

Japanese Nuclear Incident – Radiation Data Measured in North Carolina

Summary of July 6, 2011:

Since the date of the last data summary released on 6/29/11, no radioactivity from the Fukushima Daiichi nuclear power plant accident was detected in any of the samples analyzed. Since June 29, 61 samples of all media types have been analyzed. In this total population of samples analyzed, only naturally occurring isotopes were detected. Please see below for further discussion of data for samples analyzed between 6/29/11 – 7/6/11.

Only naturally occurring radioactivity has been detected since June 1, 2011. Accordingly, the Radiation Protection Section (RPS) scaled back from the escalated sampling program to the routine environmental radiological monitoring program beginning July 1, 2011. Therefore, this update is the last weekly data summary for the Fukushima Daiichi nuclear incident. A special report with analysis data from the increased monitoring effort for all phases of the Japanese nuclear incident will be released in August, 2011. Please refer to the overview of monitoring section below for an explanation of current activities taken to monitor radiation levels in the environment. In the event that radiation from this nuclear incident is detected again, the State will resume enhanced monitoring based upon observed radiation levels and characteristics.

Overview of monitoring: As a result of this event, RPS increased both the frequency and amount of samples it collects. As mentioned in the previous data summary of 6/22/11, based on the continued trend of detecting only natural background radiation, Radiation Protection has scaled back to its routine monitoring program. A special RPS report with analysis data from the increased monitoring effort for all phases of the Japanese nuclear incident will be released in August 2011. Radiation Protection will continue to monitor events at the Fukushima Daiichi nuclear power plant through the routine environmental sampling program, outlined below.

- Air Particulate – Continuous monitoring, collected weekly or monthly, depending on location and sampling method.
- Air Radioiodine – Continuous monitoring with sample media specifically engineered to detect airborne radioactive isotopes of iodine, such as Iodine-131 (I-131). These samples are collected weekly.
- Milk – monthly sampling from both large milk processors and small dairies. Samples are collected statewide for Radiation Protection by the Dairy Protection Branch, Division of Environmental Health. Samples are also collected at dairies on a monthly basis within the nuclear power plants' Emergency Planning Zones.
- Surface Water – Both continuous and grab samples are being collected statewide and around nuclear power plants. Surface water samples are collected at least biweekly.
- Drinking Water – Multiple drinking water samples from public water supplies statewide are being collected at monthly.
- Precipitation – Collection on a monthly basis depending on rain events at the collection sites.
- Vegetation – Multiple terrestrial vegetation samples from locations statewide are being collected on a quarterly. Terrestrial vegetation is defined as any vegetation that might be eaten by livestock.
- Sewage Effluent – Sewage effluent samples from treatment plants are being collected at least every month.
- Shellfish – Shellfish samples are monthly when in season.

Summary of results to date (7/6/2011): Since the last data summary provided on 6/29/11, only naturally occurring radioisotopes have been detected.

Since 6/29/11, 61 samples have been analyzed: 49 air samples, 4 surface water samples, and 6 milk samples, and two finished water samples. In all of the samples analyzed, only naturally occurring radioactivity was detected. This decrease in radioactivity in samples analyzed since 6/29/11 continues the trend of only natural radioactivity detected. This downward trend corresponds to the cessation of significant airborne releases of radioactive material from the Fukushima Daiichi reactor.

List of Counties where the RPS collects samples as part of its monitoring program:

1. Chatham
2. Wake
3. Lincoln
4. Harnett
5. Mecklenburg
6. Brunswick
7. New Hanover
8. Burke
9. Currituck
10. Albemarle
11. Buncombe
12. Craven
13. Davison
14. Macon
15. Orange
16. Sampson
17. Durham
18. Forsyth
19. Johnston
20. Montgomery
21. Pitt
22. Halifax
23. Carteret

Anticipated Health Effects of Exposure to Detected Radiation Levels from the Japan Incident:

None. No adverse health effects are expected due to radioactivity found in the environment from the failure of the Fukushima Daiichi reactors in Japan. Only trace levels of radioactivity have been detected to date in samples collected in North Carolina. RPS will continue to monitor for radiation from the incident during implementation of the normal environmental radiological monitoring program.