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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](http://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/m <sup>3</sup>	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/m <sup>3</sup>	0.75
	Water	pCi/L	0.1
† Uranium-234,235,238	Air	aCi/m <sup>3</sup>	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 m<sup>3</sup>. Measurement by alpha spectrometry includes combined activities of <sup>239</sup>Pu and <sup>240</sup>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<sup>3</sup>.

‡ 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 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<sup>3</sup>. 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 has discontinued gross beta analysis of precipitation.

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 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
AK: Fairbanks	8	0.0	0.0	0.0	0.022	0.010	0.016
AL: Birmingham	7	0.1	0.0	0.0	0.024	0.007	0.017
AL: Montgomery/408	8	0.1	0.0	0.0	0.049	0.010	0.021
AR: Little Rock	6	0.1	-0.0	0.0	0.035	0.007	0.018
AZ: Phoenix	7	1.3	0.1	0.5	0.040	0.004	0.022
AZ: Phoenix/956	8	1.0	0.0	0.5	0.044	0.004	0.027
AZ: Tucson	8	0.1	0.0	0.0	0.018	0.002	0.009
CA: Anaheim	3	0.0	0.0	0.0	0.007	0.002	0.005
CA: Bakersfield	7	0.5	0.0	0.1	0.044	0.002	0.019
CA: Eureka	4	0.0	-0.0	0.0	0.000	0.000	0.000
CA: Los Angeles	7	0.4	0.0	0.1	0.018	0.001	0.010
CA: Richmond	4	0.4	0.0	0.2	0.028	0.002	0.011
CA: Riverside	8	0.1	0.0	0.0	0.016	0.001	0.007
CA: Sacramento	8	0.3	0.0	0.1	0.033	0.002	0.015
CA: San Bernardino Cty.	8	0.0	0.0	0.0	0.020	0.002	0.010
CA: San Diego	2	0.0	0.0	0.0	0.010	0.008	0.009
CA: San Francisco	4	0.0	0.0	0.0	0.016	0.003	0.009
CA: San Jose	4	0.1	0.0	0.0	0.022	0.003	0.011
CO: Colorado Springs	3				0.013	0.008	0.011
CO: Denver	8	0.3	0.0	0.1	0.011	0.006	0.008
CT: Hartford	8	0.0	0.0	0.0	0.016	0.002	0.009
DC: Washington	8	0.1	0.0	0.0	0.008	0.002	0.006
DE: Dover	4	0.0	0.0	0.0	0.013	0.005	0.007
FL: Jacksonville	3	0.0	0.0	0.0	0.011	0.008	0.009
FL: Orlando	8	0.1	0.0	0.0	0.017	0.007	0.011
FL: Tallahassee	3				0.010	0.007	0.009
GA: Augusta	4	0.1	0.0	0.0	0.013	0.007	0.011
HI: Hilo	8	0.1	0.0	0.0	0.006	0.003	0.005
HI: Honolulu	8	0.1	0.0	0.1	0.005	0.003	0.004
IA: Des Moines	7	0.0	0.0	0.0	0.024	0.009	0.014
IA: Mason City	6	0.1	0.0	0.0	0.187	0.013	0.045
ID: Idaho Falls	4	0.0	-0.0	0.0	0.015	0.009	0.012
IL: Aurora	8	0.1	0.0	0.0	0.037	0.013	0.022
IL: Chicago	1	0.0	0.0	0.0	0.014	0.014	0.014
IN: Indianapolis	8	0.0	0.0	0.0	0.017	0.009	0.013
KS: Kansas City	3	0.1	0.0	0.0	0.028	0.012	0.018
KS: Topeka	4	0.1	0.0	0.1	0.049	0.013	0.023
KY: Lexington	8	0.1	0.0	0.0	0.018	0.006	0.012

