

PRELIMINARY NOTIFICATION

March 28, 1979

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

This preliminary notification constitutes EARLY notice of 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
(Docket No. 50-320)

Subject: REACTOR SCRAM FOLLOWED BY A SAFETY INJECTION AT THREE MILE ISLAND - UNIT 2

The licensee notified Region I at approximately 7:45 AM of an incident at Three Mile Island Unit 2 (TMI-2) which occurred at approximately 4:00 AM at 98% power when the secondary feed pumps tripped due to a feedwater polishing system problem. This resulted in a turbine trip and subsequent reactor trip on High Reactor Coolant Pressure. A combination of Feed Pump Operation and Pressurizer Relief - Steam Generator relief valve operation caused a Reactor Coolant System (RCS) cooldown. At 1600 psig, Emergency Safeguards Actuation occurred. All ECCS components started and operated properly. Water level increased in the Pressurizer and Safety Injection was secured manually approximately 5 minutes after actuation. It was subsequently resumed. The Reactor Coolant Pumps were secured when low net positive suction head limits were approached.

About 7:00 AM, high activity was noted in the RCS Coolant Sample Lines (approximately 600 mr/hr contact readings). A Site Emergency was then declared. At approximately 7:30 AM, a General Emergency was declared based on High Radiation levels in the Reactor Building. At 8:30 AM site boundary radiation levels were reported to not be significant (less than 1 mr/hr). The source of activity was stated to be failed fuel as a result of the transient, and due to a known previous primary to secondary leak in Steam Generator B.

The Region I Incident Response Center was activated at 8:10 AM and direct communications with the licensee and IE:Headquarters was established. The Response Team was dispatched at 8:45 AM and arrived at the site at 10:05 AM.

At 10:45 AM the Reactor Coolant System Pressure was being held at 1950 psig with temperature at 220°F in the cold leg. By 10:45 AM, radiation levels of 3 mr/hr had been detected 500 yards offsite.

CONTINUED

There is significant media interest at the present time because of concern about potential offsite radiation/contamination. The Commonwealth of Pennsylvania and EPA have been informed. Press contacts are being made by the licensee and NRC.

Contact: GKlingler, IE x28019 FNolan, IE x28019 SEBryan, IE x28019

Distribution: Transmitted H St ^{3:45}~~3:35~~

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)
Transmitted: MNBB <u>3:50</u>	P. Bldg <u>3:40</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region <u>1</u> <u>3:58</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	
J. J. Fouchard, PA	R. J. Mattson, NRR	(MAIL)
N. M. Haller, MPA	V. Stello, NRR	J. J. Cummings, OIA
R. G. Ryan, OSP	R. S. Boyd, NRR	R. Minogue, SD
H. K. Shapar, ELD	SS Bldg <u>3:52</u>	
	W. J. Dircks, NMSS	

PRELIMINARY NOTIFICATION

PRELIMINARY NOTIFICATION

Bob

March 29, 1979

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

This preliminary notification constitutes EARLY notice of 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 - UNIT 2

This supplements PNO-79-67 dated March 28, 1979.

As of 3:30 p.m., on March 28, 1979, the plant was being slowly cooled down with Reactor Coolant System (RCS) pressure at 450 psi, using normal letdown and makeup flow paths. The bubble has been collapsed in the A Reactor Coolant Loop hot leg, and some natural circulation cooling has been established. Pressurizer level has been decreased to the high range of visible indication, and some heaters are in operation. The secondary plant was being aligned to draw a vacuum in the main condenser and use the A Steam Generator for heat removal. The facility plans to continue a slow (30F/hr) cooldown, until the Decay Heat Removal System can be placed in operation at 350 psi RCS pressure, 350°F RCS temperature in 15-18 hours.

As of 3:30 p.m., a plume approximately 1/2 mile wide and reading generally 1 mr/hr was moving to the north of the plant. The ARM's helicopter is being used to define the length of the plume. Airborne iodine levels of up to 1×10^{-8} uCi/ml have been detected in Middletown, Pennsylvania, which is located north of the site.

Media interest is continuing. The Commonwealth of Pennsylvania is being kept informed by plant personnel.

Contact: GKlingler, IE x28019 FNolan, IE x28019 SEBryan, IE x28019

Distribution: Transmitted H St NOV 23 10:30
Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 10:25
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 10:32
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 10:28
W. J. Dircks, NMSS

J. G. Davis, IE
Region I 10:33

(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

PRELIMINARY NOTIFICATION

March 30, 1979

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

This preliminary notification constitutes EARLY notice of 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

Three Mile Island Unit 2 is continuing to remove decay heat through A-loop steam generator using one reactor coolant pump in that loop for coolant circulation. The reactor coolant pressure and temperature were stable and under control throughout the night of March 29. There has been some difficulty in maintaining coolant letdown flow due to resistance in the purification filters. The licensee notified IE at about 11:00 p.m. on March 29 that they expected to remain in this cooling mode for at least 24 hours.

The licensee's engineering staff was requested by NRR to obtain a better estimate of the volume of the noncondensable "bubbles" in the reactor coolant system. There are apparently two such bubbles one in the pressurizer that has been intentionally established for control of pressure and level, and one in the reactor vessel head caused by the accumulation of noncondensable gases from failed fuel and radiolytic decomposition of water. The estimate is to be obtained by correlating pressurizer pressure and level indications over the past hours of stable operation. The volume of the bubble in the reactor vessel is of interest in assuring that sufficient volume remains in the upper head for collection of more noncondensable gases arising from continued operation in the present cooling mode as well as to assess the potential for movement of the bubble during a switchover to decay heat removal operation.

The licensee believes it is prudent to remain in the present cooling mode due to the potential for leakage of highly radioactive coolant from the decay heat removal system into the auxiliary building, movement of noncondensable gases into the reactor coolant loop, and boiling in the core when the reactor coolant pump is shut down.

CONTINUED

Fuel Damage

Preliminary assessment of the extent of fuel damage from a reactor coolant sample taken at approximately 5:00 p.m. on March 29 indicates significant releases of iodine and noble gases from the fuel. A 100 milliliter sample taken from the primary coolant system via a letdown line was measured at about 1,000 R/hr on contact (70-80 R/hr at one foot and 10-30 R/hr at three feet). Preliminary analysis of a diluted sample in the IE mobile laboratory indicated fission product concentrations of about 8×10^5 microcuries per milliliter. The sample will be flown to Bettis Laboratory for further analysis.

Thermocouple readings of coolant temperature at the outlet of the instrumented fuel assemblies indicate potential local core damage, possibly in one quarter of the total of 177 fuel assemblies and generally in the center of the core. Of the 52 readings at 5:00 a.m. on March 30, one was above the coolant saturation temperature of about 550°F, 7 were above 350°F, and 2 were off-scale, indicating temperatures higher than 700°F. Upon request of NRR, Babcock and Wilcox is developing a procedure for use by the licensee in taking direct potentiometer readings from the off-scale thermocouples since the temperature scale limitation of 700°F is controlled by the process computer, not the thermocouple itself.

