

# EPA RadNet Air Filter and Air Cartridge Results

March 28, 2011

## STATEMENT ON THE RESULTS

During detailed filter analyses from 12 RadNet air monitor locations across the nation, the U.S. Environmental Protection Agency (EPA) identified trace amounts of radioactive isotopes consistent with the Japanese nuclear incident. Some of the filter results show levels slightly higher than those found by EPA monitors last week and a Department of Energy monitor the week before. These types of findings are to be expected in the coming days and are still far below levels of public health concern.

EPA's samples were captured by monitors in Alaska, Alabama, California, Guam, Hawaii, Idaho, Nevada, Saipan, Northern Mariana Islands and Washington state over the past week and sent to EPA scientists for detailed laboratory analysis.

## ABOUT THE DATA

Two tables are enclosed that present air sampling data for eight radionuclides associated with nuclear power incidents: Barium-140 (Ba-140), Cobalt-60 (Co-60), Cesium-134 (Cs-134), Cesium-137 (Cs-137), Iodine-131 (I-131), Iodine-132 (I-132), Iodine-133 (I-133), and Tellurium-132 (Te-132). The results show the sampling location and the average concentration of radionuclides in picocuries per cubic meter (pCi/m<sup>3</sup>) over the sampling period.

Results are presented from two types of air sampling: air canisters and air filters.

- **Air Cartridge Sampling:** RadNet deployable monitors pass air through a canister that contains charcoal. The cartridges collect radioactive particles and gases in much the same way that a home charcoal air filter traps cooking odors. The canisters are sent to an EPA laboratory for a sensitive laboratory analysis which can detect any radionuclides in the sample. The date on the table is the day that the canister was taken off the sampler.
- **Filter Sampling:** RadNet fixed or deployable monitors pass air through a filter which traps particulates. The filter is sent to an EPA laboratory for a sensitive laboratory analysis which can detect any radionuclides present. The date on the table is the day that the filter was taken off the sampler for analysis.

# EPA RadNet Air Concentration Measurement Data - Air Cartridges

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State	Location	Date Collected	Radionuclide (pCi/m3)							
			Ba-140	Co-60	Cs-134	Cs-137	I-131	I-132	I-133	Te-132
AK	Dutch Harbor	3/19/2011	ND	---	---	ND	2.42	---	---	---
AK	Dutch Harbor	3/20/2011	ND	---	---	ND	2.8	---	---	---
AK	Dutch Harbor	3/21/2011	ND	---	---	ND	0.52	---	---	---
AK	Dutch Harbor	3/22/2011	ND	---	---	ND	0.78	---	---	---
AK	Juneau	3/21/2011	ND	---	---	ND	0.037	---	---	---
AK	Juneau	3/22/2011	ND	---	---	ND	0.18	---	---	---
AK	Juneau	3/23/2011	ND	ND	---	ND	0.25	---	---	---
AK	Nome	3/20/2011	ND	---	---	ND	0.11	---	---	---
AK	Nome	3/21/2011	ND	---	---	ND	0.41	---	---	---
AK	Nome	3/22/2011	ND	---	---	ND	0.34	---	---	---
AK	Nome	3/23/2011	ND	---	---	ND	0.78	---	---	---
AL	Montgomery	3/24/2011	ND	---	---	ND	0.15	---	---	---
CA	Anaheim	3/20/2011	ND	---	---	ND	0.87	---	---	---
CA	Anaheim	3/21/2011	ND	---	---	ND	1.9	---	---	---
CA	Anaheim	3/22/2011	ND	---	---	ND	0.53	---	---	---
CA	San Bernadino	3/23/2011	ND	---	---	ND	0.45	---	---	---
CA	San Bernardino	3/20/2011	ND	---	---	ND	0.69	---	---	---
CA	San Bernardino	3/22/2011	ND	---	---	ND	1.1	---	---	---
Guam	Guam	3/19/2011	ND	---	---	ND	ND	---	---	---
Guam	Guam	3/20/2011	ND	---	---	ND	ND	---	---	---
Guam	Guam	3/22/2011	ND	---	---	ND	0.58	---	---	---
Guam	Guam	3/23/2011	ND	---	---	ND	0.19	---	---	---

**KEY:** --- radionuclide not detected. "ND" -the radionuclide was identified, but at a quantity below the minimum detectable activity (MDA).

