

EF

IMMEDIATE

PRELIMINARY NOTIFICATION

March 30, 1979

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

This preliminary notification constitutes EARLY notice of an event of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by IE staff on this date.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Gaseous radioactivity from the primary coolant system letdown has been contained in waste gas decay tanks since the last gaseous release at approximately 2:50 p.m. March 30, 1979. At the present reactor coolant letdown rate of approximately 20 gpm it may be necessary to make a planned release of radioactive gas tomorrow to prevent gas decay tank relief valve operation at its setpoint of 100 psi. The licensee has installed a temporary line from the gas decay system back to reactor containment which is under evaluation before being placed in operation. Containment pressure is being maintained slightly negative (-1 psi) as a result of fan cooler operation.

Reactor coolant temperature measured at fifty-two locations at the outlet of the core have continued to come down slowly. Three outlet temperature instruments continue to indicate above saturation temperature.

The NRC staff was informed by the licensee on Friday morning that examination of containment pressure data for March 28 indicates a pressure spike up to approximately 30 psi occurred at approximately 1:50 p.m. NRC personnel are evaluating the possibility that a hydrogen explosion was the cause of the containment internal pressure spike.

The reactor coolant path is through one reactor coolant pump and one steam generator. The steam generator is being fed by an auxiliary feed-pump. Several options for depressurizing the reactor and continuing cooldown via the residual heat removal system are under consideration.

CONTINUED

The volume of non-condensable gases in the reactor vessel has been estimated to be approximately 1000 to 1500 cubic feet at 1000 psi. This volume is estimated to result in a water level of several feet over the top of the fuel. The rate of growth of the bubble in the reactor vessel is estimated to be less than 50 cubic feet per day at 1000 psi.

The Director of the Office of Nuclear Reactor Regulation, the Director of the Region I Office of Inspection and Enforcement and the Director of the Division of Operating Reactors arrived at the site at approximately 2 p.m. today to direct NRC activities at the site and site vicinity. Representatives of HEW and EPA are providing coordination and assistance to the NRC at the Incident Response Center.

NRC personnel assembled at the TMI site and vicinity in addition to the upper management personnel consist of the following:

	RI	RII	RIII	Hq
Reactor Inspectors (IE)	8	5	4	
Health Physicists (IE)	12	12	10	
Health Physicists (SP)				4
Public Affairs	1	1		1
Reactor System Analysts (NRR)				13
Radition Waste Specialists (NRR)				4
Health Physicists (NRR)				6
Operating Licensing (NRR)				2
Total Staff			83	

CONTINUED

The following equipment has been assembled at or near the site for support of NRC operations:

Equipment	Location
1 NRC Instrument Van with 2 telephone lines	Observation Center
1 NRC Office Van	"
1 Office Trailer (Supplied by Licensee)	"
200 Hand-Held Portable Radios from US Forest Service	
Portable Health Physics Instrumentation	
3 Helicopters from DOE for survey and support	
2 Laboratory Vans DOE/Bettis	

A sophisticated communications pod from DOE/NEST will arrive tomorrow.

ENVIRONMENTAL STATUS:

At approximately 3 P.M. on March 30, 1979, NRC analysis of eight vegetation samples from the offsite areas showed no detectable activity. At 5.30 P.M. the Pennsylvania State Radiation Health Department reported that environmental water and air samples collected in the vicinity of the Three Mile Island Plant showed no detectable activity except for some Xenon-133 and Xenon-135. Milk sample analysis showed no activity levels above background.

Offsite ground level gamma surveys in the Middletown and Goldsboro areas between 3:00 and 6:00 P.M. on March 30, ranged from .01 to 1 milliroentgens per hour. An aerial survey was made by helicopter from 4:00 - 6:00 P.M. on March 30, the site was surveyed in concentric circles at approximately one mile intervals and at a height of 300 to 1,000 feet. The highest radiation readings were over the site and measured 8 to 10 milliroentgens per hour. In the plume the highest radiation readings were 6 to 8 milliroentgens per hour. The plume followed the river in a northwesterly direction and was not detectable beyond five to six miles from the site. Site ground level surveys conducted between 7:30 - 8:00 P.M. ranged from .01 to 1.8 milliroentgens per hour.

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At 4 P.M. March 30, upper level winds were from the southeast. Forecast indicates precipitation in the form of thunderstorms moving in after 12 midnight, March 30. At 5:00 P.M. winds onsite at Three Mile Island were reported at 2 to 3 miles per hour generally from east to west.

Contact: EMHoward, IE x28111; EJordan, IE x28111

Distribution: Transmitted H St 1:10 a 3/31
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB 1:17 P Bldg 1:25
L. V. Gossick, EDO H. R. Denton, NRR J. G. Davis, IE
H. L. Ornstein, EDO R. C. DeYoung, NRR Region _____
J. J. Fouchard, PA R. J. Mattson, NRR
N. M. Haller, MPA V. Stello, NRR (MAIL)
R. G. Ryan, OSP R. S. Boyd, NRR J. J. Cummings, OIA
H. K. Shapar, ELD (SS Bldg 1:33) R. Minogue, SD
W. J. Dircks, NMSS

White House Situation Room 12:55 a.m. 3/31/79
EPA _____
FDA/BRH _____
DOE/EOC 2:00 a.m. 3/31

Attachment (1)
Radiation Survey Map

IMMEDIATE

PRELIMINARY NOTIFICATION

At approximately 10:30 am, an NRC survey team took survey measurements from a vehicle traveling south on Route 441 on the eastern side of the river. Readings were generally in the range of 3 mr/hr near the site to 1 mr/hr five miles south of the site. Readings in the Middletown and Yorkhaven areas ranged from .1 to 1 mr/hr at approximately 11:15 am.

$\frac{1}{4}$ mi radius (W)
 0-30 $\frac{mr}{hr}$ (300 ft)
 8 $\frac{mr}{hr}$ (500 ft)

1 mi radius (SW to NNE)
 $\frac{1}{2}$ - 1 $\frac{mr}{hr}$ (500 ft)
 100-150 $\frac{mr}{hr}$ (< 1500 ft)

3 mi radius
 $\frac{1}{2}$ - 1 $\frac{mr}{hr}$ (600 ft)

$\frac{1}{2}$ mi radius (SSE)
 1 $\frac{mr}{hr}$ (500 ft)

Time: 1045 - 1145
 (30 Mar '79)

ARM Data (Two helicopters)

WIND - CALM

Symbol	Description	Count
○	Survey point 1	176
○	Survey point 2	200
○	Survey point 3	200
○	Survey point 4	200
○	Survey point 5	200
○	Survey point 6	200
○	Survey point 7	200
○	Survey point 8	200
○	Survey point 9	200
○	Survey point 10	200
○	Survey point 11	200
○	Survey point 12	200
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○	Survey point 199	200
○	Survey point 200	200

NOTE
 micro r/hr

INDUSTRIAL & MILITARY FACILITIES
 WITHIN A 5 MILE RADIUS
 THREE MILE ISLAND NUCLEAR STATION UNIT 1



FIGURE 2-5A
 (AM, 30 9-22-79)