Reactor Coolant System (RCS) Parameters

The RCS parameters have remained relatively stable during the period. Gradual RCS cooldown continued to about 1:30 a.m., March 30, when temperature was slightly increased to allow additional margin between RCS operating parameters and Technical Specification minimum pressurization limits. Following are the primary system parameters over this period:

	10:00 a.m. 3/29/79	7:00 p.m. 3/29/79	12:01 a.m. 3/30/79	3:00 a.m. 3/30/79	5:00a.m. 3/30/79
Pressurizer Level (inches)	348	321	326	342	354
Pressurizer Pressure (psi)	863	945	1023	1055	1053
Pressurizer Temperature (°F)	529	542	551	556	557
Loop A Core					
Inlet Temperature (°F)	281	277	275	278	274
Loop B Core					
Inlet Temperature (°F)	281	277	275	278	274

CONTINUED

Environmental Status

Two aerial surveys were conducted during the evening of March 29. The first flight was made about 8:15 p.m. during which measurements were taken in a circle around the site with a radius of about eight miles. No defined plume of radioactivity was detected, but residual pockets of radioactivity were identified at various points where the measured levels ranged from .025 to .050 milliroentgens per hours. (Natural background levels are about .005 to .015 milliroentgens per hour.) During the second flight, at about 10:30 p.m., a plume was detected northwest of the plant with a width equal to and confined within the boundaries of the river. The plume was touching down about one mile from the plant at Hill Island and then splitting into two parts - one on each side of Hill Island. Measurements at the east shoreline of the river, opposite Hill Island indicated about four milliroentgens per hour and at the shoreline on mile north of Hill Island near Olmstead Air Force Base about one milliroentgen per hour. Additional measurements at five miles from the plant were on the order of .010 milliroentgens per hour and are in agreement with the earlier flight.

During the early morning hours of March 30, an NRC monitoring team took radiation measurements from a vehicle traveling both sides of the Susquehanna River from 10 miles south of Three Mile Island to 4 miles north. Radiation levels were highest near Cly, a community just south of the facility on the west side of the river. The level at Cly was 0.15 milliroentgen per hour. All other locations had levels less than 0.05 milliroentgens per hour.

Other Information

At approximately 4:00 p.m. on March 29, two employees of Metropolitan Edison Co. received radiation exposures in excess of the quarterly limit of 3 rems. The employees, an operator and a chemist, entered the auxiliary building to collect a sample of primary coolant. Present estimates are that the operator received 3.1 rems and the chemist 3.4 rems.

The licensee released less than 50,000 gallons of slightly contaminated industrial wastes on March 29, 1979. This release was terminated at NRC request at approximately 6:00 p.m., March 29, 1979, because of concerns expressed by state representatives. At about 12:15 a.m. on March 30, NRC gave the licensee permission to resume releases of the slightly contaminated industrial wastes to the Susquehanna River. This action was coordinated with the office of the Governor of Pennsylvania and a press release was issued by the State. Representatives of the news media expressed concern that they were not informed of the planned resumption of the release prior to permission having been granted.

At 8:40 a.m., on March 30 the licensee began venting from the gaseous waste tanks. The impact of this operation is not yet known.

Contact: DThompson, IE x28111; EJordan, IE x 28111

Distribution: Transmitted H St 9:50
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 10:02
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P Bldg 10:15
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
(SS Bldg 10:42)
W. J. Dircks, NMSS

J. G. Davis, IE
Region II 10:30
II, III, IV, V
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

RII: 12:07

RIII: 12:20

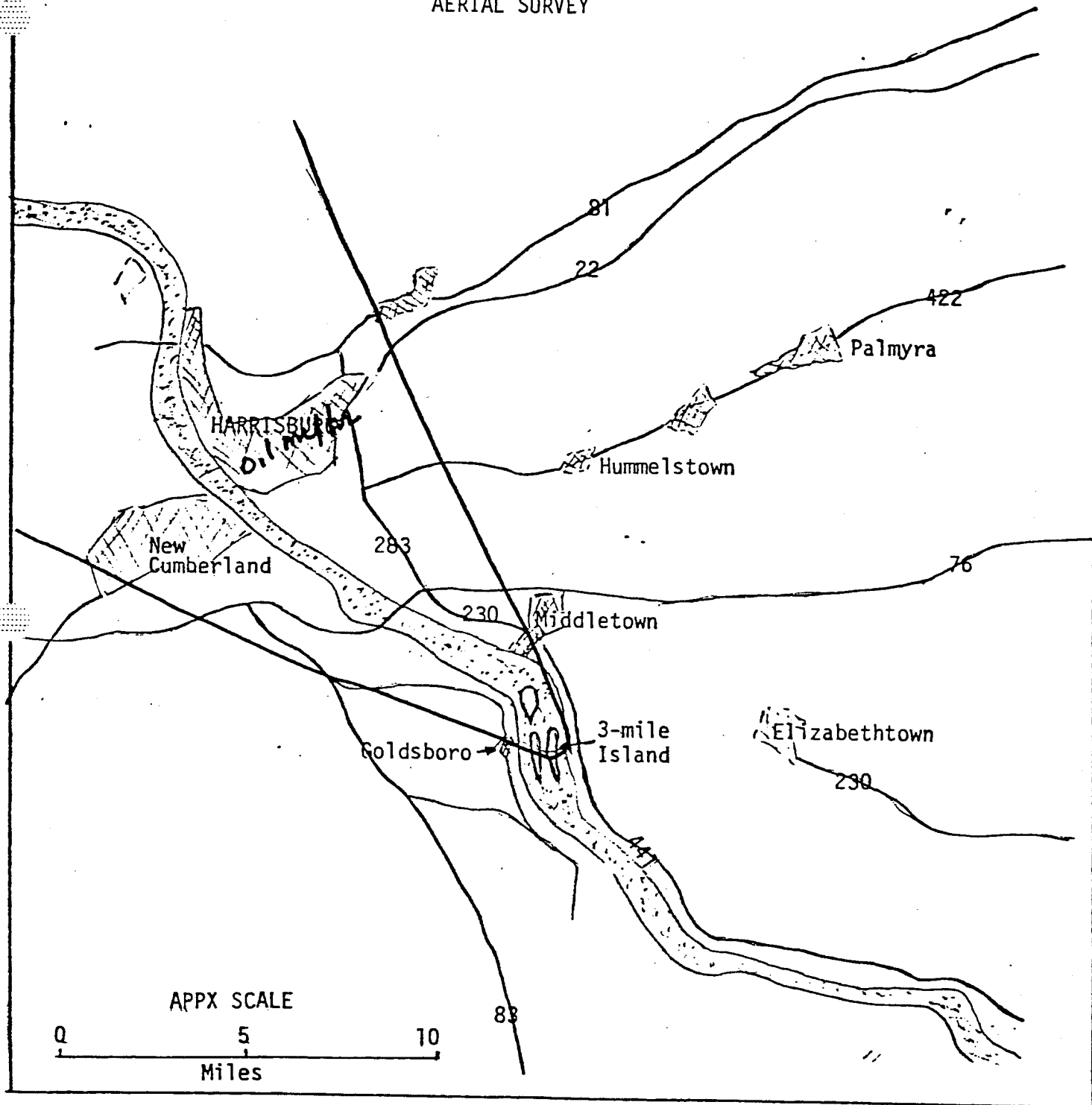
RIIV: 12:55

RIV:

Attachments (7):
Aerial Survey (6)
Ground-Level Survey (1)

