

April 12, 2012

### **Marine Debris from Japan - Shoreline Surveys**

As the tsunami that hit Japan receded, many of the materials from the inundation zone were swept into the ocean. The heavier materials sank close to shore and more buoyant materials have been scattered throughout the North Pacific Ocean by winds and ocean currents. Because most of the debris was washed out to sea before the release of radioactive materials from the power plant and because of its extended exposure to the elements, it is highly unlikely that it would be contaminated.

Recent models and estimates run by the National Oceanic and Atmospheric Administration (NOAA) and the University of Hawaii tell us some debris may have already passed near or washed ashore on the Northwestern Hawaiian Islands (debris was reportedly found on Midway Atoll in September 2011). The debris will then begin to approach the West Coast of the United States in 2013 and circle back to the main Hawaiian Islands in 2014 to 2016.

Even though the likelihood of finding radioactive contamination on marine debris is low, the Department of Health has been conducting shoreline surveillance since April 2011 (shortly after the Japan tsunami) in order to establish normal background radiation levels around the islands. DOH continues to conduct quarterly shoreline environmental surveys on Oahu, Maui, Kauai and the Big Island. Results of surveys performed in October, December and February were consistent with normal background levels. Additional surveys are scheduled for May 2012.

The Department of Health has also partnered with NOAA to perform shoreline and debris monitoring on the Northwestern Hawaiian Islands. Radiation training and detection equipment will be provided to NOAA staff members and contractors in April 2012 with surveys to commence in May/June 2012. Results will be posted as they become available.

For more information, please refer to the website for National Oceanic and Atmospheric Administration (NOAA):

<http://marinedebris.noaa.gov/info/japanfaqs.html>

### **Radioactive Materials in the Pacific Ocean and Seafood Safety**

The Hawaii Department of Health does not anticipate any public health effect on beachgoers or seafood safety around the Hawaiian Islands, due to the following factors:

- **Water acts as a diluent.** While there were significant amounts of radioactive material released into the sea near the Fukushima reactor site,

the massive amount of water in the Pacific Ocean would rapidly dilute and disperse the materials to negligible levels.

- **Some radioactive isotopes rapidly decay.** For example, the half life of Iodine-131 (I-131) is about eight days. This means that the activity level of the I-131 isotope drops by half every eight days. Given the length of time since the event, the short-lived radionuclides would have decayed to near background levels and pose no health hazard. Although Cesium isotopes have longer half-lives (Cs-134 has a half-life of about two years, Cs-137 a longer half-life of about 30 years), the radionuclides also undergo biological excretion and do not continue to build up in fish forever.

With regard to imported food, the FDA and Customs and Border Protection (CBP) are screening all food products imported from Japan. Fish harvested in Japan undergo the same screening for radiation when they arrive in the U.S. as other food products from Japan. This means that whole shipping containers are screened by CBP. FDA field staff also conduct field examinations. They carry hand-held equipment that detects radiation. If the detectors indicate radiation above background levels, FDA samples and tests the shipment to determine the amount of radiation. More information can be found at FDA's website:

[http://www.fda.gov/Food/FoodDefense/Emergencies/ucm253893.htm?utm\\_campaign=Google2&utm\\_source=fdaSearch&utm\\_medium=website&utm\\_term=japan%20nuclear&utm\\_content=8](http://www.fda.gov/Food/FoodDefense/Emergencies/ucm253893.htm?utm_campaign=Google2&utm_source=fdaSearch&utm_medium=website&utm_term=japan%20nuclear&utm_content=8)

### **Samples from Local Milk, Precipitation, and Drinking Water**

Milk, precipitation, and drinking water samples continue to be collected following routine sampling protocols. Milk and drinking water samples are collected on a quarterly basis. Precipitation samples are collected monthly. Samples are sent to the Environmental Protection Agency (EPA) laboratory for analysis.

DOH will update this page as the information becomes available from EPA. Data can also be found at the following EPA website:

[http://iaspub.epa.gov/enviro/erams\\_query\\_v2.simple\\_query](http://iaspub.epa.gov/enviro/erams_query_v2.simple_query)

### **Samples From Surface Water Systems on neighbor islands**

Water samples collected from one catchment and three surface water systems on the Big Island, Maui, and Kauai in October 2011 were sent to a private lab in California. Results indicate no detectable levels of radioactive materials.

### **Radiation Air Monitors Continue to Show Typical Fluctuations in Background Radiation**

Two stationary monitors in Honolulu and Hilo continue to measure radiation levels throughout the state. Recent analysis continues to show typical fluctuations associated with background radiation. DOH continues to work with other federal, state and county partners to monitor the situation in Japan. The department is prepared to accelerate radiation sampling if the need arises.