Central files

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
SUITE 202, WALNUT CREEK PLAZA
1990 N. CALIFORNIA BOULEVARD
WALNUT CREEK, CALIFORNIA 94596

April 25, 1979

Docket Nos. 50-460, 50-397
50-508, 50-509, 50-513

Washington Public Power Supply System
P. O. Box 968
3000 George Washington Way
Richland, Washington 99352

Attention: Mr. N. O. Strand
Managing Director

Gentlemen:

In accordance with our letter dated April 1, 1979 transmitting Bulletin 79-05, we are enclosing Preliminary Notification 79-67AF.

Sincerely,

R. H. Engelken
Director

Enclosure:
PNO-79-67AF

cc w/enclosure:
M. E. Witherspoon, WPPSS
A. D. Kohler, WPPSS
J. P. Thomas, WPPSS
W. J. Talbott, WPPSS
G. C. Sorensen, WPPSS

AD
6D

7905090047 S

April 25, 1979

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

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 25, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

In the course of transferring feedwater flow to the auxiliary nozzles, a carryover of water into the steam line was experienced; resulting in water impingement in the main turbine. An operator-initiated turbine trip at about 3:00 p.m. stopped the impingement. The feedwater was being diverted to the auxiliary feedwater sparger in preparation for secondary system modification for adding a closed cooling system. Steam is currently being admitted to the main condenser through the turbine bypass valves. This change in cooling mode will not affect preparations for natural circulation operations. The average primary coolant temperature has increased to 224 degrees F. The highests incore thermocouple reading is 312 degrees F.

As a result of changing the charcoal filters in the A Trains of the Auxiliary and Fuel Handling Building Ventilation Systems, the iodine discharges have been reduced by approximately 80 percent. The charcoal filters of Auxiliary Building Ventilation System Train B have been replaced. This system was placed in service at 5:30 a.m. April 25.

Following a briefing of the Governor's Office, a press briefing was held to outline the anticipated schedule for achieving long term cooling status. A copy of the press release is attached.

Environmental Status

Three Aerial Measuring System (ARMS) Surveys were made on April 24, 1979. No radioactivity above natural background was detected.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Iodine concentration at Unit 2 ventilation stack (Analyzed by NRC Mobile Laboratory).

Date/Time	Activity (uCi/cc)
4/24 (0408) - 4/24 (0637)	3.0×10^{-8}
4/24 (0642) - 4/24 (0813)	4.2×10^{-8}
4/24 (0815) - 4/24 (1215)	3.1×10^{-8}
4/24 (1217) - 4/24 (1600)	1.6×10^{-8}
4/24 (1602) - 4/24 (1955)	2.4×10^{-8}
4/24 (1958) - 4/25 (0001)	2.6×10^{-8}

Offsite Measurements

Radiation Levels

Offsite radiation levels identified by NRC survey teams continue to be consistent with natural background levels (0.02 mR/hr maximum). These results were obtained from routine daily surveys performed downwind on the east side of the Susquehanna River at distances up to five miles north and south of the site.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters (TLDs) for the past 24 hour period continue to be consistent with natural background levels.

NRC Environmental Samples (Samples taken offsite within 3 miles of site analyzed in mobile laboratory)

Sample Type	Date of Sample	Number of Samples	Results
air	4/24-25	6	Less than MDA*
milk	4/23	3	Less than MDA
daily air	4/23-24	1	Less than MDA

EPA Environmental Samples (Analyzed at Remote Laboratory)

Sample Type	Date of Sample	Number of Samples	Results
air	4/23	28	Less than MDA
air	4/23	3	Range from 2.3 to 7.1 $\times 10^{-13}$ microcuires per cubic centimeter (0.23 to 0.71 picocuries per cubic meter)
air	4/20	2	One sample was less than MDA. One sample indicated 168 picocuries per cubic meter of Xe-133.** Both samples indicated approximate background levels of Kr-85.