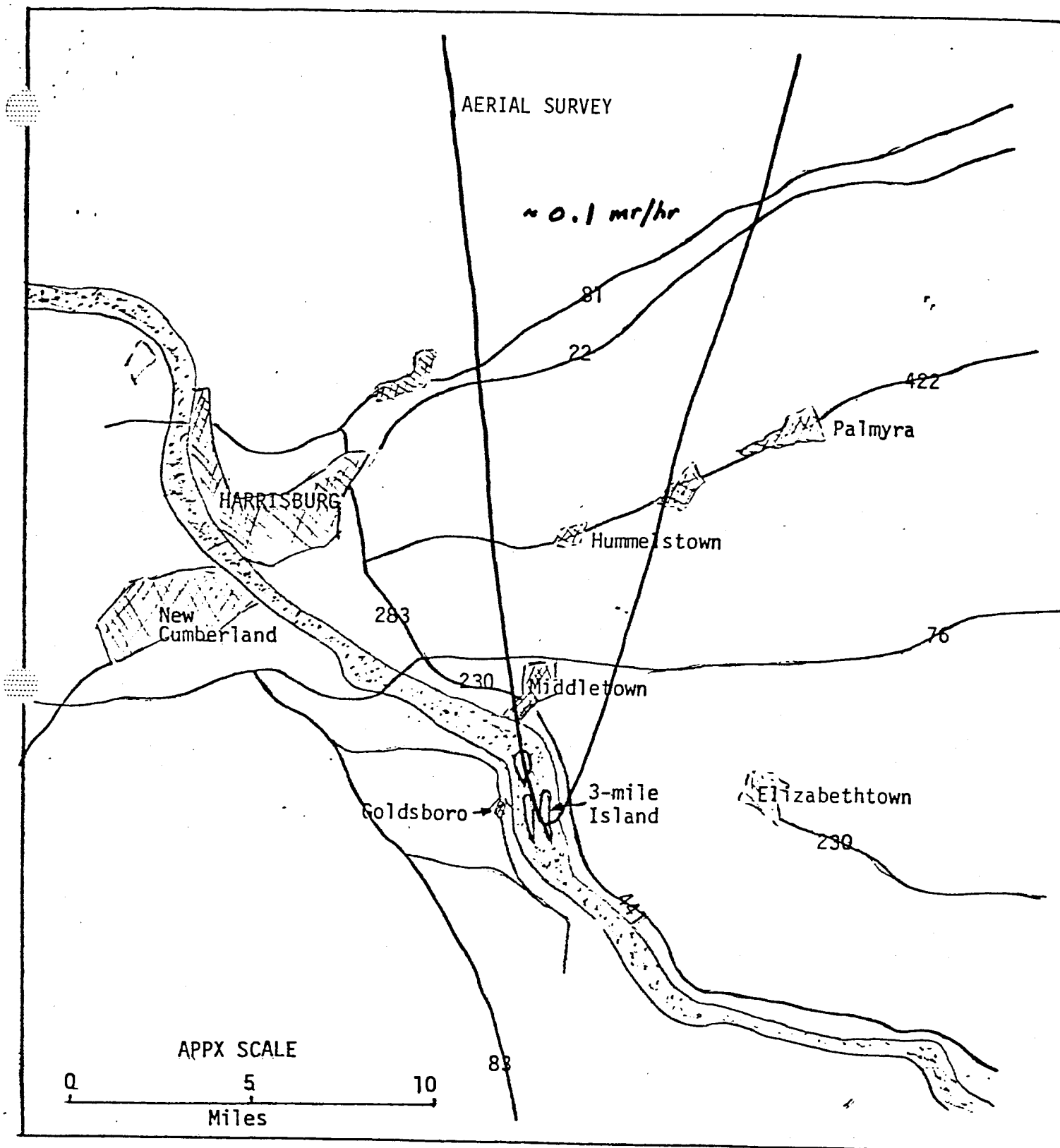
PRELIMINARY NOTIFICATION

AERIAL SURVEY



March 28, 1979 8:00 p.m.

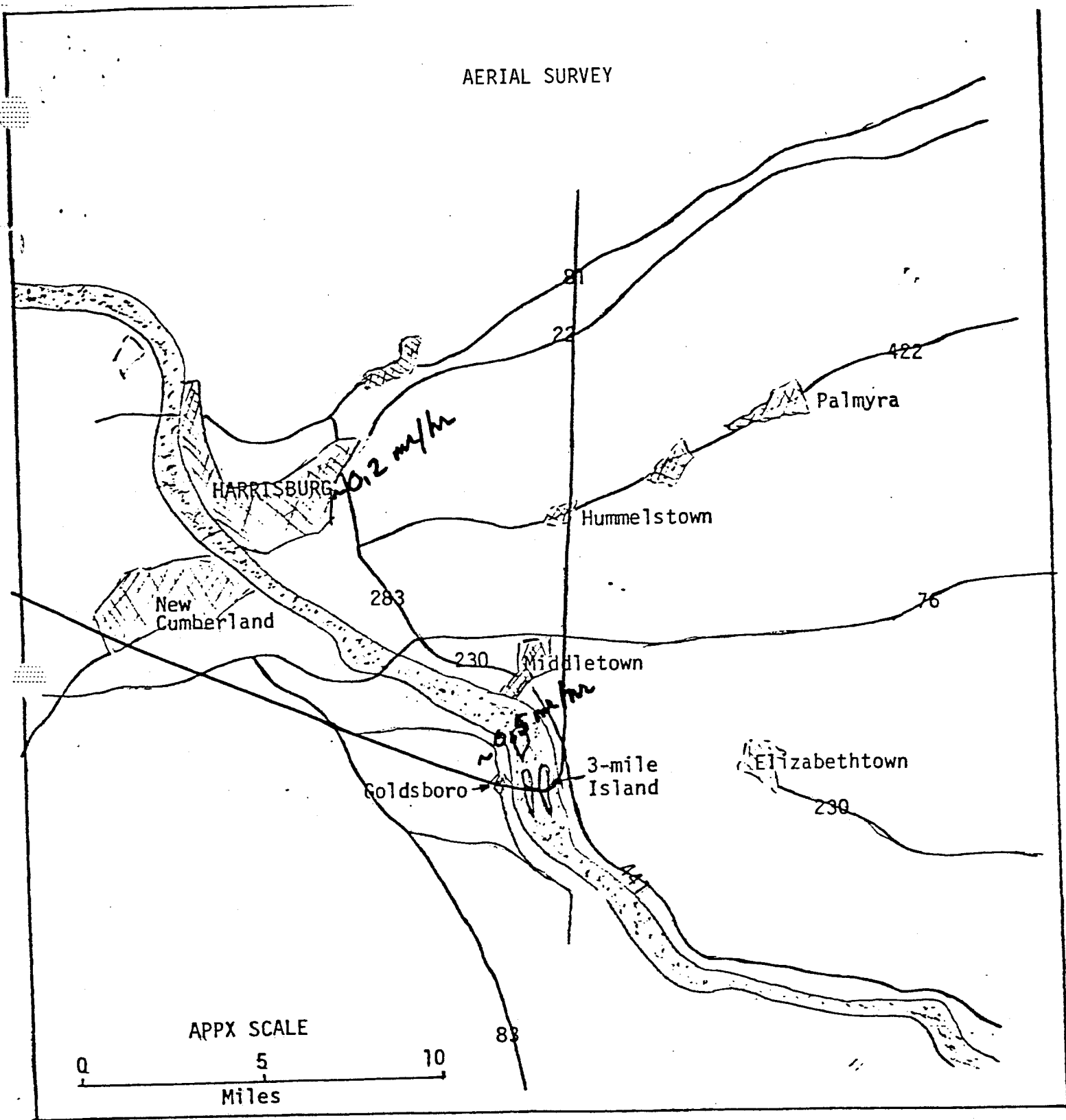
Plume in a N to NW direction. Primarily Xe-133. Over Harrisburg, radiation measurements in the plume showed about 0.1 mr/hr. At 10 miles from the site, the plume was about 4-5 miles wide; top of plume at about 3000 feet.



March 28, 1979 4:30 p.m.

Plume in a N to NE direction, about 30° sector.
 Primarily Xe-133. At distance of about 16 miles,
 radiation measurements in the plume were about 0.1 mr/hr.

