California Department of Public Health
Radiation Monitoring Report April 6, 2011

AIR:
California Department of Public Health (CDPH) air monitors detected only trace amounts of radiation following the nuclear emergency in Japan. Radiation levels remain below the average amount from natural sources in California.

Air samples, taken in Humboldt Bay and Richmond, March 30 to April 5, 2011 indicate the trace presence of Iodine-131.

The amounts are so small that according to U.S. Nuclear Regulatory Commission standards, they are at least a thousand times less than amounts that would cause a public health concern. Due to the distance from Japan to the West Coast, no health impacts from the nuclear emergency in Japan are currently expected.

We are exposed to radiation every day, both from natural sources, such as minerals in the ground or radiation from the sun, and from man-made sources such as medical x-rays. The average annual radiation dose per person in the U.S. is 620 millirem.

On the chart below, the numbers in the final column represent the additional dose (in millirems) to a person if they were breathing air for one year with the trace amounts of radiation detected. For example, in Humboldt Bay on March 30, the readings indicate that an individual's annual radiation dose would increase by three one hundredths (0.03) of one millirem over the course of a full year. As a basis of comparison, a typical chest x-ray results in a dose of approximately 4-10 millirem. A Los Angeles-to-Chicago airplane flight results in a dose of approximately 2-3 millirem.

Sample Station	Date Collected	Results	Element Detected	Concentration Measured (picoCuries per cubic meter of air)	Estimated Radiation Dose per Year (millirem)
Humboldt Bay	3/30/11	Detection of:	Iodine-131	0.10	0.03
	4/1/11	No Detection			
	4/3/11	Detection of:	Iodine-131	0.08	0.02
Richmond	4/5/11	Detection of:	Iodine-131	0.06	0.02
Avila Beach	4/3/11	No Detection			
San Luis Obispo	4/3/11	No Detection			
Los Angeles	4/4/11	No Detection			
San Clemente	4/4/11	No Detection			
San Diego	4/4/11	No Detection			

Milk:
The milk sample collected April 4, 2011 had no detection of Iodine-131.

Sample Station	Date Collected	Results	Element Detected	Concentration Measured (pCi/liter)	Estimated Dose per Week (millirem)
CalPoly Dairy Farm	4/4/11	No Detection			

Notes:
CDPH has air sampling stations in nine locations in California. Samples collected from these stations are analyzed for radioactive elements including Barium-140, Cerium-141, Cerium-144, Cesium-134, Cesium-137, Iodine-131, Iodine-132, Ruthenium-103, Ruthenium-106, Tellurium-132, and Zirconium-95.

Estimated dose is calculated by methods described in Title 10 of the Code of Federal Regulations Part 20, Standards for Protection Against Radiation, Appendix B, Table 2. Dose values for each radionuclide assume the individual will be exposed at this concentration continuously over the course of a year. Information to date indicates that the duration of exposure should not exceed a few weeks.

Link to raw data: http://www.cdph.ca.gov/programs/Documents/CDPH-RHB-PreLabAnalysis-2011-04-06.pdf

Link to Air Sampling Map: http://www.cdph.ca.gov/programs/Documents/CDPH-RHB-SamplingStationMap.pdf