**Table 2 (continued)**  
**Gross Beta in Airborne Particulates**  
**January 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
LA: Baton Rouge	8	0.0	0.0	0.0	0.011	0.006	0.008
LA: Shreveport	7	0.1	0.0	0.0	0.017	0.007	0.011
MA: Worcester	6	0.0	0.0	0.0	0.010	0.002	0.007
MD: Baltimore	8	0.1	0.0	0.0	0.014	0.005	0.009
ME: Orono	3	0.0	0.0	0.0	0.012	0.007	0.010
ME: Portland	8	0.0	-0.0	0.0	0.010	0.001	0.006
MI: Bay City 48708	6	0.0	-0.0	0.0	0.017	0.004	0.011
MI: Detroit	8	0.1	0.0	0.0	0.018	0.005	0.012
MN: Duluth	5	0.0	0.0	0.0	0.019	0.007	0.013
MN: St. Paul	4	0.0	0.0	0.0	0.016	0.008	0.013
MN: Welch/510	7	0.0	0.0	0.0	0.038	0.013	0.025
MO: Jefferson City	6	0.1	0.0	0.0	0.017	0.007	0.012
MO: Springfield	8	0.1	0.0	0.0	0.025	0.011	0.017
MO: St. Louis	1	-0.1	-0.1	-0.1	0.013	0.013	0.013
MS: Jackson	4	0.1	0.0	0.1	0.026	0.010	0.021
MS: Jackson/Deq	8	0.1	0.0	0.1	0.019	0.007	0.013
MT: Billings	3	0.0	0.0	0.0	0.055	0.025	0.037
NC: Charlotte	8	0.1	0.0	0.0	0.029	0.006	0.012
NC: Wilmington	4				0.010	0.006	0.008
ND: Bismarck	4	0.0	0.0	0.0	0.018	0.011	0.014
NE: Kearney	8	0.1	0.1	0.1	0.036	0.010	0.016
NE: Lincoln	6	0.2	0.0	0.1	0.025	0.008	0.017
NE: Omaha	4	0.0	0.0	0.0	0.032	0.011	0.022
NJ: Edison	7	0.0	-0.0	0.0	0.014	0.003	0.007
NJ: Trenton	8	0.3	0.0	0.1	0.016	0.005	0.010
NM: Carlsbad	4				0.027	0.004	0.017
NM: Santa Fe	7	4.5	0.0	1.2	0.031	0.005	0.016
NV: Las Vegas/913	8	0.3	0.0	0.1	0.015	0.002	0.008
NY: Albany	8	0.1	0.0	0.0	0.034	0.004	0.015
NY: Hauppauge	7	0.0	0.0	0.0	0.017	0.005	0.011
NY: Lockport	8	0.0	0.0	0.0	0.020	0.004	0.010
NY: Rochester	8	0.0	0.0	0.0	0.011	0.003	0.007
NY: Yaphank	5	0.0	0.0	0.0	0.007	0.002	0.004
OH: Cincinnati	8	0.1	0.0	0.0	0.016	0.007	0.011
OH: Cleveland	8	0.0	0.0	0.0	0.019	0.007	0.012
OH: Painesville	5	0.0	0.0	0.0	0.019	0.008	0.014
OK: Oklahoma City	5	0.2	0.0	0.1	0.016	0.009	0.013
OR: Portland	8	0.1	0.0	0.0	0.031	0.003	0.011

**Table 2 (continued)**  
**Gross Beta in Airborne Particulates**  
**January 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
PA: Harrisburg	8	0.1	0.0	0.0	0.020	0.004	0.012
PA: Pittsburgh	6	0.0	0.0	0.0	0.015	0.006	0.011
SC: Barnwell	2	0.0	0.0	0.0	0.013	0.011	0.012
SC: Columbia	4	0.1	0.0	0.1	0.014	0.008	0.011
SD: Pierre	8	0.2	0.0	0.1	0.031	0.009	0.014
SD: Rapid City	1	0.2	0.2	0.2	0.059	0.059	0.059
TN: Knoxville	8	0.1	0.0	0.1	0.014	0.002	0.008
TN: Memphis	6	0.0	0.0	0.0	0.021	0.008	0.016
TN: Nashville	5	0.0	0.0	0.0	0.015	0.005	0.010
TN: Oak Ridge/Bethel	7	0.4	0.0	0.2	0.026	0.004	0.015
TN: Oak Ridge/K25	7	0.7	0.1	0.2	0.031	0.004	0.018
TN: Oak Ridge/Melton	7	0.2	0.1	0.1	0.026	0.004	0.017
TN: Oak Ridge/Y12 E	7	0.3	0.0	0.1	0.025	0.004	0.016
TN: Oak Ridge/Y12 W	7	0.2	0.0	0.1	0.030	0.004	0.018
TX: Amarillo	4	0.9	0.4	0.6	0.028	0.005	0.014
TX: Corpus Christi	1				0.011	0.011	0.011
TX: Dallas	7	0.2	0.0	0.2	0.018	0.007	0.012
TX: El Paso	7	1.5	0.3	0.6	0.043	0.002	0.023
TX: Harlingen	7	0.7	0.2	0.3	0.019	0.007	0.013
TX: Houston	1				0.008	0.008	0.008
TX: Laredo	6	0.8	0.0	0.3	0.043	0.004	0.013
TX: San Angelo	7	0.0	0.0	0.0	0.023	0.004	0.011
TX: San Antonio	8	0.5	0.0	0.3	0.017	0.005	0.011
UT: Salt Lake City	8	0.1	0.0	0.0	0.061	0.002	0.021
VA: Lynchburg	7	0.5	0.0	0.3	0.017	0.008	0.012
VA: Richmond	5	0.0	0.0	0.0	0.011	0.005	0.007
VA: Virginia Beach	6	0.0	0.0	0.0	0.012	0.004	0.009
WA: Olympia	8	0.0	0.0	0.0	0.019	0.001	0.005
WA: Richland	8	0.1	0.0	0.0	0.060	0.004	0.015
WA: Seattle	8	0.0	0.0	0.0	0.006	0.001	0.003
WA: Spokane	7	0.0	0.0	0.0	0.023	0.003	0.011
WI: Milwaukee	9	-0.0	-0.1	-0.1	0.026	0.009	0.016
WV: Charleston	6	0.0	0.0	0.0	0.018	0.009	0.013

