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CONTACT: Loretta O'Donnell or Amy Collings
(609) 984-1795 or 292-2994

DEP DIRECTS 9 WATER SUPPLIERS TO TAKE CORRECTIVE ACTION DUE TO STATE RADIOLOGICAL TESTING RESULTS

The Department of Environmental Protection (DEP) today took steps to ensure public health by directing nine water suppliers to take corrective action due to results from the most thorough and precise radiological testing to date of the state's public drinking water systems.

The elevated levels of naturally occurring radiological contamination were discovered using an accelerated testing protocol developed by DEP to detect the presence of radium-224, a radioactive element with a half-life of 3.7 days. The accelerated testing protocol is expected to become the national standard. Seven of the nine water systems directed to take corrective action have historically met federal radiological drinking water quality standards when water samples were examined using standard protocols.

"The discovery of these contaminants using an accelerated testing protocol developed by DEP staff is only the latest example of this department's national leadership in protecting the public health and environment," said DEP Commissioner Bob Shinn. "This department's dogged investigation of naturally occurring radiological contamination has given us a head-start in addressing this public health concern while giving the rest of the nation a new tool for protecting drinking water."

DEP today released to water purveyors and county health officers the results of a proactive compliance monitoring program by DEP and a cooperative investigation of the Kirkwood-Cohansey aquifer conducted with the U.S. Geological Survey (USGS). These investigations are the most comprehensive by any state and are designed to ensure that any potential problems are discovered and corrected as soon as practicable.

The ongoing program, initiated in July 1997, has to date conducted sampling at 70 percent of the 615 public community water systems in New Jersey. Under the new testing protocol, sampling has found that 412 systems comply with state and federal safe drinking water radiological standards and nine systems will have to take some action to comply with standards. Compliance monitoring is ongoing at 29 systems. Initial testing for the remaining 164 systems will be completed by July.

"These results are a continuation of the aggressive investigation of naturally occurring radioactivity in ground water that was first uncovered by DEP testing," Shinn said. "The recent findings parallel previous ground water results reported in June 1997, and we repeat our previous recommendation that private well owners in the Kirkwood-Cohansey aquifer have their water tested."

Radiological results, add I

The Kirkwood-Cohansey aquifer covers all of Atlantic and Cumberland counties, and parts of Burlington, Camden, Cape May, Gloucester, Monmouth, Ocean and Salem counties.

Unacceptable levels of radiological contamination were first discovered by DEP in Washington Township (Gloucester County). That discovery prompted the Legislature to fund radiological investigations of drinking water by DEP and USGS that were reported in 1991 and 1996. Results of private well testing in the Dover Township (Ocean County) area in 1996 uncovered the presence of radium-224, a short-lived contaminant that was not previously known to be present at significant levels in groundwater.

The discovery of radium-224 prompted the development of new testing methods by the state radiological laboratory and a third DEP/USGS study. Because of radium-224's short 3.7 day half-life, water must be tested for it within 48 hours of sampling. Prior testing methods, because they were not performed within that period, did not reliably detect the radium-224 in the water.

The nine water systems with results above standards (see attached sheet) have been directed to notify their customers and take corrective actions. The federal and state maximum contaminant level for combined radium-226 and radium-228 is five picocuries per liter. The standard for gross alpha particle activity is 15 picocuries per liter. Corrective options for public water systems include closing the contaminated well, drilling replacement wells or using any of the well-established treatment technologies.

For private wells, properly maintained water softeners are a proven method to remove radiological contamination from drinking water.

These contaminants do not pose an immediate public health threat, but long-term, chronic exposure is believed to increase the risk of certain types of cancer. Radiological drinking water standards are based on an assumption that the life-time excess cancer risk to a person drinking two liters of water every day for 70 years should not exceed one in 10,000.

"New Jersey continues to be in the national forefront in this field of research. The radiological testing of public water supplies in New Jersey has prompted the federal Environmental Protection Agency (EPA) to fund a national assessment of the extent of this problem throughout the country," Shinn said.

Ground water in the Kirkwood-Cohansey aquifer is acidic which dissolves the naturally occurring radium in the aquifer sediments. Initial results from public well testing in northern New Jersey do not show a consistent pattern of elevated radiological results as exists in the Kirkwood-Cohansey. The DEP and USGS continue to study the situation. In the interim, concerned residents using private wells elsewhere in New Jersey can follow the procedures recommended for testing within the Kirkwood-Cohansey.

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In addition to requiring the nine water systems to come into compliance with standards, DEP also is taking the following actions:

- working with public water systems to ensure that any standard exceedance is promptly corrected;
- continuing compliance monitoring of all 615 public community water systems;
- working with the USGS to further identify areas at risk and the causes for levels found;
- working with the EPA to develop testing procedures and maximum contaminant levels to ensure the safety of drinking water;
- continuing to work with county health officials and advise homeowners on the risk of radiological contamination and effective measures to protect themselves.

Public community water supply customers may contact their water company for more information. Private well owners should contact their county health department for guidance on testing. Additional information and guidance for homeowners with private wells also is available on DEP's web page at <http://www.state.nj.us/dep/rpp/radwater.htm>

Attachments