

IMMEDIATE  
PRELIMINARY NOTIFICATION

April 11, 1979

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-79-67R

This preliminary notification constitutes summary information of an event of safety or public interest significance. The information presented is a summary of information as of 7:00 a.m. on 4/11/79.

Facility: Three Mile Island Unit 2  
Middletown, Pennsylvania (DN 50-320)

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Bulk coolant inlet and outlet temperatures remain at approximately 280 degrees F. The peak core thermocouples have declined to less than 400 degrees F for the first time, the highest thermocouple reading is 398 degrees F.

Degassing operations were continued; however, after cycling down to 425 psig, pressure had to be increased because the system letdown flow rate was not sufficient to prevent an increase in the pressurizer level caused by normal coolant pump seal water leakage into the reactor cooling system. Pressure was increased to 550 psig where some degassing occurred. Pressure was subsequently increased to approximately 940 psig, where it is being held while pressurizer level is being reduced. Continued degassing operations, with reactor pressure reduced to 300 psig, is being reexamined.

A primary coolant sample was taken at approximately 0730 on April 10, 1979. Portions of the sample will be analyzed by Bettis, B&W, Oak Ridge National Laboratory and Savannah River.

The hydrogen concentration in containment is about 1.8%. The containment temperature is about 93 degrees F; the containment fans are operating, however, the cooling water to the system was shut off at about 1600 hours on April 10, 1979 due to leakage from the shaft seal packing gland on one of the Reactor Building Emergency Cooling booster pumps in the Auxiliary Building. The containment temperature at the time the cooling water was shut off was 80 degrees F.

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Environmental Status

Offsite radiation levels identified by NRC survey teams range between 0.02 - 0.12 mR/hr. The radiation levels appeared to be lower than yesterday. The results were obtained from routine surveys performed on the east side of the Susquehanna River at distances of up to 2 1/2 miles north and south of the site. The primary coolant sampling resulted in no discernable effect on these radiation levels.

At the request of NRC, a whole-body counter was set up in Middletown on April 10, 1979, by the Commonwealth of Pennsylvania Department of Environmental Resources. Over 300 residents who live within a 3-mile radius of Three Mile Island have signed up to be scanned. As of 1600 hours on April 10, 1979, 24 people who live closest to the site and whose families have milk cows for their own use have been scanned. The scan results reported thus far do not indicate radiation levels above normal body levels. It is expected that counting will continue until at least Saturday, April 14, 1979.

The following ARMS surveys were conducted during April 10, 1979:

<u>Time</u>	<u>Maximum Radiation Levels</u>	<u>Location</u>	<u>Distance From Site</u>
0627-0800	0.1 mR/hr	sector 310°	1 mile
1833-1913	0.15 mR/hr	sector 340°	1 mile

The State of Pennsylvania reported that an air sample taken at the observation center from March 22 to April 2 indicated 2.4 picocuries per cubic meter of iodine-131. The NRC took a 24-hour air sample near the observation center starting at 1600 hours on April 9, 1979. The results indicated 4.2 picocuries per cubic meter of iodine-131. The 10 CFR 20 limit for iodine-131 is 100 picocuries per cubic meter.

A soil and vegetable sample taken by NRC in Goldsboro on April 10, 1979 indicated no detectable activity.

Thirty-five milk samples were collected by various Federal and State agencies on April 5-6, 1979. All were less than the minimum detectable activity of 10 picocuries per liter of iodine-131.

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DOE collected samples from 0800 hours on April 9 to 1600 hours on April 10, 1979, and analyzed for iodine-131. Results were as follows:

- 15 water samples - no detectable activity
- 12 vegetable samples - no detectable activity
- 4 soil samples - no detectable activity
- 1 air sample near Goldsboro - 8.5 picocuries per cubic meter

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters have ranged from 0.01 to 0.03 milliroentgens per hour for the past 24-hour period of April 10, 1979. These levels are in close agreement with expected natural background levels.

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