**Table 3**  
**Gross Beta in Airborne Particulates**  
**February 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
AK: Anchorage	4	0.5	-0.0	0.1	0.008	0.001	0.004
AK: Fairbanks	6	0.0	0.0	0.0	0.016	0.002	0.009
AL: Birmingham	8	0.0	0.0	0.0	0.019	0.011	0.013
AL: Montgomery/408	8	0.0	0.0	0.0	0.022	0.010	0.016
AR: Little Rock	6	0.0	0.0	0.0	0.020	0.008	0.013
AZ: Phoenix	7	1.4	0.0	0.7	0.026	0.008	0.018
AZ: Phoenix/956	8	0.4	0.4	0.4	0.028	0.010	0.018
AZ: Tucson	8	0.0	0.0	0.0	0.028	0.004	0.009
CA: Anaheim	4	0.0	0.0	0.0	0.020	0.005	0.011
CA: Bakersfield	8	1.4	0.0	0.3	0.030	0.003	0.015
CA: Eureka	1	0.0	0.0	0.0	0.001	0.001	0.001
CA: Los Angeles	7	0.1	0.0	0.1	0.017	0.004	0.010
CA: Richmond	3	0.1	0.0	0.0	0.005	0.003	0.004
CA: Riverside	7	0.0	0.0	0.0	0.021	0.004	0.010
CA: Sacramento	7	0.1	0.0	0.1	0.012	0.003	0.007
CA: San Bernardino Cty.	8	0.1	0.0	0.0	0.024	0.004	0.015
CA: San Diego	5	0.0	0.0	0.0	0.012	0.003	0.008
CA: San Francisco	4	0.0	0.0	0.0	0.005	0.002	0.004
CA: San Jose	3	0.0	0.0	0.0	0.006	0.003	0.005
CO: Colorado Springs	3				0.016	0.011	0.013
CO: Denver	8	0.4	0.1	0.2	0.016	0.005	0.010
CT: Hartford	8	0.0	0.0	0.0	0.008	0.000	0.004
DC: Washington	7	0.0	0.0	0.0	0.008	0.003	0.005
DE: Dover	4	0.0	0.0	0.0	0.011	0.006	0.008
FL: Miami	3	0.0	0.0	0.0	0.008	0.006	0.007
FL: Orlando	8	0.1	0.0	0.0	0.011	0.005	0.008
FL: Tallahassee	4				0.009	0.005	0.007
GA: Atlanta	2	0.0	0.0	0.0	0.009	0.006	0.008
GA: Augusta	4	0.1	0.0	0.1	0.012	0.007	0.010
HI: Hilo	8	0.1	0.0	0.0	0.006	0.002	0.004
HI: Honolulu	8	0.1	0.0	0.0	0.005	0.002	0.003
IA: Des Moines	7	0.0	0.0	0.0	0.018	0.005	0.012
IA: Mason City	3	0.0	0.0	0.0	0.020	0.016	0.018
ID: Idaho Falls	2	0.0	0.0	0.0	0.024	0.012	0.018
IL: Aurora	8	0.1	0.0	0.0	0.024	0.007	0.014
IN: Fort Wayne	1	0.0	0.0	0.0	0.021	0.021	0.021
IN: Indianapolis	8	0.1	0.0	0.0	0.016	0.008	0.012
KS: Kansas City	8	0.1	0.0	0.0	0.036	0.009	0.020

**Table 3 (continued)**  
**Gross Beta in Airborne Particulates**  
**February 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
KS: Topeka	8	0.3	0.0	0.1	0.040	0.015	0.024
KY: Lexington	7	0.0	0.0	0.0	0.019	0.006	0.011
LA: Baton Rouge	8	0.1	0.0	0.0	0.011	0.006	0.008
LA: Shreveport	6	0.0	0.0	0.0	0.011	0.006	0.009
MA: Worcester	6	0.0	0.0	0.0	0.009	0.001	0.005
MD: Baltimore	6	0.0	0.0	0.0	0.013	0.004	0.009
ME: Orono	6	0.0	-0.0	0.0	0.008	0.001	0.004
ME: Portland	6	0.0	-0.0	0.0	0.012	0.001	0.006
MI: Bay City 48708	7	0.0	0.0	0.0	0.019	0.004	0.010
MI: Detroit	8	0.0	0.0	0.0	0.015	0.002	0.008
MN: Duluth	4	0.0	0.0	0.0	0.010	0.007	0.008
MN: St. Paul	4	0.0	0.0	0.0	0.013	0.006	0.010
MN: Welch/510	8	0.0	0.0	0.0	0.028	0.010	0.021
MO: Jefferson City	7	0.1	0.0	0.0	0.018	0.006	0.012
MO: Springfield	8	0.1	0.0	0.0	0.025	0.011	0.018
MS: Jackson	6	0.2	0.0	0.1	0.020	0.011	0.015
MS: Jackson/Deq	8	0.2	0.0	0.1	0.019	0.007	0.011
MT: Billings	3	0.0	0.0	0.0	0.030	0.015	0.023
NC: Charlotte	8	0.1	0.0	0.0	0.015	0.005	0.008
NC: Wilmington	4				0.007	0.005	0.006
ND: Bismarck	4	0.0	0.0	0.0	0.025	0.013	0.019
NE: Kearney	8	0.4	0.0	0.1	0.041	0.005	0.017
NE: Lincoln	8	0.1	0.0	0.0	0.020	0.007	0.014
NE: Omaha	3	0.0	0.0	0.0	0.028	0.013	0.018
NJ: Edison	7	0.0	-0.0	0.0	0.009	0.003	0.006
NJ: Trenton	6	0.2	0.0	0.1	0.015	0.007	0.010
NM: Carlsbad	4				0.015	0.007	0.011
NM: Santa Fe	3	0.5	0.0	0.2	0.018	0.015	0.016
NV: Las Vegas/913	9	0.6	0.0	0.2	0.019	0.011	0.014
NY: Albany	8	0.1	0.0	0.0	0.013	0.001	0.007
NY: Hauppauge	5	0.1	0.0	0.0	0.016	0.005	0.011
NY: Lockport	7	0.0	-0.0	-0.0	0.010	0.003	0.007
NY: Rochester	7	0.0	0.0	0.0	0.008	0.004	0.005
NY: Yaphank	5	0.0	0.0	0.0	0.006	0.002	0.005
OH: Cincinnati	7	0.0	0.0	0.0	0.013	0.006	0.011
OH: Cleveland	8	0.0	0.0	0.0	0.015	0.004	0.010
OK: Oklahoma City	3	0.0	0.0	0.0	0.009	0.008	0.008
OR: Portland	8	0.1	0.0	0.1	0.018	0.008	0.012