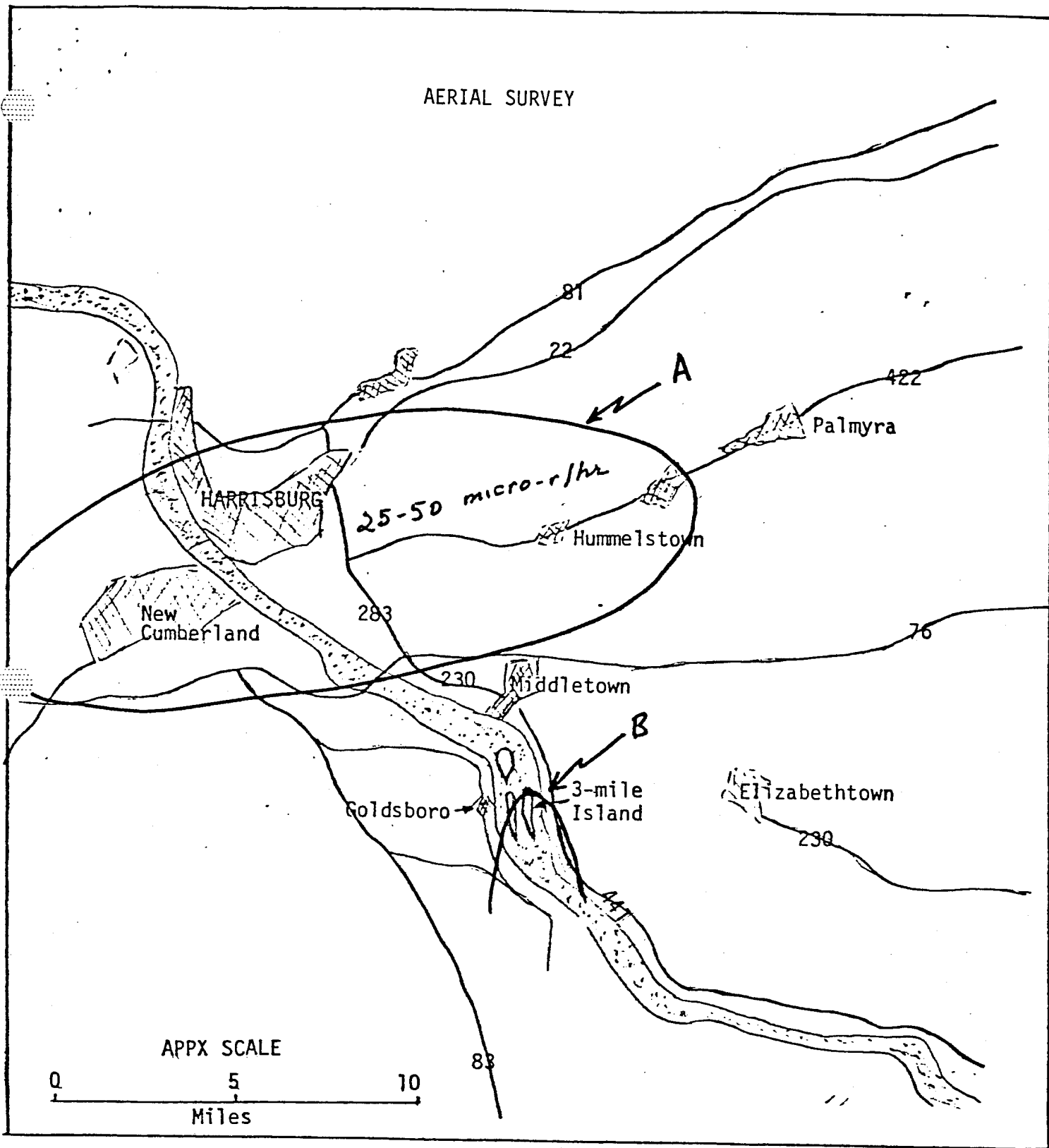
AERIAL SURVEY



March 29, 1979 10:45 a.m.

Plume in a N to NW direction. Primarily Xe-133.
Radiation measurements in the plume at about 10 miles
from plant in centerline of plume were 0.2 mr/hr; at
1 mile from plant, about 0.5 mr/hr maximum.

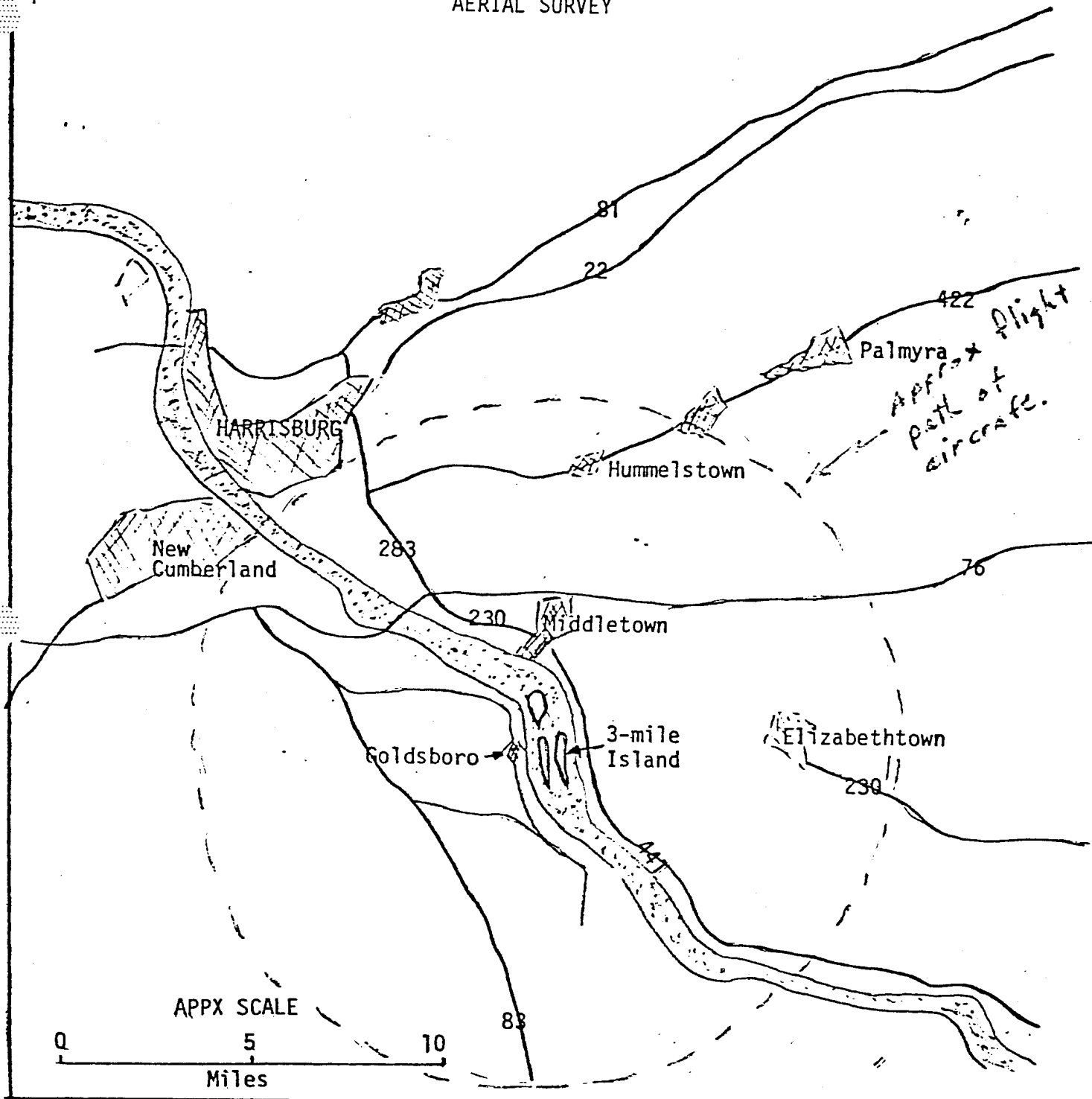
AERIAL SURVEY



March 29, 1979 5:00 p.m.

