0.003	0.008
CA: Sacramento	4	0.1	0.0	0.1	0.006	0.003	0.004
CA: San Francisco	5	0.0	0.0	0.0	0.048	0.002	0.021
CA: San Jose	1	0.0	0.0	0.0	0.004	0.004	0.004
CO: Colorado Springs	2				0.013	0.011	0.012
CO: Denver	5	0.8	0.2	0.4	0.015	0.008	0.012
CO: Grand Junction	3	0.3	0.3	0.3	0.025	0.009	0.015
CT: Hartford	2	0.1	0.0	0.0	0.009	0.004	0.006
DC: Washington	5	0.0	0.0	0.0	0.005	0.002	0.003
DE: Dover	3	0.0	0.0	0.0	0.007	0.005	0.006
FL: Jacksonville	5	0.0	0.0	0.0	0.006	0.005	0.005
FL: Miami	1	0.0	0.0	0.0	0.005	0.005	0.005
FL: Orlando	5	0.1	0.0	0.0	0.010	0.005	0.007
FL: Tallahassee	2	0.0	0.0	0.0	0.010	0.008	0.009
FL: Tampa	5	0.1	0.0	0.0	0.010	0.006	0.008
GA: Atlanta	2	0.0	0.0	0.0	0.010	0.006	0.008
GA: Augusta	3	0.1	0.0	0.1	0.006	0.005	0.005
HI: Hilo	4	0.0	0.0	0.0	0.004	0.003	0.004
HI: Honolulu	4	0.0	0.0	0.0	0.003	0.002	0.002
IA: Des Moines	5	0.2	0.1	0.1	0.016	0.012	0.014
IA: Mason City	2	0.0	0.0	0.0	0.014	0.009	0.011
ID: Idaho Falls	4	0.0	0.0	0.0	0.008	0.006	0.007
IL: Aurora	5	0.1	0.0	0.1	0.018	0.011	0.014
IN: Indianapolis	5	0.1	0.0	0.0	0.011	0.006	0.008

Table 4 (continued)
Gross Beta in Airborne Particulates
March 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg
KS: Kansas City	5	0.1	0.0	0.0	0.012	0.007	0.010
KS: Topeka	5	0.3	0.0	0.1	0.020	0.012	0.015
KS: Wichita	4	0.3	0.0	0.2	0.018	0.012	0.015
KY: Lexington	5	0.0	-0.0	0.0	0.010	0.005	0.007
KY: Louisville	4	0.1	0.0	0.1	0.008	0.004	0.006
LA: Baton Rouge	3	0.0	0.0	0.0	0.007	0.006	0.006
LA: Shreveport	4	0.0	0.0	0.0	0.012	0.006	0.009
MA: Boston	1	0.0	0.0	0.0	0.007	0.007	0.007
MA: Worcester	4	0.1	0.0	0.0	0.010	0.008	0.009
MD: Baltimore	6	0.0	0.0	0.0	0.009	0.004	0.007
ME: Orono	2	0.0	0.0	0.0	0.011	0.006	0.009
MI: Bay City 48708	4	0.0	0.0	0.0	0.013	0.008	0.010
MI: Detroit	5	0.1	0.0	0.0	0.011	0.005	0.008
MI: Grand Rapids	5	0.0	0.0	0.0	0.013	0.004	0.009
MN: Duluth	4	0.0	0.0	0.0	0.015	0.005	0.009
MN: Welch/510	3	0.0	0.0	0.0	0.015	0.014	0.015
MO: Jefferson City	5	0.1	0.1	0.1	0.012	0.007	0.009
MO: Springfield	4	0.0	0.0	0.0	0.014	0.006	0.011
MS: Jackson/Deq	4	0.1	0.1	0.1	0.012	0.007	0.009
NC: Charlotte	5	0.0	0.0	0.0	0.008	0.003	0.005
NC: Raleigh	1				0.010	0.010	0.010
NC: Wilmington	3				0.008	0.005	0.006
ND: Bismarck	4	0.0	0.0	0.0	0.013	0.003	0.008
NE: Lincoln	4	0.4	0.1	0.2	0.011	0.008	0.009
NH: Concord	1	0.0	0.0	0.0	0.005	0.005	0.005
NJ: Edison	4	0.0	-0.0	0.0	0.007	0.003	0.005
NJ: Trenton	2	0.2	0.0	0.1	0.010	0.007	0.008
NM: Albuquerque	3	0.0	0.0	0.0	0.008	0.007	0.008
NM: Navajo Lake St Park	3	0.1	0.0	0.0	0.004	0.003	0.003
NM: Santa Fe	1	0.0	0.0	0.0	0.002	0.002	0.002
NV: Las Vegas/913	2	0.6	0.0	0.3	0.009	0.008	0.008
NY: Albany	4	0.0	0.0	0.0	0.011	0.007	0.010
NY: Rochester	4	0.0	0.0	0.0	0.007	0.003	0.005
OH: Cincinnati	3	0.0	0.0	0.0	0.011	0.007	0.009
OH: Cleveland	5	0.1	0.0	0.0	0.010	0.005	0.007
OH: Columbus	2	0.0	0.0	0.0	0.006	0.006	0.006
OH: Painesville	5	0.0	0.0	0.0	0.011	0.008	0.010
OH: Toledo	3	0.0	0.0	0.0	0.013	0.010	0.012