**Table 3 (continued)**  
**Gross Beta in Airborne Particulates**  
**February 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
PA: Harrisburg	8	0.1	0.0	0.0	0.018	0.009	0.014
PA: Pittsburgh	5	0.0	0.0	0.0	0.016	0.009	0.011
SC: Barnwell	1	0.0	0.0	0.0	0.013	0.013	0.013
SC: Columbia	4	0.1	0.0	0.1	0.016	0.009	0.012
SD: Pierre	8	0.1	0.0	0.0	0.023	0.010	0.017
TN: Knoxville	4	0.1	0.0	0.0	0.011	0.005	0.008
TN: Memphis	5	0.0	0.0	0.0	0.018	0.010	0.013
TN: Nashville	3	0.0	0.0	0.0	0.013	0.008	0.011
TN: Oak Ridge/Bethel	7	0.1	0.0	0.1	0.022	0.011	0.015
TN: Oak Ridge/K25	7	0.2	0.0	0.1	0.024	0.011	0.016
TN: Oak Ridge/Melton	7	0.1	0.0	0.1	0.023	0.012	0.015
TN: Oak Ridge/Y12 E	7	0.1	0.0	0.1	0.021	0.012	0.014
TN: Oak Ridge/Y12 W	7	0.1	0.0	0.1	0.021	0.012	0.015
TX: Amarillo	7	0.4	0.1	0.2	0.020	0.007	0.012
TX: Corpus Christi	2				0.012	0.009	0.011
TX: Dallas	7	0.1	0.0	0.1	0.014	0.008	0.011
TX: El Paso	8	1.8	0.5	0.9	0.023	0.011	0.016
TX: Ft. Worth	6	0.1	0.0	0.1	0.018	0.008	0.013
TX: Houston	7				0.014	0.006	0.009
TX: Laredo	7	0.6	0.0	0.3	0.015	0.003	0.007
TX: San Angelo	7	0.0	0.0	0.0	0.019	0.008	0.012
TX: San Antonio	8	0.3	0.0	0.2	0.010	0.004	0.008
UT: Salt Lake City	8	0.2	0.0	0.1	0.021	0.011	0.017
VA: Lynchburg	8	0.3	0.0	0.1	0.019	0.008	0.012
VA: Richmond	7	0.0	0.0	0.0	0.007	0.003	0.006
VA: Virginia Beach	6	0.0	-0.0	0.0	0.010	0.006	0.008
WA: Olympia	8	0.0	0.0	0.0	0.005	0.002	0.004
WA: Richland	8	0.2	0.0	0.1	0.019	0.005	0.010
WA: Seattle	7	0.0	0.0	0.0	0.006	0.002	0.004
WA: Spokane	7	0.1	0.0	0.1	0.017	0.005	0.010
WI: Milwaukee	7	0.0	0.0	0.0	0.022	0.006	0.011
WV: Charleston	5	0.0	0.0	0.0	0.012	0.009	0.010