All EPA samples were taken at distances greater than 2 miles from this site.

*MDA - minimum detectable activity.
**Maximum Permissible Concentration for Xe-133 is 300,000 picocuries per cubic meter.

The Commonwealth of Pennsylvania has been informed of these results.

Attachment: Press Release Dated 4/24/79

Contact:

Distribution: Transmitted H St 2:45

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)

Transmitted: MNBB _____	P. Bldg 3:00	J. G. Davis, IE (Broadcast by Comm. at 4:11 PS)
L. V. Gossick, EDO	H. R. Denton, NRR	Region I 3:00
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II 3:00
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III 3:00
N. M. Haller, MPA	V. Stello, NRR	Region IV 3:00
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V 3:00
H. K. Shapar, ELD	SS Bldg _____	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

(Broadcast) IE (TMI) Site _____ (Provide copy to STATE)
White House Situation Room _____
FDAA _____ (Provide copies to the Administrator and the Operations Center)
EPA _____
DOE/EOC _____
PEMA _____
BRP (State of PA) _____
DCPA _____
HEW (Pickup)
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

FOR IMMEDIATE RELEASE
April 24, 1979

The NRC staff today announced a timetable for placing the Three Mile Island Unit 2 reactor on natural circulation cooling. As stated on previous occasions, it is now possible to cool the reactor by natural convection circulation if difficulties arise with presently operating equipment. It is, of course, preferable to place the plant on natural circulation in a planned fashion while presently available plant instruments and equipment remain functioning. However, if instrumentation in the plant does not retain its reliability and the various backup methods presently available do not function adequately, it may be necessary to place the plant on natural circulation at that time.

The excessive non-condensable gases in the system have been removed and are now at an acceptable level.

The phased reduction in primary system temperature has now reached approximately 175°F. This reduction in temperature is greater than originally anticipated with steaming in the steam generator A.

Assuming current instrumentation continues to perform satisfactorily, the following timetable for a planned transition to natural circulation has been established. The sequences planned to reach this objective are:

1. The "B" steam generator will be placed in a water solid condition by April 29th.

2. The "A" steam generator will be placed in a water solid condition by April 30th.

3. Action needed to upgrade the backup cooling capability of the existing decay heat removal system will be completed by May 1.

4. With these steps completed, the primary system recirculation pump will be shut off on May 2nd and the system will then go into natural circulation.

There are a number of other ongoing actions at the plant.

1. Radioactive effluent filter systems within the plant have been upgraded. An independent redundant charcoal filter system, which will serve as a second stage of removal, has been under construction for some time. The new system is expected to be operational by May 2nd.

2. Modifications are currently in progress that will permit the secondary side of the "B" steam generator to be operated in a closed system, i.e., without the need for the availability of the main condenser. This activity is scheduled for completion for May 7th. Closed system cooling of steam generator B is not essential to establish stable natural circulation cooling.

3. The "A" steam generator also will be modified to permit operation in a closed system. This modification also is not required to establish natural circulation. Its schedule for completion is currently estimated to be the middle of May.

4. The passive level and pressure control system that will augment existing plant systems is expected to be completed by mid-May. This system is not needed to achieve natural circulation, but it is prudent to add this redundancy to the existing plant equipment for long term monitoring of natural circulation cooling.

5. Modifications on the onsite electrical system are currently being made. Additional diesel generators have been delivered to the site to provide a backup power supply, and are currently being placed on their foundations. Electrical instrumentation and other necessary connections will be completed by April 27th.

6. There are a number of additional modifications being made within the facility that are related to the long term recovery from the accident. Such modifications include: adding an additional decay heat removal system with equipment to process and remove the radioactive materials from the primary coolant system; the installation of additional tanks to provide for storage of contaminated water that may result from decontamination activities; installation of additional contaminated water processing equipment, and general decontamination activities needed in the auxiliary building.