Table 4 (continued)
Gross Beta in Airborne Particulates
March 2011

Location	Number of Samples	5-hour Field Estimate Max (pCi/m³)	5-hour Field Estimate Min (pCi/m³)	5-hour Field Estimate Avg (pCi/m³)	NAREL Lab Measurement Max (pCi/m³)	NAREL Lab Measurement Min (pCi/m³)	NAREL Lab Measurement Avg (pCi/m³)
OR: Corvallis	6	0.0	0.0	0.0	0.047	0.002	0.010
OR: Portland	5	0.0	0.0	0.0	0.005	0.002	0.003
PA: Philadelphia	1				0.004	0.004	0.004
PA: Pittsburgh	3	0.0	0.0	0.0	0.008	0.005	0.006
SC: Barnwell	1	0.0	0.0	0.0	0.006	0.006	0.006
SC: Columbia	3	0.0	0.0	0.0	0.010	0.007	0.008
SD: Pierre	3	0.5	0.0	0.2	0.017	0.010	0.013
SD: Rapid City	4	0.1	0.1	0.1	0.025	0.012	0.016
TN: Knoxville	2	0.1	0.0	0.1	0.012	0.004	0.008
TN: Nashville	1	-0.0	-0.0	-0.0	0.006	0.006	0.006
TN: Oak Ridge/Bethel	5	0.4	0.1	0.2	0.014	0.005	0.009
TN: Oak Ridge/K25	5	0.5	0.1	0.2	0.013	0.006	0.008
TN: Oak Ridge/Melton	5	0.4	0.1	0.2	0.013	0.005	0.008
TN: Oak Ridge/Y12 E	4	0.2	0.1	0.1	0.013	0.006	0.008
TN: Oak Ridge/Y12 W	5	0.1	0.1	0.1	0.013	0.005	0.008
TX: Amarillo	1	0.5	0.5	0.5	0.013	0.013	0.013
TX: Austin	2	0.2	0.2	0.2	0.015	0.013	0.014
TX: Dallas	6	0.3	0.1	0.2	0.011	0.006	0.009
TX: Ft. Worth	2	0.3	0.1	0.2	0.015	0.012	0.014
TX: Houston	6				0.010	0.007	0.009
TX: Laredo	1	0.4	0.4	0.4	0.008	0.008	0.008
TX: San Angelo	1	0.0	0.0	0.0	0.010	0.010	0.010
TX: San Antonio	3	0.4	0.1	0.3	0.010	0.008	0.009
UT: Salt Lake City	1	0.1	0.1	0.1	0.012	0.012	0.012
VA: Harrisonburg	5	0.4	0.0	0.2	0.008	0.004	0.006
VA: Lynchburg	5	0.2	0.0	0.2	0.010	0.006	0.008
VA: Richmond	4	0.0	0.0	0.0	0.006	0.004	0.004
VA: Virginia Beach	5	0.2	0.0	0.1	0.008	0.005	0.006
WA: Olympia	5	0.0	0.0	0.0	0.067	0.001	0.015
WA: Richland	5	0.1	0.0	0.1	0.006	0.002	0.004
WA: Seattle	1				0.013	0.013	0.013
WA: Spokane	5	0.1	0.0	0.1	0.005	0.002	0.004
WI: Madison	5	0.1	0.0	0.0	0.011	0.006	0.009
WV: Charleston	4	0.0	0.0	0.0	0.022	0.004	0.012