**Table 4**  
**Gross Beta in Airborne Particulates**  
**March 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
AK: Anchorage	9	0.0	-0.0	0.0	0.006	0.002	0.004
AK: Fairbanks	5	0.0	0.0	0.0	0.014	0.008	0.010
AL: Birmingham	8	0.1	0.0	0.0	0.017	0.005	0.010
AL: Montgomery/408	9	0.1	0.0	0.0	0.017	0.007	0.011
AR: Little Rock	8	0.1	0.0	0.0	0.016	0.005	0.009
AZ: Phoenix	7	1.2	0.2	0.6	0.016	0.007	0.012
AZ: Phoenix/956	9	1.4	0.1	0.5	0.024	0.006	0.014
AZ: Tucson	9	0.0	-0.0	0.0	0.008	0.003	0.005
CA: Anaheim	5	0.0	0.0	0.0	0.011	0.004	0.006
CA: Bakersfield	9	1.1	0.0	0.3	0.011	0.003	0.006
CA: Eureka	4	0.0	0.0	0.0	0.001	0.000	0.000
CA: Fresno	4	0.1	0.1	0.1	0.016	0.004	0.009
CA: Los Angeles	9	0.1	0.0	0.1	0.012	0.002	0.006
CA: Richmond	4	0.1	0.0	0.0	0.005	0.003	0.004
CA: Riverside	9	0.0	0.0	0.0	0.012	0.004	0.006
CA: Sacramento	9	0.2	0.0	0.1	0.008	0.002	0.004
CA: San Bernardino Cty.	8	0.0	0.0	0.0	0.014	0.003	0.007
CA: San Diego	5	0.1	0.0	0.0	0.009	0.003	0.006
CA: San Francisco	4	0.0	0.0	0.0	0.005	0.002	0.003
CA: San Jose	4	0.0	0.0	0.0	0.006	0.002	0.004
CO: Colorado Springs	5				0.016	0.009	0.011
CO: Denver	9	0.4	0.1	0.2	0.012	0.006	0.010
CO: Grand Junction	3	0.4	0.4	0.4	0.009	0.007	0.008
CT: Hartford	9	0.1	0.0	0.0	0.012	0.002	0.006
DC: Washington	9	0.1	0.0	0.0	0.008	0.001	0.005
DE: Dover	6	0.1	0.0	0.0	0.010	0.003	0.007
FL: Jacksonville	3	0.0	0.0	0.0	0.007	0.004	0.006
FL: Miami	6	0.0	0.0	0.0	0.011	0.006	0.007
FL: Orlando	9	0.1	0.0	0.0	0.018	0.004	0.009
FL: Tallahassee	1				0.014	0.014	0.014
GA: Augusta	5	0.1	0.0	0.1	0.009	0.007	0.008
HI: Hilo	9	0.0	0.0	0.0	0.007	0.002	0.004
HI: Honolulu	9	0.1	0.0	0.0	0.004	0.002	0.003
IA: Des Moines	8	0.2	0.0	0.1	0.012	0.004	0.008
IA: Mason City	6	0.3	0.0	0.1	0.019	0.008	0.012
ID: Idaho Falls	2	0.1	0.0	0.1	0.005	0.004	0.005
IL: Aurora	9	0.2	-0.0	0.1	0.022	0.005	0.012
IN: Fort Wayne	5	0.1	0.0	0.0	0.014	0.001	0.009

**Table 4 (continued)**  
**Gross Beta in Airborne Particulates**  
**March 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
IN: Indianapolis	9	0.1	0.0	0.0	0.011	0.004	0.008
KS: Kansas City	8	0.1	0.0	0.1	0.021	0.008	0.012
KS: Topeka	9	0.2	0.1	0.1	0.022	0.007	0.013
KY: Lexington	8	0.0	0.0	0.0	0.008	0.003	0.006
LA: Baton Rouge	9	0.1	0.0	0.1	0.009	0.004	0.006
LA: Shreveport	7	0.0	0.0	0.0	0.011	0.005	0.008
MA: Worcester	7	0.0	0.0	0.0	0.011	0.002	0.007
MD: Baltimore	9	0.1	0.0	0.0	0.017	0.004	0.010
ME: Orono	7	0.0	0.0	0.0	0.008	0.002	0.006
ME: Portland	8	0.0	-0.0	-0.0	0.023	0.003	0.008
MI: Bay City 48708	8	0.1	0.0	0.0	0.015	0.008	0.010
MI: Detroit	9	0.1	0.0	0.0	0.016	0.006	0.009
MN: Duluth	8	0.1	-0.0	0.0	0.016	0.005	0.010
MN: St. Paul	5	0.1	0.0	0.0	0.013	0.007	0.009
MN: Welch/510	8	0.1	0.0	0.1	0.022	0.009	0.014
MO: Jefferson City	8	0.3	0.0	0.1	0.012	0.006	0.008
MO: Springfield	8	0.1	0.0	0.0	0.012	0.005	0.009
MS: Jackson	5	0.4	0.0	0.1	0.018	0.009	0.012
MS: Jackson/Deq	9	0.4	0.0	0.1	0.013	0.004	0.008
MT: Billings	2	0.0	0.0	0.0	0.026	0.009	0.017
NC: Charlotte	7	0.1	-0.0	0.0	0.012	0.003	0.008
NC: Wilmington	5				0.007	0.004	0.005
ND: Bismarck	9	0.1	0.0	0.0	0.018	0.004	0.011
NE: Kearney	9	0.4	0.0	0.2	0.016	0.004	0.009
NE: Lincoln	8	0.2	0.0	0.1	0.013	0.004	0.009
NE: Omaha	5	0.0	0.0	0.0	0.019	0.007	0.013
NJ: Edison	9	0.0	-0.0	0.0	0.010	0.002	0.006
NJ: Trenton	8	0.2	0.0	0.1	0.017	0.003	0.009
NM: Carlsbad	5				0.010	0.008	0.009
NM: Santa Fe	6	0.5	0.0	0.1	0.017	0.007	0.010
NV: Las Vegas/913	7	0.1	0.0	0.0	0.011	0.005	0.007
NV: Washoe County	8	0.5	-0.0	0.1	0.008	0.003	0.005
NY: Albany	9	0.1	0.0	0.0	0.012	0.002	0.008
NY: Hauppauge	9	0.1	0.0	0.0	0.019	0.003	0.011
NY: Rochester	8	0.1	0.0	0.0	0.013	0.004	0.007
NY: Yaphank	9	0.0	-0.0	0.0	0.008	0.001	0.005
OH: Cincinnati	9	0.1	0.0	0.0	0.016	0.005	0.009
OH: Cleveland	9	0.1	0.0	0.0	0.017	0.005	0.009

