



# news releases

**FOR IMMEDIATE RELEASE**

June 3, 2010

**Contact:** Lawrence Ragonese (609) 292-2994

Lawrence Hajna (609) 984-1795

---

## DEP ISSUES ACTION PLAN ON OYSTER CREEK TRITIUM LEAK TO ENSURE PUBLIC SAFETY

**(10/P51) TRENTON** -DEP Commissioner Bob Martin today issued an action plan requiring the owner of the Oyster Creek nuclear power plant to take a series of steps to further investigate the 2009 leak of radioactive tritium into aquifers below the plant and ensure the radioactive substance does not endanger public health and safety.

Under a directive of the state's Spill Act, the Exelon Corporation must drill new test wells, increase sampling of existing wells, review accuracy of existing data regarding water flow in and around the nuclear power plant, and expand the search area for a potentially contaminating tritium flow.

"We have given Exelon very specific directions and they have agreed to cooperate and move quickly to comply," said Commissioner Martin, who will tour the Oyster Creek plant on Friday and meet with Exelon officials. "We need prompt action to prevent the continuing spread of the radioactive substance and to ensure it never gets near the region's potable water supplies. This requires immediate attention and Exelon has committed to move as fast as safely possible."

It is believed at least 180,000 gallons of contaminated water was released from the plant on April 9, 2009, through two small holes in separate pipes. There is evidence that contamination 50 times higher than DEP standards has reached the Cohansey aquifer, a significant drinking water resource for much of South Jersey.

To date, there is no evidence of any immediate threat to private or public drinking water supplies. The underground flow of the tritium-contaminated water moves at a rate of approximately one to three feet a day. With the closest residential wells about two miles away, it would take about 15 years for the contamination to cause a problem for those wells.

But the DEP wants scientific information to more accurately determine the course and depth of the tritium flow.

Nuclear power plants are regulated by the federal government's Nuclear Regulatory Commission (NRC), thus the state's ability to compel mandatory cleanup is limited. Following notification of the 2009 Oyster Creek contamination, NRC performed an investigation but did not compel a clean up.

However, the fact contamination has reached the Cohansey aquifer is a violation of New Jersey statutes that protect the aquifer as a resource held in trust for the public.

The DEP's plan of action was developed by scientists from the department, including the New Jersey Geological Survey, and the U.S. Geological Survey, and after reviewing data with Exelon officials. The action plan for Exelon requires the company to do the following:

- Drill eight new groundwater monitoring wells in the Cohansey aquifer, including four intermediate and four deep Cohansey wells.
- Sample an existing well in the even deeper Kirkwood aquifer to search for tritium contamination.
- Sample for tritium contamination in the company's existing potable wells on the grounds of the Oyster Creek plant, and also sample adjacent potable wells owned and once used by JCP&L, which owns property near the nuclear plant.
- Re-survey all existing monitoring wells on the Oyster Creek site to ensure the accuracy of current test data, especially regarding groundwater flow direction assumptions.
- Measure water levels in all existing monitoring wells and adjacent surface water bodies to ensure the accuracy of current groundwater flow data.

Work on the new test wells will begin as soon as Exelon obtains required drilling permits from the DEP, which will expedite the process to allow work to start almost immediately.

Tritium occurs as a by-product of nuclear power plant operations. The DEP has documented levels of the radioactive material in the Cohansey aquifer that exceed 1 million picocuries per liter (pCi/L). The federal Environmental Protection Agency's health based standard is 20,000 pCi/L.

The Cohansey aquifer is about 60 feet deep at the leak site, and is comprised mostly of sand and some clay deposits. The existing monitoring wells extend about 20 feet deep into the aquifer, and the new test wells will be drilled to depths of 40 and 60 feet, as required by the DEP directive.

"We don't know exactly how deep the tritium has gone or where it is flowing," said Commissioner Martin. "This will help further delineate the groundwater flow and the depth of the contamination. It is vital to our investigation."

"Based on the data received, additional work may be required, which could include drilling more wells. Once the testing is complete the DEP will determine what options there are for Exelon to clean up the site."

In response to concerns about leaking of tritium into the Cohansey aquifer, the DEP on May 7 took the following steps:

- Issued a Spill Act directive to force action by Exelon. Failure to comply allows DEP to perform these actions at Exelon's expense and exposes Exelon to treble damages.
- Initiated a new investigation and mandated Exelon to install necessary monitoring wells.
- Required that Exelon provide split sampling to confirm analytical results.
- Required Exelon to contain or treat the contamination plume to ensure there is no risk to the environment or the public in the future.

Exelon also previously made some concessions to the DEP, including installing some monitoring wells to help identify the extent of contamination. It also has committed to move all pipes containing radioactively contaminated water either above ground or into concrete vaults to avoid similar leaks by the end of 2010.

Nuclear power plants are regulated by the federal government's Nuclear Regulatory Commission (NRC), thus the state's ability to compel mandatory cleanup is limited. Following notification of the 2009 Oyster Creek contamination, NRC performed an investigation but did not compel a clean up.

Tritium leaks are not uncommon at nuclear power plants nationwide. A similar situation exists at both Salem nuclear power plants on Artificial Island. But the owner of those plants, PSE&G, has worked closely with the DEP to ensure there is no unmonitored release of tritium.

###

[Contact DEP](#) | [Privacy Notice](#) | [Legal Statement](#) | [Accessibility Statement](#) 

News Releases: [DEP News Home](#) | [Archives](#)

Department: [NJ DEP Home](#) | [About DEP](#) | [Index by Topic](#) | [Programs/Units](#) | [DEP Online](#)

Statewide: [NJ Home](#) | [Services A to Z](#) | [Departments/Agencies](#) | [EAQs](#)

Copyright © State of New Jersey, 1996-2009

P. O. Box 402

Trenton, NJ 08625-0402

Last Updated: June 3, 2010