Table 5
Specific Gamma in Precipitation
January 2011

Location	Nuclide	pCi/L ± 2*u*	
AL: Montgomery/408	Pb212	2.5	3.2
	Tl208	1.7	1.6
AZ: Phoenix		ND	
CA: Richmond	Pb212	2.6	3.0
CO: Denver	Pb212	2.8	2.9
CT: Hartford		ND	
FL: Jacksonville	K40	11	13
GA: Atlanta		ND	
ID: Idaho Falls	Pb212	2.9	2.9
MN: St. Paul	K40	16	34
	Tl208	2.4	3.5
NC: Charlotte		ND	
NC: Wilmington		ND	
NY: Albany		ND	
NY: Yaphank	K40	13	12
	Pb212	2.1	2.8
OR: Portland	Bi212	14.9	9.3
	K40	6	27
PA: Harrisburg		ND	
TN: Knoxville		ND	
TN: Oak Ridge/K25	Tl208	1.1	1.3
TN: Oak Ridge/Melton	K40	7	10
TN: Oak Ridge/Y12 E		ND	
TX: Austin	Tl208	1.2	1.4
UT: Salt Lake City	Pb212	1.8	1.3
VA: Lynchburg		ND	
WA: Olympia		ND	

Table 6
Specific Gamma in Precipitation
February 2011

Location	Nuclide	pCi/L ± 2*u*	
AL: Montgomery/408		ND	
AR: Little Rock	K40	10	13
AZ: Phoenix	Pb212	2.1	1.1
CA: Richmond		ND	
CO: Denver		ND	
CT: Hartford		ND	
GA: Atlanta	Bi212	24	10
	Pb212	1.2	6.5
ID: Idaho Falls	K40	8	17
KS: Kansas City		ND	
MN: St. Paul	K40	11	12
NC: Charlotte		ND	
NC: Wilmington		ND	
NY: Albany		ND	
NY: Yaphank		ND	
OR: Portland		ND	
PA: Harrisburg	Pb212	2.6	2.8
TN: Knoxville		ND	
TN: Nashville		ND	
TN: Oak Ridge/K25		ND	
TN: Oak Ridge/Melton		ND	
TN: Oak Ridge/Y12 E	K40	18	17
	Pb212	1.8	2.5
UT: Salt Lake City	Pb212	4.0	3.0
VA: Lynchburg		ND	
WA: Olympia		ND	

Table 7
Specific Gamma in Precipitation
March 2011

Location	Nuclide	pCi/L ± 2*u*	
AL: Montgomery/408	Pb212	2.7	2.8
AR: Little Rock		ND	
CA: Richmond	Pb212	2.2	1.9
CT: Hartford		ND	
FL: Jacksonville		ND	
GA: Atlanta	Pb212	1.3	1.2
ID: Idaho Falls		ND	
KS: Kansas City		ND	
MN: St. Paul		ND	
NC: Charlotte		ND	
NC: Wilmington		ND	
NY: Albany		ND	
OH: Painesville		ND	
TN: Knoxville		ND	
TN: Nashville	Pb212	1.5	1.9
TN: Oak Ridge/K25		ND	
TN: Oak Ridge/Melton		ND	
TN: Oak Ridge/Y12 E		ND	
UT: Salt Lake City		ND	
VA: Lynchburg		ND	
WA: Olympia	K40	9	12

Table 8
Tritium in Precipitation
January - March 2011

Location	January 2011 pCi/L	± 2*u*	February 2011 pCi/L	± 2*u*	March 2011 pCi/L	± 2*u*
AL: Montgomery/408	6	91	75	91	0	84
AR: Little Rock	NS		140	94	55	85
AZ: Phoenix	10	91	-21	84	NS	
CA: Richmond	8	92	-15	85	-21	81
CO: Denver	-29	90	60	90	NS	
CT: Hartford	-48	89	136	92	91	87
FL: Jacksonville	-29	90	NS		119	88
GA: Atlanta	-10	91	62	90	-15	82
ID: Idaho Falls	-38	90	-17	85	52	85
KS: Kansas City	NS		84	92	82	86
MN: St. Paul	65	89	127	93	19	83
NC: Charlotte	12	92	55	90	12	84
NC: Wilmington	21	93	92	90	46	85
NY: Albany	-8	91	121	91	55	85
NY: Yaphank	-40	90	67	88	NS	
OH: Painesville	NS		NS		42	85
OR: Portland	67	89	-27	84	NS	
PA: Harrisburg	-75	88	101	91	NS	
TN: Knoxville	-37	89	34	90	17	84
TN: Nashville	NS		55	90	2	83
TN: Oak Ridge/K25	58	94	76	90	29	84
TN: Oak Ridge/Melton	390	110	320	100	135	90
TN: Oak Ridge/Y12 E	-27	91	153	95	4	83
TX: Austin	-23	91	NS		NS	
UT: Salt Lake City	17	92	2	86	2	83
VA: Lynchburg	11	78	225	98	31	84
WA: Olympia	-17	91	-54	82	10	88