- A** Residual cloud (Xe-133) N to NW between Mechanicsburg and Hershey, Pennsylvania. Radiation measurements in the cloud in the microrentgen/hour range, highest readings in cloud center.
- B** Ground level measurements on the island indicated a plume in the southerly direction. Radiation measurements at fence line south of plant were 10 mr/hr, and one-half mile south of fence line, 0.5 mr/hr.

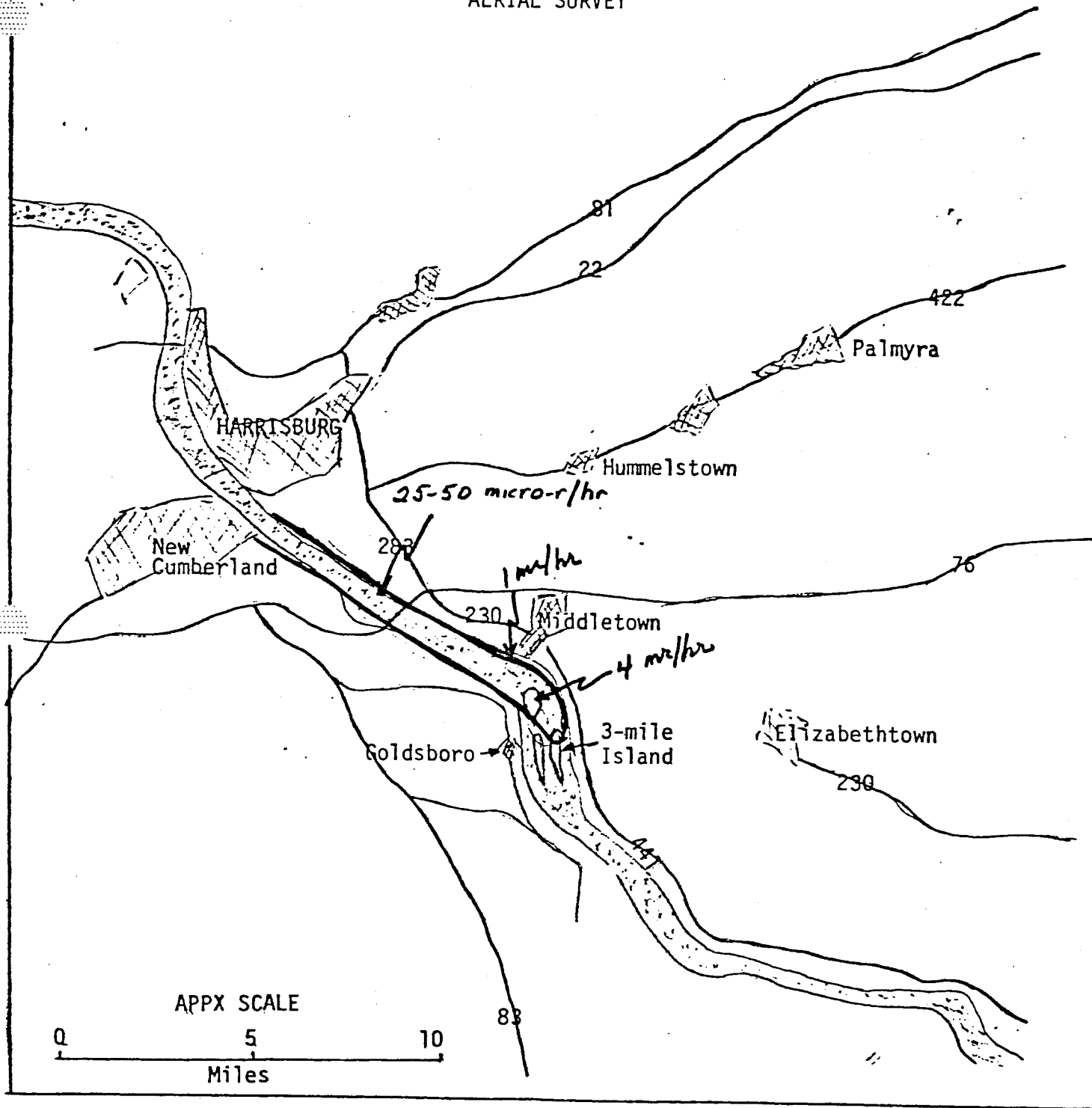
AERIAL SURVEY



March 29, 1979 8:00 p.m.

Survey aircraft circled the site at distance of about 8 miles at altitude of 1000 feet. No detectable plume; "pockets" of residual radioactivity were detected with radiation readings in the range of of 25 - 50 microrentgens/hour.