**Table 4 (continued)**  
**Gross Beta in Airborne Particulates**  
**March 2010**

Location	Number of Samples	5-hour Field Estimate			NAREL Lab Measurement		
		Max	Min (pCi/m <sup>3</sup> )	Avg	Max	Min (pCi/m <sup>3</sup> )	Avg
OK: Oklahoma City	3	0.0	0.0	0.0	0.010	0.007	0.009
OR: Portland	7	0.1	0.0	0.0	0.012	0.005	0.007
PA: Harrisburg	8	0.3	0.0	0.1	0.029	0.004	0.016
PA: Pittsburgh	5	0.1	0.0	0.0	0.012	0.004	0.008
SC: Barnwell	3	0.0	0.0	0.0	0.010	0.007	0.008
SC: Columbia	4	0.1	0.0	0.0	0.019	0.006	0.011
SD: Pierre	9	0.5	0.0	0.2	0.022	0.005	0.011
TN: Knoxville	3	0.1	0.0	0.0	0.007	0.004	0.005
TN: Memphis	7	0.0	0.0	0.0	0.015	0.006	0.011
TN: Nashville	2	0.0	0.0	0.0	0.008	0.008	0.008
TN: Oak Ridge/Bethel	9	0.3	0.1	0.2	0.016	0.006	0.010
TN: Oak Ridge/K25	9	0.4	0.1	0.3	0.017	0.005	0.011
TN: Oak Ridge/Melton	9	0.3	0.0	0.2	0.017	0.005	0.010
TN: Oak Ridge/Y12 E	9	0.4	0.0	0.2	0.019	0.005	0.011
TN: Oak Ridge/Y12 W	9	0.2	0.1	0.1	0.016	0.004	0.010
TX: Amarillo	7	0.7	0.0	0.3	0.013	0.005	0.009
TX: Dallas	8	0.4	0.0	0.2	0.013	0.004	0.009
TX: El Paso	9	1.7	0.1	0.8	0.015	0.008	0.012
TX: Ft. Worth	7	0.2	0.0	0.1	0.015	0.007	0.011
TX: Houston	8				0.012	0.006	0.009
TX: Laredo	8	0.6	0.0	0.2	0.010	0.005	0.008
TX: San Angelo	8	0.0	0.0	0.0	0.011	0.005	0.008
TX: San Antonio	9	0.4	0.0	0.2	0.011	0.004	0.008
UT: Salt Lake City	8	0.2	0.0	0.1	0.014	0.004	0.009
VA: Lynchburg	9	0.5	0.0	0.2	0.016	0.004	0.009
VA: Richmond	8	0.0	0.0	0.0	0.010	0.001	0.005
VA: Virginia Beach	9	0.3	0.0	0.1	0.012	0.003	0.006
WA: Olympia	8	0.0	0.0	0.0	0.004	0.002	0.003
WA: Richland	6	0.3	0.0	0.1	0.004	0.002	0.003
WA: Seattle	9	0.0	0.0	0.0	0.004	0.002	0.002
WA: Spokane	8	0.2	0.0	0.1	0.010	0.004	0.006
WI: Milwaukee	3	0.0	0.0	0.0	0.010	0.008	0.009
WV: Charleston	6	0.0	0.0	0.0	0.010	0.006	0.008

**Table 5**  
**Specific Gamma in Precipitation**  
**January 2010**

Location	Nuclide	pCi/L ± 2 <u>u</u>	
AL: Montgomery/408	Be7	31	20
AR: Little Rock	Be7	51	18
AZ: Phoenix		ND	
CA: Richmond	K40	10	10
CO: Denver		ND	
CT: Hartford	Be7	63	17
FL: Jacksonville	Be7	53	17
ID: Idaho Falls		ND	
KS: Kansas City	Be7	39	40
MN: St. Paul	Be7	16	12
	Pb212	1.0	1.1
MN: Welch/510	Be7	18	11
	Pb212	1.4	1.0
NC: Charlotte	Be7	21	12
	Bi212	13.3	9.5
	Tl208	0.9	1.2
NC: Wilmington	Be7	50	13
NY: Albany		ND	
NY: Yaphank	Bi212	27	38
OR: Portland	Tl208	3.1	3.7
PA: Harrisburg	Pb212	3.8	6.0
TN: Knoxville	Tl208	3.9	3.5
TN: Nashville	Be7	72	38
TN: Oak Ridge/K25	Be7	25	17
TN: Oak Ridge/Melton	Be7	33	13
	Pb212	1.4	1.2
TN: Oak Ridge/Y12 E	Be7	38	17
TX: El Paso		ND	
UT: Salt Lake City	K40	12	13
VA: Lynchburg	Pb212	5.7	7.0
	Tl208	2.8	3.3
WA: Olympia		ND	