Note: NS = No Sample

Plutonium and Uranium in Airborne Particulates

Environmental radiation levels of plutonium and uranium are determined by the analysis of annually composited samples (air filters) collected from the continuously operating airborne particulate samplers.

Concentrations of plutonium-238, combined plutonium-239 and 240, and uranium-234, 235, and 238 are determined by alpha-particle spectrometry following chemical separation. The volume of air represented by the annual composite typically ranges from 120,000 to 500,000 cubic meters.

Plutonium and uranium results are published when they become available.

2. Drinking Water Program

The RadNet drinking water program provides data on radionuclide concentrations in the nation's drinking water supplies. Samples are taken at 78 sites which are either major population centers or selected nuclear facility environs.

Drinking water data are used to assess trends and anomalies in concentrations, and to compare with standards set forth in the EPA "National Interim Primary Drinking Water Regulations." These regulations provide for approval of supplies when the combined radium-226 and radium-228 levels do not exceed 5 pCi/L, when the gross alpha (excluding radon and uranium) levels do not exceed 15 pCi/L, when tritium levels do not exceed 20,000 pCi/L, when the strontium-90 levels do not exceed 8 pCi/L, and when the gross beta levels do not exceed 50 pCi/L.

The analyses include (a) tritium on a quarterly basis; (b) gross alpha, gross beta, and gamma on annual composites; (c) radium-226 if the gross alpha exceeds 2 pCi/L and radium-228 if the radium-226 falls between 3 and 5 pCi/L on annual composites; (d) iodine-131 on one quarterly sample per year for each station; and (e) plutonium-238, combined plutonium-239 and 240, and uranium-234, 235, and 238 for stations that demonstrate gross alpha levels greater than 2 pCi/L on annual composites; and (f) strontium-90 on one-fourth of the annual composites on a four year rotating schedule.

Table 9
Tritium in Drinking Water
January - March 2011

Location	Date Collected	^{3}H pCi/L	± 2*u*
AK: Fairbanks	03/08/11	-24	88
AL: Dothan	01/13/11	-19	80
AL: Montgomery	02/17/11	25	84
AL: Muscle Shoals	01/06/11	125	87
AL: Scottsboro	01/05/11	101	86
AR: Little Rock	02/25/11	25	83
CA: Los Angeles	02/08/11	2	88
CA: Richmond	02/23/11	-15	82
CO: Denver	02/10/11	68	86
CT: Hartford	02/01/11	-92	77
DE: Dover	02/02/11	4	89
FL: Tampa	01/28/11	-85	76
GA: Baxley	02/01/11	4	84
GA: Savannah	03/09/11	-13	85
IA: Cedar Rapids	02/24/11	35	84
ID: Boise	02/11/11	-35	87
ID: Idaho Falls	03/10/11	10	88
IL: W. Chicago	02/07/11	-38	87
MD: Baltimore	02/01/11	-70	78
MD: Conowingo	02/14/11	31	84
MI: Grand Rapids	03/11/11	90	92
MN: St. Paul	02/08/11	-15	87
MN: Welch	02/08/11	-46	87
MO: Jefferson City	02/03/11	0	83
MS: Jackson	02/02/11	2	83
MS: Port Gibson	02/02/11	4	83
MT: Helena	02/14/11	86	91
ND: Bismarck	02/18/11	54	85
NE: Lincoln	02/03/11	-6	82
NJ: Trenton	01/24/11	39	82
NJ: Waretown	01/24/11	-47	77
NV: Las Vegas	02/10/11	40	85
NY: Albany	02/07/11	43	90
NY: New York City	02/23/11	54	85
NY: Niagara Falls	02/01/11	58	86
NY: Syracuse	02/03/11	56	85
OH: Cincinnati	01/28/11	-16	79
OH: E. Liverpool	02/02/11	-38	86
OH: Painesville	02/22/11	110	88
OH: Toledo	01/31/11	44	90