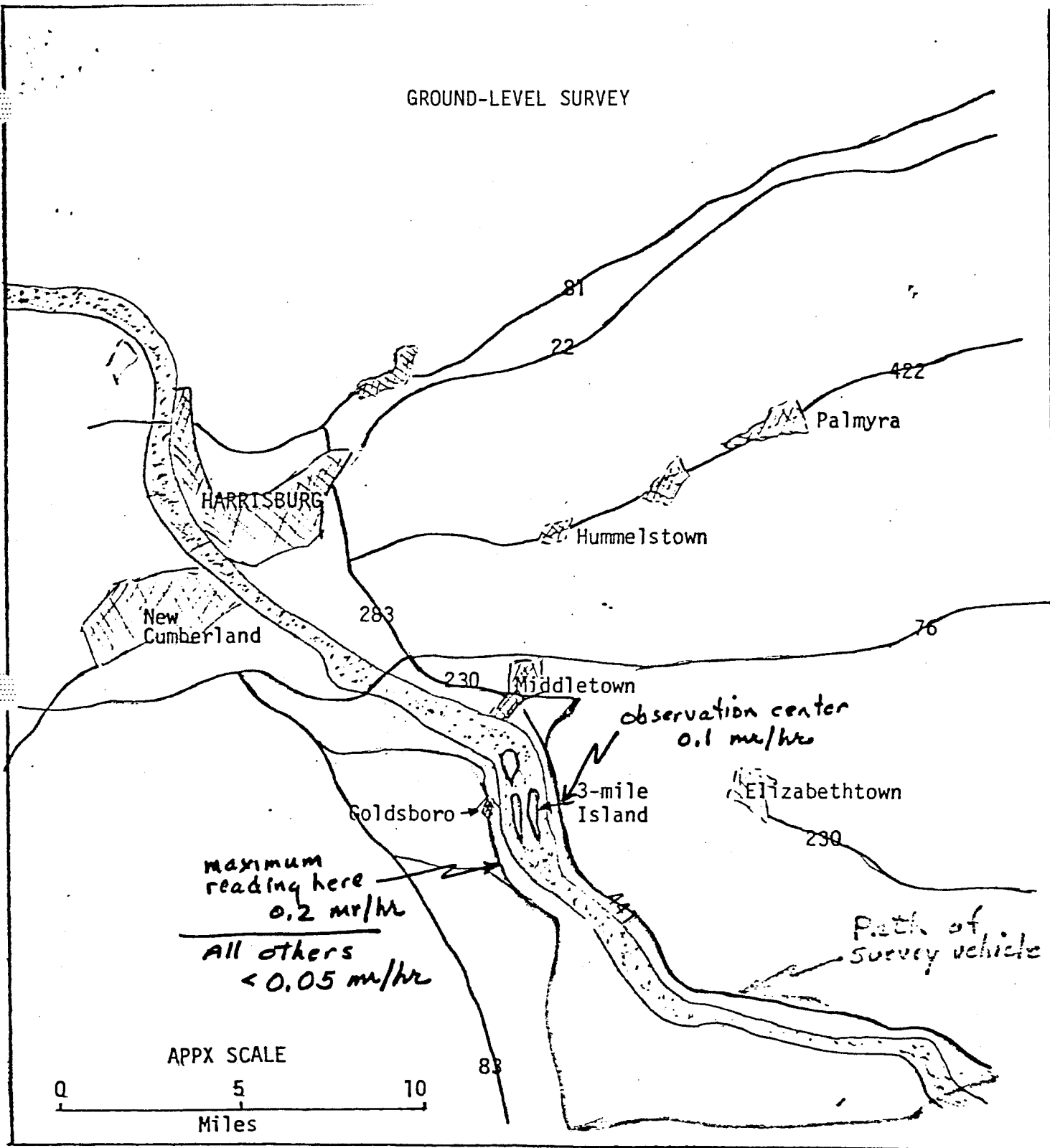
AERIAL SURVEY



March 29, 1979 10:30 p.m.

Plume in a NW direction, width about equal to width of river. Plume touches down about 1 mile from plant at Hill Island. Radiation measurements at east shore line at Hill Island, 4 mr/hr; one mile north of Hill Island, 1 mr/hr; and at five miles from the plant, 25 - 50 microrentgens/hr.

GROUND-LEVEL SURVEY



March 30, 1979 Time: approximately 4:00 a.m. - 5:30 a.m.

An NRC survey team took radiation measurements from a vehicle traveling both sides of the Susquehanna River. Radiation levels were highest near Cly, a community just south of the plant on the west side of the river. The level at Cly was about 0.2 mr/hr. With the exception of the reading of 0.1 mr/hr at the Observation Center, the remainder of the readings on the route were less than 0.05 mr/hr.

March 30, 1979

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

This preliminary notification constitutes EARLY notice of 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 50-520)

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

There have been intermittent uncontrolled releases of radioactivity into the atmosphere from the primary coolant system of Unit 2 of the Three Mile Island Nuclear Power Plant near Harrisburg, Pennsylvania. The licensee is attempting to stop the intermittent gaseous releases by transferring the radioactive coolant water into the primary containment building. The levels of radioactivity being measured have been as high as 20 to 25 millirem per hour in the immediate vicinity of the site at ground level. Off-site levels were a few milliroentgen.

At about 11:30 a.m. EST, the Chairman of the NRC has suggested to Governor Thornburg of the Commonwealth of Pennsylvania that pregnant women and pre-school children in an area within five miles of the plant site be evacuated. Members of the NRC technical staff are at the site and efforts to reduce the temperatures of the reactor fuel are continuing. These temperatures have been coming down slowly and the final depressurization of the reactor vessel has been delayed. There is evidence of severe damage to the nuclear fuel. Samples of primary coolant containing high-levels of radioiodine and instruments in the core indicate high fuel temperatures in some of the fuel bundles, and the presence of a large bubble of non-condensable gases in the top of the reactor vessel.

Because of these non-condensable gases, the possibility exists of interrupting coolant flow within the reactor when its pressure is further decreased and the contained gases expand. Several options to reach a final safe state for the fuel are under consideration. In the meantime, the reactor is being maintained in a stable condition.

Contact: SEBryan, IE x28188 ELJordan, IE x28188

Distribution: Transmitted H St 4.15
Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 4.33
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 4.17
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 4.35
W. J. Dircks, NMSS

J. G. Davis, IE
Region I 4.30
II 4.33
III 4.43
(MAIL) 4.40
J. J. Cummings, OIA
R. Minogue, SD

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.

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	100
○	Survey point # 3	100
○	Survey point # 4	100
○	Survey point # 5	100
○	Survey point # 6	100
○	Survey point # 7	100
○	Survey point # 8	100
○	Survey point # 9	100
○	Survey point # 10	100
○	Survey point # 11	100
○	Survey point # 12	100
○	Survey point # 13	100
○	Survey point # 14	100
○	Survey point # 15	100
○	Survey point # 16	100
○	Survey point # 17	100
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○	Survey point # 45	100
○	Survey point # 46	100
○	Survey point # 47	100
○	Survey point # 48	100
○	Survey point # 49	100
○	Survey point # 50	100
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○	Survey point # 96	100
○	Survey point # 97	100
○	Survey point # 98	100
○	Survey point # 99	100
○	Survey point # 100	100

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)

IMMEDIATE
PRELIMINARY NOTIFICATION

March 31, 1979

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

This immediate preliminary notification constitutes an update of event of safety and public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by NRC staff at this time.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Reactor cooling continues using the 1A main reactor coolant pump with steam generator A steaming to the main condenser. Changes to this cooling method are not planned for the near term. An operability status of equipment is being compiled for use as backup in the event of failure of existing operating equipment.

The hydrogen recombiner is in an operable status; however, shielding of its piping and components is not fully installed and is presently considered inadequate. Lead for shielding has been located and will be moved to the site on an expedited basis. Calculations of hydrogen in containment show that the present concentration is less than 4%, the staff's limit on allowed concentration to ensure an explosive mixture is not obtained. Attempts are being made to obtain a containment atmosphere sample.

The waste gas decay tank pressures were 80 psi at 10:15 p.m. on March 30 and had been relatively constant for about five hours. The tank is set to relieve pressure at 100 - 110 psi. The radiation field (60 R/hr at contact) prevents resetting relief points.

Reactor coolant temperatures measured by incore thermocouples at 52 locations presently show only one location above saturation temperature. Temperatures in the core as measured from outlet thermocouples are gradually decreasing. Other system parameters are remaining stable.

Environmental Status

Three ARMS flights of one-hour length were conducted beginning at 9:30 p.m. on March 30, and at midnight and 3:00 a.m. on March 31. At a

CONTINUED

distance of one mile from the plant, maximum readings ranged from 0.5 milliroentgens per hour (mr/hr) to 1.5 mr/hr. At the 18 mile point, readings of 0.1 to 0.2 mr/hr were obtained during the two earlier surveys and 0.5 mr/hr during the latest. Flights are being made at approximately three hour intervals.

Offsite ground level gamma surveys in the Middletown area and north, between 9:30 p.m. on March 30 and 1:00 a.m. on March 31, indicated levels from 0.2 to 0.5 mr/hr. These measurements were taken in the general direction of the plume measured in aerial surveys.

At 3:00 p.m. on March 29, (prior to the releases of March 30) the licensee pulled thermoluminescent dosimeters from 17 fixed positions located within a 15 mile radius of the site. The dosimeters had been in place for three months and had been exposed for about 32 hours after the incident. Only two dosimeters showed elevated exposures above normal levels. The highest reading observed was on Three Mile Island, 0.4 miles north of the reactor at the North Weather Station. At this location, the quarterly accumulated exposure was 81 mr, approximately 65 mr above the normal quarterly exposure rate. The other high exposure was observed at North Bridge, 0.7 miles NNE of the reactor at the entrance to the site. At this location, the total quarterly accumulated exposure was 37 mr or approximately 22 mr above the normal quarterly exposure rate.

During the evening milking hours on March 30, milk samples were collected by the Pennsylvania Department of Environmental Resources at the following locations:

Harrisburg (2 sites)
York
Middletown
Bainbridge
Etters

Analyses showed no detectable radioiodine. The cows had been fed on stored feed but had been outside for exercise.

