



## State of New Jersey

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE  
*Governor*

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

Zigmund Karpa, Director  
Exelon Nuclear Environmental Affairs and Regulatory Programs  
200 Exelon Way  
KSA 3-E  
Kennett Square, PA 19348

June 3, 2010

Re: Oyster Creek Generating Station  
Ground Water Investigation

Dear Mr. Karpa,

In response to the directive issued by the Department of Environmental Protection (Department) to Exelon Generation Company, LLC (Exelon) on May 7, 2010, Exelon and Department's technical teams met at the Oyster Creek facility on May 26, 2010. The purpose of the meeting was to develop a supplemental scope of work to address the tritium leaks at the facility. In particular, the supplemental scope of work must address the installation of additional monitoring wells into the Cohansey Formation to better define the vertical and horizontal extent of the tritium contamination as well as get a better understanding of the ground water flow regime at the station. As a result of that meeting, Exelon submitted a Supplemental Scope of Work on June 1, 2010. Exelon must complete the work described below.

Currently, the existing Cohansey wells are installed in the first 20 feet of the aquifer. To complete the groundwater flow characterization and delineate the horizontal and vertical extent of tritium in the Cohansey Formation, intermediate and deep Cohansey wells shall be installed as described below. The intermediate wells shall be installed to a depth of 40 feet into the Cohansey and the deep wells shall be installed to a depth of 60 feet into the Cohansey.

1. Two additional monitoring wells (MW-A and MW-B) shall be installed on the bridge near shallow Cohansey monitoring well 54, if possible and after discussion with the Department. In the event that subsurface infrastructure prevents the installation of wells at this location, the two wells shall be installed in the Cohansey near existing shallow Cohansey well 57I;

2. Two additional monitoring wells (MW-C and MW-D) shall be installed near existing shallow Cohansey well 56I;

3. Two additional monitoring wells (MW-E and MW-F) shall be installed near existing well W-10; and

4. Two additional monitoring wells (MW-G and MW-H) shall be installed near existing well W-13.

5. Once the wells have been installed, all wells associated with the tritium investigation (Cape May, Cohansey and Kirkwood wells) shall be sampled concurrently for tritium. In addition, a synoptic water level event shall also be conducted at this time to establish baseline conditions.

The Department's Bureau of Water System and Well Permitting will expedite processing of new well permits for the proposed wells and assist in conducting an updated well search of the Forked River area.

In addition, Exelon shall complete the following tasks to support the ongoing investigation:

1. If accessible, monitoring well W-17, a Kirkwood Formation well, shall be sampled for tritium. If sampling W-17 is not possible, Exelon shall propose to the Department and sample another Kirkwood well,

2. Exelon shall sample all potable wells at Oyster Creek and the potable wells on the neighboring JCP&L property for tritium, and

3. Staff gauge measurements (Intake Canal and Discharge Canal) shall be included in synoptic water level events to support the development of piezometric groundwater contour maps. A synoptic water level event shall take place after installation and surveying of the new monitoring wells.

4. For monitoring wells in the area of the tritium plumes with four consecutive independent analytical results that are less than the USEPA and NJDEP drinking water standard Exelon is requesting a reduction in tritium sampling from once every week to once every two weeks. As per Department policy, a responsible party may request a reduction in sampling frequency if there are several rounds of ground water data below standard. If Exelon is interested in reducing the sampling frequency a formal request must be submitted to the Department for approval. In addition, Exelon shall submit a table describing the sampling frequency for all wells for Department approval.

Currently all samples required for the evaluation of the tritium releases are split with the Department for independent analysis. The ground water samples collected from the new wells will also continue to be split with the Department.

5. Exelon shall review potential survey discrepancies noted by NJGS/USGS, particularly in the area of MW-4A. The wells in question shall be resurveyed. If significant changes are

identified to existing top of casing elevations, previous groundwater contour maps shall be revised.

The preparation all well installations shall begin immediately with the actual drilling to commence prior to the end of June, 2010. All sampling and additional tasks as enumerated above, including the synoptic water level readings, shall be conducted by July 30, 2010.

It was agreed that representatives of the Department, USGS, and Exelon will meet again to discuss next investigation and remedial steps, if directed by the Department, once all the data described above has been generated.

As you are aware, the remedial investigation is an iterative process and, depending upon the results of this phase of work, additional action may be required at Oyster Creek.

If you have any questions, please contact Mary Anne Kuserk of my staff at (609) 292-8427.

Sincerely,

Irene S. Kropp  
Deputy Commissioner