Table 9 (continued)
Tritium in Drinking Water
January - March 2011

Location	Date Collected	^{3}H pCi/L	± 2*u*
OK: Oklahoma City	02/17/11	-10	82
PA: Columbia	02/16/11	480	110
PA: Harrisburg	02/16/11	-35	81
PA: Philadelphia/Baxter	02/14/11	21	84
PA: Philadelphia/Belmont	02/14/11	50	84
PA: Philadelphia/Queen	02/14/11	21	83
PA: Pittsburgh	02/02/11	-19	88
RI: Providence	02/02/11	-69	85
SC: Barnwell	01/31/11	-2	89
SC: Columbia	01/28/11	23	80
SC: Jenkinsville	01/27/11	-16	80
SC: Seneca	01/17/11	-81	76
TN: Knoxville	02/07/11	-98	84
TN: Oak Ridge/#360	01/25/11	-38	76
TN: Oak Ridge/#371	01/25/11	-12	80
TN: Oak Ridge/#4442	01/25/11	33	81
TN: Oak Ridge/#768	01/25/11	-57	75
TN: Oak Ridge/#772	01/25/11	-50	78
TX: Austin	02/02/11	79	87
VA: Ashland	01/31/11	1570	150
WA: Richland	02/24/11	23	84
WI: Madison	03/07/11	-23	81

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3. Milk Program

Pasteurized Milk

Milk is a reliable indicator of the general population's intake of certain radionuclides since it is consumed fresh by a large segment of the population and can contain several of the biologically significant radionuclides that result from environmental releases from nuclear activities. A primary function of this program is to obtain reliable monitoring data relative to current radionuclide concentrations and determine any long-term trends.

Quarterly samples are collected at approximately 55 sampling sites. The samples are composited, according to production, from the major milk suppliers representing more than 80 percent of the milk consumed in a given population center.

The samples are analyzed for gamma-emitting nuclides, including iodine-131, barium-140, cesium-137, and potassium-40. Total potassium concentrations in g/L are determined from potassium-40 activities assuming natural isotopic abundances. During the third quarter collection, one-fourth of the samples are also analyzed for strontium-90 on a four year rotating schedule.

Table 10

Radionuclides in Pasteurized Milk

January - March 2011

Location	Date Collected	K g/L ± 2*u*	^{137}Cs pCi/L ± 2*u*	^{140}Ba pCi/L ± 2*u*	^{131}I pCi/L ± 2*u*
AR: Fort Smith	03/07/11	1.50 0.19	ND	ND	ND
CA: Los Angeles	02/28/11	1.62 0.20	ND	ND	ND
CA: San Francisco	01/20/11	1.80 0.23	ND	ND	ND
CT: Hartford	03/07/11	1.55 0.20	ND	ND	ND
DE: Wilmington	01/31/11	1.57 0.19	ND	ND	ND
FL: Plant City	01/12/11	1.61 0.20	2.6 1.6	ND	ND
HI: Hilo	01/24/11	1.56 0.20	ND	ND	ND
KS: Wichita	01/19/11	1.55 0.20	ND	ND	ND
KY: Louisville	01/19/11	1.68 0.21	ND	ND	ND
MD: Baltimore	01/24/11	1.68 0.20	ND	ND	ND
MO: Jefferson City	01/26/11	1.57 0.19	ND	ND	ND
NJ: Trenton	01/13/11	1.57 0.20	ND	ND	ND
NY: Buffalo	02/22/11	1.51 0.19	ND	ND	ND
NY: Syracuse	01/19/11	1.53 0.20	ND	ND	ND
OR: Portland	01/31/11	1.61 0.20	ND	ND	ND
PA: Pittsburgh	01/03/11	1.62 0.20	ND	ND	ND
TN: Chattanooga	03/03/11	1.55 0.19	ND	ND	ND
TN: Knoxville	02/22/11	1.58 0.19	ND	ND	ND
TN: Memphis	01/24/11	1.55 0.20	ND	ND	ND
TX: San Antonio	01/24/11	1.43 0.18	ND	ND	ND
WV: Charleston	01/24/11	1.57 0.20	ND	ND	ND

Note: ND = Not Detected

For More Information

Environmental Radiation Data(ERD) is published quarterly by the U.S. Environmental Protection Agency's Office of Radiation and Indoor Air.

Requests for information concerning the operation of RadNet, the data that are generated or publication and distribution of ERD should be directed to:

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Requests for information concerning policies of the Office of Radiation and Indoor Air should be directed to:

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