# EPA RadNet Air Concentration Measurement Data - Air Cartridges

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State	Location	Date Collected	Radionuclide (pCi/m3)							
			Ba-140	Co-60	Cs-134	Cs-137	I-131	I-132	I-133	Te-132
HI	Oahu	3/20/2011	ND	---	---	ND	0.76	---	---	---
HI	Oahu	3/21/2011	ND	---	---	ND	1.4	---	---	---
HI	Oahu	3/23/2011	ND	---	---	ND	0.18	---	---	---
ID	Boise	3/21/2011	ND	---	---	ND	0.50	---	---	---
ID	Boise	3/22/2011	ND	ND	---	ND	0.66	---	---	---
ID	Boise	3/23/2011	ND	ND	---	ND	0.49	---	---	---
NV	Las Vegas	3/18/2011	ND	---	---	ND	0.18	---	---	---
NV	Las Vegas	3/21/2011	ND	---	---	ND	1.1	---	---	---
NV	Las Vegas	3/22/2011	ND	---	---	ND	0.64	---	---	---
NV	Las Vegas	3/23/2011	ND	---	---	ND	0.35	---	---	---
Saipan	Saipan	3/21/2011	ND	---	---	ND	0.78	---	---	---

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# EPA RadNet Air Concentration Measurement Data - Air Filters

Issued: 3/28/11

State	Location	Date Collected	Radionuclide (pCi/m3)							
			Ba-140	Co-60	Cs-134	Cs-137	I-131	I-132	I-133	Te-132
AK	Dutch Harbor	3/19/2011	ND	---	0.037 <sup>1</sup>	0.053	0.66	0.17	---	0.19
AK	Dutch Harbor	3/19/2011	ND	---	0.043 <sup>1</sup>	0.063	0.69	0.29	---	0.4
AK	Dutch Harbor	3/20/2011	ND	---	0.0098	0.014	0.20	0.034	---	0.028
AK	Juneau	3/22/2011	ND	---	---	ND	0.064	---	---	---
AK	Juneau	3/22/2011	ND	---	0.0036 <sup>1</sup>	0.0040	0.056	---	---	0.0037
AK	Nome	3/21/2011	ND	---	---	0.015	0.069	---	---	---
AK	Nome	3/22/2011	ND	---	---	ND	0.068	---	---	---
AK	Nome	3/22/2011	ND	---	---	ND	0.096	---	---	---
CA	Anaheim	3/11/2011	---	---	---	---	---	---	---	---
CA	Anaheim	3/15/2011	ND	ND	---	ND	ND	---	---	---
CA	Anaheim	3/18/2011	ND	ND	0.0012 <sup>1</sup>	0.0017	0.046	0.0095	---	0.012
CA	Anaheim	3/20/2011	ND	---	---	ND	0.13	---	---	0.019
CA	Anaheim	3/20/2011	ND	---	0.0076 <sup>1</sup>	0.008	0.13	0.018	---	0.022
CA	Anaheim	3/21/2011	ND	---	---	ND	0.17	---	---	0.031
CA	Anaheim	3/21/2011	ND	---	0.017 <sup>1</sup>	0.021	0.15	0.022	---	0.031
CA	Anaheim	3/22/2011	ND	---	---	ND	0.093	---	---	---
CA	Anaheim	3/22/2011	ND	---	---	0.0015	0.08	---	---	---
CA	Riverside	3/15/2011	ND	ND	---	ND	ND	---	---	---
CA	Riverside	3/18/2011	ND	ND	0.00024	0.00024	0.011	0.0011	---	0.0014
CA	San Bernadino	3/20/2011	ND	---	0.0088 <sup>1</sup>	0.017	0.14	---	---	0.027
CA	San Bernadino	3/20/2011	ND	---	0.012 <sup>1</sup>	0.014	0.17	0.027	---	0.031
CA	San Bernadino	3/22/2011	ND	---	---	0.018	0.11	---	---	---
CA	San Bernadino	3/22/2011	ND	---	0.013 <sup>1</sup>	0.018	0.11	0.018	---	0.027
CA	San Francisco	3/18/2011	ND	---	0.00092 <sup>1</sup>	0.0013	0.068	0.0066	0.0020	0.0075
Guam	Guam	3/22/2011	ND	---	0.018 <sup>1</sup>	0.022	0.12	0.016	---	0.028
ID	Boise	3/21/2011	ND	---	---	ND	0.13	---	---	---
ID	Boise	3/21/2011	ND	---	0.012 <sup>1</sup>	0.017	0.11	---	---	0.01
ID	Boise	3/22/2011	ND	---	0.0084 <sup>1</sup>	0.0096	0.098	---	---	0.0052
WA	Seattle	3/18/2011	ND	ND	0.00052 <sup>1</sup>	0.00045	0.013	0.0029	---	0.0034

Note: Some locations have two results at the same time and date because two filters were analyzed: a 4-inch filter and a 2-inch filter.

<sup>1</sup>Cs-134 analysis is subject to greater uncertainty due to spectral interferences, so the Cs-134 results here should be used only as a qualitative means of indicating the presence of this radionuclide, and not as a qualitative measure of its concentration.

**KEY:** --- radionuclide not detected. "ND" -the radionuclide was identified, but at a quantity below the minimum detectable activity (MDA).