**Table 6**  
**Specific Gamma in Precipitation**  
**February 2010**

Location	Nuclide	pCi/L ± 2 <u>u</u>	
AL: Montgomery/408	Be7	52	40
AR: Little Rock	Pb212	2.5	2.5
AZ: Phoenix		ND	
CA: Richmond	Be7	30	24
CT: Hartford	Be7	43	32
FL: Jacksonville	Be7	80	43
ID: Idaho Falls	Pb212	4.7	5.6
MN: St. Paul		ND	
MN: Welch/510		ND	
NC: Charlotte	Be7	33	33
NC: Wilmington	Be7	49	24
	Pb212	1.2	1.8
NM: Santa Fe	Tl208	1.9	3.8
NY: Albany		ND	
OR: Portland	K40	26	42
PA: Harrisburg		ND	
TN: Nashville	Be7	73	67
TN: Oak Ridge/K25	Be7	88	43
TN: Oak Ridge/Melton	Be7	93	37
TN: Oak Ridge/Y12 E	Be7	106	42
TX: El Paso		ND	
UT: Salt Lake City		ND	
VA: Lynchburg	Pb212	3.5	5.5
WA: Olympia	K40	38	34

**Table 7**  
**Specific Gamma in Precipitation**  
**March 2010**

Location	Nuclide	pCi/L ± 2 <u>u</u>	
AL: Montgomery/408	Be7	65	35
	Pb212	2.0	2.4
AR: Little Rock	Be7	43	33
	K40	8	12
AZ: Phoenix	Bi212	35	36
CA: Richmond	Be7	46	34
	ND		
CO: Denver	Be7	35	34
	K40	10	12
CT: Hartford	Be7	70	35
	K40	ND	
FL: Jacksonville	Bi212	43	43
	Tl208	2.1	3.9
MN: Welch/510	ND		
NC: Charlotte	Pb212	2.0	2.5
	K40	8	11
NC: Wilmington	Be7	71	70
	K40	9	12
NY: Albany	Be7	20	11
	K40	1.9	2.4
NY: Yaphank	Pb212	ND	
OR: Portland	ND		
	PA: Harrisburg	ND	
TN: Knoxville	K40	19	34
	Tl208	4.1	3.8
TN: Nashville	K40	55	36
	Be7	57	37
TN: Oak Ridge/K25	Be7	77	37
	TN: Oak Ridge/Melton	40	31
TN: Oak Ridge/Y12 E	Be7	ND	
	UT: Salt Lake City	ND	
VA: Lynchburg	VA: Olympia	ND	
	WA: Olympia	ND	

**Table 8**  
**Tritium in Precipitation**  
**January - March 2010**

Location	January 2010 pCi/L ± 2u		February 2010 pCi/L ± 2u		March 2010 pCi/L ± 2u	
AL: Montgomery/408	28	89	32	92	-31	96
AR: Little Rock	53	91	55	92	-71	94
AZ: Phoenix	-100	100	23	92	34	81
CA: Richmond	-20	110	-20	79	116	85
CO: Denver	15	88	NS		-84	94
CT: Hartford	120	94	101	95	-75	94
FL: Jacksonville	6	88	74	94	-31	96
ID: Idaho Falls	0	110	-13	79	NS	
KS: Kansas City	-17	87	NS		-82	94
MN: St. Paul	26	90	80	94	-64	95
MN: Welch/510	47	90	89	95	-11	97
NC: Charlotte	55	91	53	93	-77	94
NC: Wilmington	-4	88	57	93	-64	94
NM: Santa Fe	NS		17	91	-53	95
NY: Albany	68	91	69	93	-62	95
NY: Yaphank	19	89	NS		-110	92
OR: Portland	-60	100	36	92	24	81
PA: Harrisburg	26	89	124	96	-104	93
TN: Knoxville	45	90	NS		-66	94
TN: Nashville	34	90	-11	90	-117	92
TN: Oak Ridge/K25	139	95	270	100	220	110
TN: Oak Ridge/Melton	340	100	310	100	29	98
TN: Oak Ridge/Y12 E	116	94	230	100	-18	96
TX: El Paso	24	90	102	94	NS	
UT: Salt Lake City	0	100	25	92	-9	79
VA: Lynchburg	74	91	45	93	-68	94
WA: Olympia	-30	100	-65	77	-2	79

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.

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## **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 2010**

Location	Date Collected	<sup>3</sup> H	
		pCi/L	± 2u
AK: Fairbanks	01/18/10	30	91
AL: Dothan	01/13/10	-18	88
AL: Montgomery	01/11/10	11	98
AL: Muscle Shoals	01/07/10	-14	88
AL: Scottsboro	01/06/10	-29	88
AL: Scottsboro	03/31/10	13	87
AR: Little Rock	01/12/10	-8	88
CA: Los Angeles	01/12/10	-84	85
CA: Richmond	01/07/10	30	100
CO: Denver	01/07/10	-43	87
CT: Hartford	01/11/10	-35	87
DE: Dover	01/11/10	-41	87
FL: Tampa	01/21/10	-14	83
GA: Baxley	02/02/10	-5	84
GA: Savannah	03/09/10	13	88
HI: Honolulu	02/04/10	-9	83
IA: Cedar Rapids	01/22/10	0	83
ID: Boise	03/02/10	-110	98
ID: Idaho Falls	01/14/10	18	90
IL: Morris	02/17/10	63	92
IL: W. Chicago	02/08/10	24	80
LA: New Orleans	03/25/10	9	87
MD: Baltimore	01/07/10	2	90
MD: Conowingo	01/12/10	78	89
MI: Detroit	03/04/10	-20	100
MI: Grand Rapids	03/29/10	-26	85
MN: St. Paul	01/11/10	-45	87
MN: Welch	01/12/10	-53	87
MO: Jefferson City	01/08/10	51	91
MS: Jackson	02/19/10	-110	100
MS: Port Gibson	02/17/10	-50	100
MT: Helena	01/25/10	-22	88
NC: Raleigh	02/26/10	-40	100
ND: Bismarck	01/11/10	-21	88
NE: Lincoln	01/11/10	-115	84
NJ: Trenton	01/11/10	-21	88
NJ: Waretown	01/13/10	51	87
NY: Albany	01/26/10	47	86
NY: New York City	01/19/10	-48	87
NY: Niagara Falls	01/12/10	11	96