The Pennsylvania Department of Environmental Resources also collected water samples at filtration plants at Columbia, PA (for the City of Lancaster) and Wrightsville on March 30 in the morning and early afternoon. Both sample points are downstream of Three Mile Island. No detectable activity was found.

CONTINUED

Contact: DThompson, IE x28111 NCMoseley, IE x28111

Distribution: Transmitted H St 9:04
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution).

Transmitted: MNBB 9:08
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 9:15
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 9:20
W. J. Dircks, NMSS

J. G. Davis, IE
Region I 9:24

(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

White House Situation Room _____
EPA 10:15
FDA/BRH _____
DOE/EOC 10:01

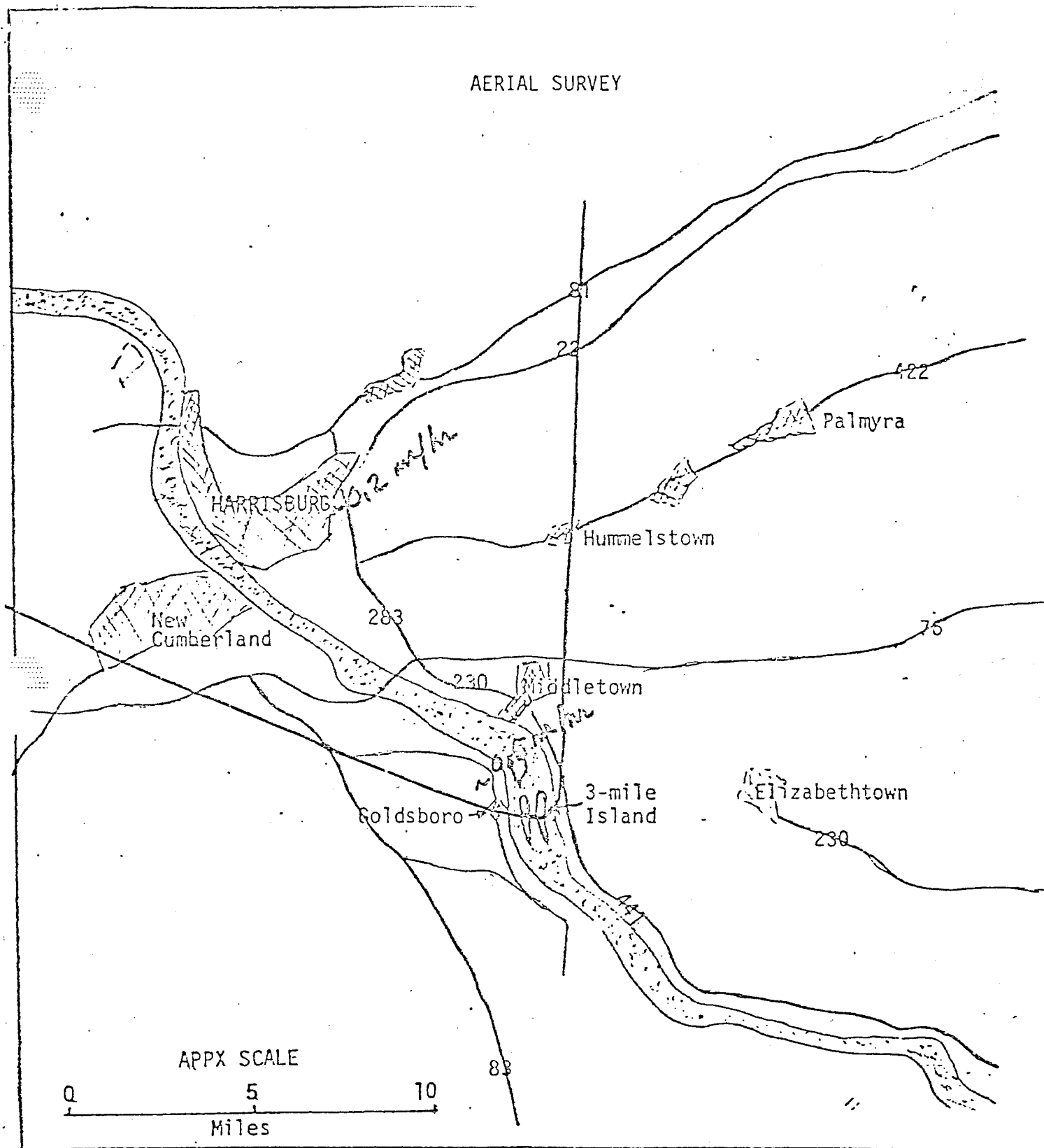
2II - 9:32
2III - 9:40
2IV - 9:48
2V - ~~9:50~~
3:07

Attachment (1)
Radiation Survey Map

IMMEDIATE

PRELIMINARY NOTIFICATION

AERIAL SURVEY



March 29, 1979 10:45 a.m.

Plume in a N to NW direction. Primarily Xe-133.
Radiation measurements in the plume at about 10 miles
from plant in centerline of plume were 0.2 mr/hr; at
1 mile from plant, about 0.5 mr/hr maximum.

IMMEDIATE
PRELIMINARY NOTIFICATION

g

March 31, 1979

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

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 5:30 pm date 3/31/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

There has been no change in the method of cooling the reactor since the previous report (PNO-79-67E). Reactor coolant temperatures measured by incore thermocouples at 52 locations have continued to decrease. At present none of the temperature readings is above saturation temperature for this pressure (554°F). System parameters remain stable. There has been a slight drop in pressurizer level from 215 to 191 inches.

Efforts continue to complete installation of components and piping on the hydrogen recombiner. Approximately 220 tons of lead shielding in various shapes and forms has arrived, or is on the way, to the site. Lead shielding is being installed around the recombiner. A decision to use the recombiner has not yet been made. Two samples of containment atmosphere have been analyzed which show hydrogen concentrations of 1.7 and 1.0%.

Efforts continue to estimate the volume of the noncondensable gas bubble above the core. Licensee calculations of the size of the bubble at 2:40 pm was 880 cubic feet at 875 psig. At about 4:20 pm this was recalculated by the licensee to be 621 cubic feet at 875 psig. This is being further evaluated.

Environmental Status

Three ARMS flights were conducted at about 6:00 a.m., 9:00 a.m., and 12:00 noon on March 31. All flights reflected a rather stable situation. Maximum readings in the plume were from 1.5 to 2.5 milliroentgens per hour (mr/hr) at a distance of one mile from the plant, from 0.5 to 1.0 mr/hr out to 7 miles, and 0.1 to 0.2 mr/hr beyond 10 miles. The plume width is about 1-1/2 to 2 miles. No radioiodines have been detected in the plume. Offsite ground level gamma surveys performed in the predominant wind direction indicated maximum levels of about 2 mr/hr at about 1/2 mile from the site in the direction of the plume. The wind was from the SSW at the time of the

CONTINUED

ARMS flights. At about 1 PM the winds shifted and are now blowing in a south easterly direction.

International Contacts

NRC's Office of International Programs (OIP) has prepared daily status reports, transmitted by Immediate Department of State telegrams to official NRC contacts in the 25 foreign countries with which NRC has regular official relations. OIP is also receiving many foreign telephone calls.

Two senior safety experts from the Federal Republic of Germany (FRG) arrived late March 30 and were briefed by NRC experts at the Operations Center, late March 30 and during March 31. Two French experts will arrive April 1. Washington Representatives or senior visitors of Japan, FRG, and Sweden also have been briefed in the Operations Center. OIP also has been briefing the President of the AECB of Canada, who offered to send any AECL or AECB experts who could be of assistance.

