State of New Jersey

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Bradley M. Campbell
Commissioner

Mr. Norman Cohen
321 Barr Avenue
Linwood, New Jersey 08221

March 9, 2004

Dear Mr. Cohen:

Thank you for your e-mail of February 2, 2004 regarding Strontium-90 (Sr-90) results for test wells samples being collected at Salem Nuclear Generating Station in response to a leak of tritium discovered in groundwater at the facility. We share your concerns regarding the source and extent of the radioactivity in soil and/or groundwater and will continue to provide an independent assessment into the cause and resolution of this issue.

In response to the groundwater contamination found at Salem Unit 1, Public Service Enterprise Group (PSEG) developed an on-site well monitoring system around the fuel handling and containment buildings as part of the characterization and eventual remediation of the contamination. Monitoring is being performed for tritium and fission products in the groundwater. The radionuclides being reported on our website (Tritium, Cesium-137, Cobalt-58 and Cobalt-60) are direct indicators of the suspected source of the leak, the spent fuel pool.

Since being notified of the leak, the Bureau of Nuclear Engineering (BNE) has been collecting split samples of all the test wells installed to monitor the contamination. These samples are analyzed for all fission products through our independent contract laboratory using gamma spectroscopy. As you mentioned, Sr-90 is a known beta emitter and would have to be analyzed through the more specific gross beta analysis. Yttrium-90, its daughter product, is also a pure beta emitter with no associated gamma decay, therefore non-detectable by gamma spectroscopy. PSEG did perform a Sr-90 analysis of the on-site well with the highest detected amount of tritium (Well S at almost 3 million picoCuries/Liter) and found none detected.

While the BNE has not requested specific analysis of groundwater for strontium as part of the investigation of the tritium contamination, the Bureau does monitor for strontium in fish/shellfish, milk and quarterly air particulate samples as part of their routine Radiological Environmental Monitoring Program (REMP). Historically, results have shown no significant Sr-90 or gross beta activity in these media.

Throughout the groundwater contamination investigation, the BNE will continue to provide comment to PSEG on all monitoring and remediation activities and will collect and analyze environmental samples and perform inspections. In addition to our independent

analysis of tritium and other fission products from the onsite wells, we will review PSEG's laboratory analyses as well as the plant's 2003 REMP report detailing offsite sampling results for all fission products.

If you would like to discuss any of this further, please feel free to contact Mr. Kent Tosch, at (609) 984-7700. Thank you for sharing your concerns with me.

Sincerely,

Jill Lipoti

Jill Lipoti Ph.D., Assistant Director
Radiation Protection and Release Prevention

C: Kent Tosch, Manager
Bureau of Nuclear Engineering