

## Elevated Levels of Tritium At Brunswick Site

Progress Energy has notified its employees and is expected to make informal notification to North Carolina state agencies today (May 31) regarding recently identified levels of tritium at site of the Brunswick plant.

### Technical Issue

On May 7, 2007, measurable concentrations of tritium (H-3) ranging from 76,000 to 167,000 picocuries per liter (p/L) were detected in liquids collected from two man-holes adjacent to the storm drain stabilization pond within the owner controlled area (OCA). Subsequent samples collected from standing/flowing water in ditches adjacent to the pond also had measurable concentrations of H-3 ranging from approximately 300,000 - 900,000 pci/L. Currently the licensee is collecting flowing water from the ditches and routing the material back to the pond for processing. Radioisotopic results for liquid samples collected from three OCA wells in the vicinity of the pond were less than the Offsite Dose Calculation Manual (ODCM) analytical detection limits. In addition, analyses of water samples collected from Nancy and Gum Long Branch Creeks which are adjacent to the pond but are outside of the OCA were less than detection limits.

The stabilization pond is a routine effluent pathway described in the licensee's ODCM. The unlined stabilization pond receives input from turbine building (TB) effluent releases and onsite storm drains. As a result of normal operations, stabilization pond H-3 concentrations can exceed  $1 \text{ E}+6$  pCi/L. Discharges from the pond are routinely made as batch releases to the intake canal using standard liquid release permit methods in accordance with established regulatory requirements

The licensee developed and has begun implementation of an action plan to monitor and evaluate the extent and/or potential for movement of H-3 from the stabilization pond to groundwater. An additional six paired (shallow and deep) groundwater sampling wells are to be installed around the perimeter of the stabilization pond starting the week of June 4, 2007. The wells will be used to monitor groundwater radionuclide concentrations and determine the hydrology of the shallow and deep aquifers located beneath the pond. In addition, the licensee will continue to monitor Nancy and Gum Long Branch Creek and onsite water sources for potential radionuclides.

A chart showing some of the topographical features and locations of elevated levels is attached

### COMMUNICATION ACTIVITIES:

The licensee has issued a communication to site employees regarding the discovery of tritium outside of the site's stabilization pond. (The communication is attached).

Shortly after distributing the communication, the licensee plans to informally communicate the discovery to local and state officials. This includes local state senators and representatives, Mayor and Utilities Superintendent of the City Southport, the Chairman of the Brunswick County Commission, the North Carolina Division of Radiation Protection, and the Brunswick County Director of Emergency Preparedness. Additionally the licensee will communicate with NEI, ANI

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and INPO.

The licensee is not planning on making a press release or a 50.72 notification because the communications with public official will be informal. However, they are prepared to respond and issue one (including a 50.72) if there is media interest.

#### INTERNAL STAKEHOLDERS/PLANS

To ensure timely awareness of this issue, the following NRC staff and managers are being provided with this status sheet.

| NRR:  | OEDO                  | RII   |
|---|-----------------------|---|
| J Dyer<br>J Wiggins                             | S Campbell<br>U Shoop | R Trojanowski<br>K Clark<br>R Hannah<br>C Casto et al |
| B Boger   |                       |   |
| C Haney<br>T McGinty<br>S Richards<br>E Collins |                       |   |

RII does not intend to issue a press release.

RII intends to develop an EDO daily note on 5/31

RII is reviewing the need for a Preliminary Notification