**Table 9 (continued)**  
**Tritium in Drinking Water**  
**January - March 2010**

Location	Date Collected	<sup>3</sup> H	
		pCi/L	± 2u
NY: Syracuse	02/24/10	-60	100
OH: Cincinnati	01/22/10	18	90
OH: Columbus	03/30/10	220	100
OH: E. Liverpool	01/27/10	73	89
OH: Painesville	02/09/10	27	90
OH: Toledo	01/11/10	39	91
OK: Oklahoma City	01/11/10	-12	88
OR: Portland	03/31/10	41	88
PA: Columbia	01/13/10	49	87
PA: Harrisburg	01/12/10	66	88
PA: Philadelphia/Baxter	02/02/10	2	84
PA: Philadelphia/Belmont	02/02/10	39	85
PA: Philadelphia/Queen	02/02/10	-14	83
PA: Pittsburgh	01/26/10	16	85
RI: Providence	03/18/10	-9	86
SC: Barnwell	01/12/10	16	85
SC: Columbia	01/15/10	82	88
SC: Jenkinsville	01/13/10	57	88
SC: Seneca	01/11/10	63	87
TN: Chattanooga	01/11/10	18	90
TN: Knoxville	01/08/10	-8	89
TN: Oak Ridge/#360	01/12/10	-40	94
TN: Oak Ridge/#371	01/12/10	-47	94
TN: Oak Ridge/#4442	01/12/10	-46	96
TN: Oak Ridge/#768	01/12/10	6	97
TN: Oak Ridge/#772	01/12/10	11	97
TX: Austin	01/08/10	-4	89
VA: Ashland	02/22/10	3820	210
VA: Lynchburg	01/11/10	96	89
WA: Richland	03/01/10	-30	100
WA: Seattle	03/26/10	-21	84

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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 radio-nuclide 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 2010**

Location	Date Collected	K g/L ± 2u	<sup>137</sup> Cs pCi/L ± 2u	<sup>140</sup> Ba pCi/L ± 2u	<sup>131</sup> I pCi/L ± 2u
AR: Little Rock	01/11/10	1.68 0.20	ND	ND	ND
AZ: Phoenix	03/03/10	1.56 0.20	ND	ND	ND
CA: Los Angeles	02/11/10	1.62 0.20	ND	ND	ND
CA: San Francisco	01/13/10	1.88 0.23	ND	ND	ND
CT: Hartford	02/19/10	1.63 0.20	ND	ND	ND
DE: Wilmington	02/08/10	1.55 0.19	ND	ND	ND
FL: Plant City	02/17/10	1.63 0.20	ND	ND	ND
HI: Hilo	01/25/10	1.63 0.20	ND	ND	ND
IA: Des Moines	02/16/10	1.41 0.19	ND	ND	ND
KS: Wichita	01/20/10	1.66 0.21	ND	ND	ND
KY: Louisville	01/20/10	1.63 0.20	ND	ND	ND
MD: Baltimore	01/05/10	1.55 0.19	ND	ND	ND
MO: Jefferson City	01/13/10	1.68 0.21	ND	ND	ND
NJ: Trenton	01/11/10	1.44 0.19	ND	ND	ND
NV: Las Vegas	03/25/10	1.62 0.20	ND	ND	ND
NY: Buffalo	02/22/10	1.58 0.20	ND	ND	ND
NY: Syracuse	02/09/10	1.60 0.20	ND	ND	ND
OH: Cincinnati	01/19/10	1.50 0.19	ND	ND	ND
OH: Cleveland	03/05/10	1.56 0.20	ND	ND	ND
OR: Portland	01/11/10	1.58 0.20	ND	ND	ND
PA: Pittsburgh	02/01/10	1.45 0.19	ND	ND	ND
TN: Chattanooga	01/28/10	1.54 0.20	ND	ND	ND
TN: Knoxville	03/03/10	1.50 0.19	ND	ND	ND
TN: Memphis	01/11/10	1.41 0.19	ND	ND	ND
TX: Austin	01/19/10	1.53 0.20	ND	ND	ND
TX: Dallas	03/30/10	1.56 0.19	ND	ND	ND
VA: Norfolk	01/25/10	1.62 0.21	ND	ND	ND
VT: Montpelier	03/31/10	1.61 0.21	ND	ND	ND
WA: Spokane	02/23/10	1.62 0.20	ND	ND	ND
WA: Tacoma	03/27/10	1.68 0.20	ND	ND	ND
WV: Charleston	01/11/10	1.49 0.19	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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