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IMMEDIATE  
PRELIMINARY NOTIFICATION

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April 16, 1979

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

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 April 16, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status:

The primary coolant temperature remains at approximately 250 degrees F. Four of the incore thermocouple readings remain above 300 degrees F with the highest at 344 degrees F.

The hydrogen recombiner that failed on April 13 has been repaired and is in service. At 0800 on April 15, 1979, the hydrogen concentration was reported to be 1.46% compared to the reading of 1.48% reported at 2200 hrs. on April 12, 1979 before the recombiner failed.

Environmental Status:

Offsite radiation levels indentified by NRC survey teams were consistent with normal background levels (0.02 mR/hr. maximum). The results were obtained from routine surveys performed on the east and west sides of the Susquehanna River at distances up to five miles north and south of the site.

By 4:00 p.m. on April 15, 1979, 482 local residents had been scanned with the whole body counter located in Middletown. Scan results indicated no radiation levels above normal body levels.

The following Aerial Measuring System survey was conducted on April 15. Wind speed variable 5-20 mph.

<u>Time</u>	<u>Max. Radiation Level</u>	<u>Sector</u>	<u>Distance from Site</u>
1700-1815	0.013 mR/hr	120°	1/4 mile (elevation 300 ft)

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CONTINUED  
IMMEDIATE  
PRELIMINARY NOTIFICATION

The NRC took an air sample near the observation center starting at 1200 on April 14 and ending at 1700 on April 15. Analysis of this sample indicated that the concentration of iodine-131 during the 29 hour period averaged  $4.1 \times 10^{-12}$  uc/cc.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters for the past 24-hour period of April 16 are near expected natural background levels.

Iodine cartridge measurements (from the Unit 2 vent stack) indicate that increased iodine release rates began occurring on or around April 12. Iodine concentrations measured in the ventilation stack are:

<u>Time</u>	<u>Activity (uc/cc)</u>
4/10 (1608) - 4/11 (1800)	$2.3 \times 10^{-8}$
4/11 (1920) - 4/13 (2315)	$1.2 \times 10^{-7}$
4/14 (1030) - 4/14 (1915)	$1.4 \times 10^{-7}$
4/14 (1915) - 4/15 (0525)	$2.5 \times 10^{-7}$
4/15 (0525) - 4/15 (0804)	$2.7 \times 10^{-7}$
4/15 (0805) - 4/15 (1802)	$3.8 \times 10^{-7}$
4/15 (1802) - 4/15 (2140)	$2.1 \times 10^{-7}$

Environmental samples obtained during this period have shown some increase in radioactivity. While the exact source of the increased activity has not been determined, it may be related to changeout of filters in the Auxiliary Building and/or tripout of the Auxiliary Building ventilation fan. Efforts are in progress to correlate work activities with the increased Iodine concentrations.

On April 15 and 16, DOE, NRC, and the licensee measured Iodine levels in the switchyard, 0.6 miles east of the reactor site. Airplane over-flight occurring at the same time indicated a very narrow plume. Recent measurements (0200 4/16) indicated  $9.4 \times 10^{-11}$  uc/cc for NRC sample,  $7.4 \times 10^{-11}$  uc/cc for licensee sample and  $6.0 \times 10^{-11}$  uc/cc for the DOE sample. The MPC for iodine-131 in unrestricted areas is  $1 \times 10^{-10}$  uc/cc. All samples were side by side samples.

The State of Pennsylvania has been informed of these results. In addition, the State will be provided with the DOE samples for analysis.

Contact: GCGower, IE x 27246; DThompson, IE x 28487

CONTINUED  
IMMEDIATE  
PRELIMINARY NOTIFICATION

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IE (TMI) Site 12:50 (Provide copy to STATE)  
White House Situation Room 2:20  
FDAA 2:02 (Provide copies to the Administrator and the Operations Center)  
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DOE/EOC 1:55  
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PRELIMINARY NOTIFICATION