

November 24, 1993

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PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-II-93-066

A preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region II staff on this date.

Facility

North Carolina State University
Raleigh, North Carolina
Dockets: 00050297

Licensee Emergency Classification

- Notification of Unusual Event
- Alert
- Site Area Emergency
- General Emergency
- X Not Applicable

Subject: WATER LOSS FROM RESEARCH REACTOR POOL

On Tuesday, November 23, 1993, representatives from North Carolina State University informed Region II that they had noted an apparent leak in the reactor coolant piping system. The loss rate had increased gradually until Tuesday when the loss rate reached one gallon per hour. As a result, the licensee shutdown the reactor and notified various entities on campus, including the Radiation Protection Council. The leak is believed to be in the area of the underground N-16 Holdup Tank. The results of analyses of pool water samples indicate that the water meets the criteria specified in 10 CFR Part 20 for release to unrestricted areas.

The licensee plans to maintain the reactor shutdown until they can develop an action plan to correct the problem and obtain the concurrence of the Radiation Protection Council on that course of action. Until then, the reactor pool will be isolated from the coolant piping leading to the underground N-16 Holdup Tank. With the approval of the Radiation Protection Council, the reactor will be operated only in the natural convection mode at power levels not exceeding 100 kW. The normal full power level is 1MW.

To correct the problem, the licensee anticipates excavating the soil from around the coolant piping leading to the N-16 Holdup Tank (which is buried at a depth of approximately 20 feet) to expose flanges which are suspected to be the source of the leak. These will be examined and repaired, as necessary, after which the licensee will perform tests to verify that the leakage has stopped. The excavation and repairs will probably not occur until January 1994.

The State of North Carolina has been informed.

This information is current as of 11:30 a.m. on November 24, 1993.

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