Contact with Licensee

NRC Regional Offices are transmitting to the utilities with operating licenses summary information (in the form of Preliminary Notifications) as they are prepared.

Contact: DThompson, IE x28111 EMHoward, IE x28111

Distribution: Transmitted H St 7:06p.

Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 7:10p

L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 7:15p
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 7:20p
W. J. Dircks, NMSS

J. G. Davis, IE
Region I - 7:50
Region II - 7:55
Region III - 8:15
Region IV - 8:21
Region V - 7:45
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

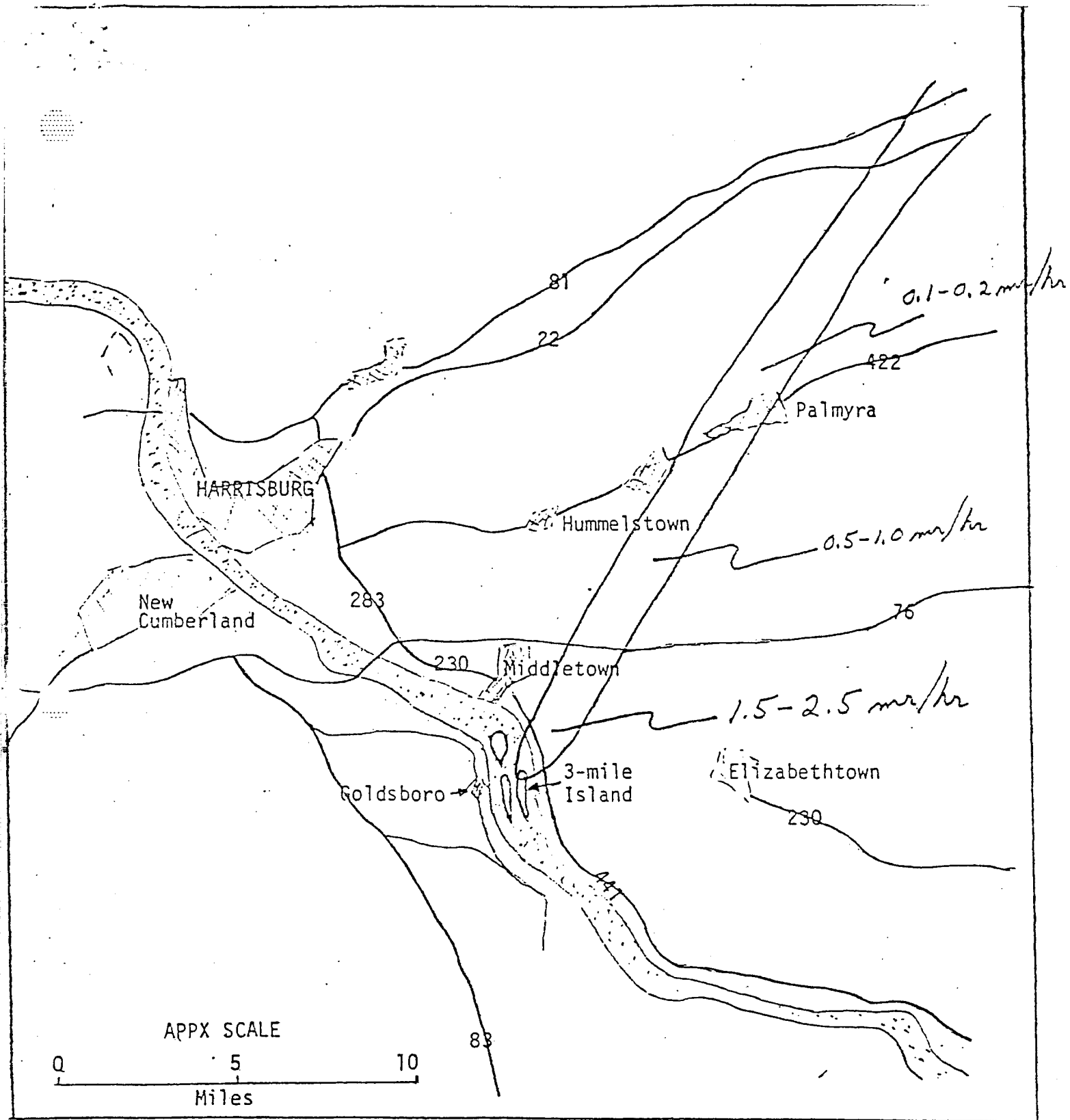
White House Situation Room 7:25p

EPA -
FDA/BRH -
DOE/EOC 8:05p.

Attachment (1)
Radiation Survey Map

IMMEDIATE

PRELIMINARY NOTIFICATION



March 31, 1979

AERIAL SURVEY plume direction and radiation readings shown above conducted at 6:00 & 9:00 AM and 12:00 noon.

IMMEDIATE

PRELIMINARY NOTIFICATION

April 1, 1979

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

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 am on 4/1/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

There has been no substantial change in the primary system temperature and pressure. Incore thermocouples continue to show a downward trend.

Actions are underway to vent radioactive gases from the waste gas decay tank to the containment building. This will be performed through a temporary pipeline.

The licensee plans to hook up and shield two recombiners prior to initiating recombining operations to reduce the concentrations of hydrogen in the containment. The licensee estimates that it will require about 24 hours before the recombiners will be operational.

Calculated values by the licensee of the volume of noncondensable gases above the core continue to vary. The NRC staff has been unable to draw meaningful conclusions from this data.

Environmental Status

ARMS flights at approximately 3-hour intervals were continued on March 31 and the early hours of April 1. Survey results reflected stable conditions. Maximum readings were 2 mR/hr in the plume at a distance of 1 mile from the plant. The plume width has been about 1.5 miles out to a distance of 10 miles. At a distance of 10 miles, plume readings were 0.15 mR/hr. Milk was collected at nine stations on March 31; no radioactive iodine was detected. Offsite ground level gamma surveys performed in the predominant wind direction showed a maximum of 0.6 mR/hr at 500 yards from the plant to a low of 0.06 mR/hr at distances of 2 to 3 miles. An exception was noted during the collection of a sample from the waste gas decay tank when gamma levels of 3 mR/hr were observed at a distance of 500 yards east of the plant.

CONTINUED

Other Information

Analysis of a sample of primary coolant indicated that the principal isotopes released from the fuel were iodine, cesium and noble gases. A preliminary evaluation of the analytical results related to these more volatile isotopes indicates high fuel temperatures existed, perhaps for extended periods. However, ratios among isotopes indicate that the less volatile isotopes, such as strontium, were released to the coolant in quantities characteristic of releases from the gaps of the fuel and, therefore, based on this preliminary evaluation, melting of the fuel is not considered likely to have occurred.

Analysis of a containment building gas sample showed the following results:

<u>Isotope</u>	<u>Concentration (microcuries/milliliter)</u>
Xe-133	676
Xe-133m	16
Xe-135	8.1
I-131	6.3×10^{-2}
I-133	< 0.03

NRC representatives at the facility were informed at 10:45 p.m. on March 31 that there would be an attempt to sabotage the facility during the night. The FBI, Pennsylvania State Police and the licensee were notified.

Contact: DThompson, IE x28111 NCMoseley, IE x28111

Distribution: Transmitted H St 0828
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB 0833 P. Bldg 0828 J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I SITE 11:38
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 5:50 P. AND GRIER
J. J. Fouchard, PA R. J. Mattson, NRR Region III 6:45 P.
N. M. Haller, MPA V. Stello, NRR Region IV 5:38 P.
R. G. Ryan, OSP R. S. Boyd, NRR Region V 6:20 P.
H. K. Shapar, ELD SS Bldg 0845 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
R. Minogue, SD

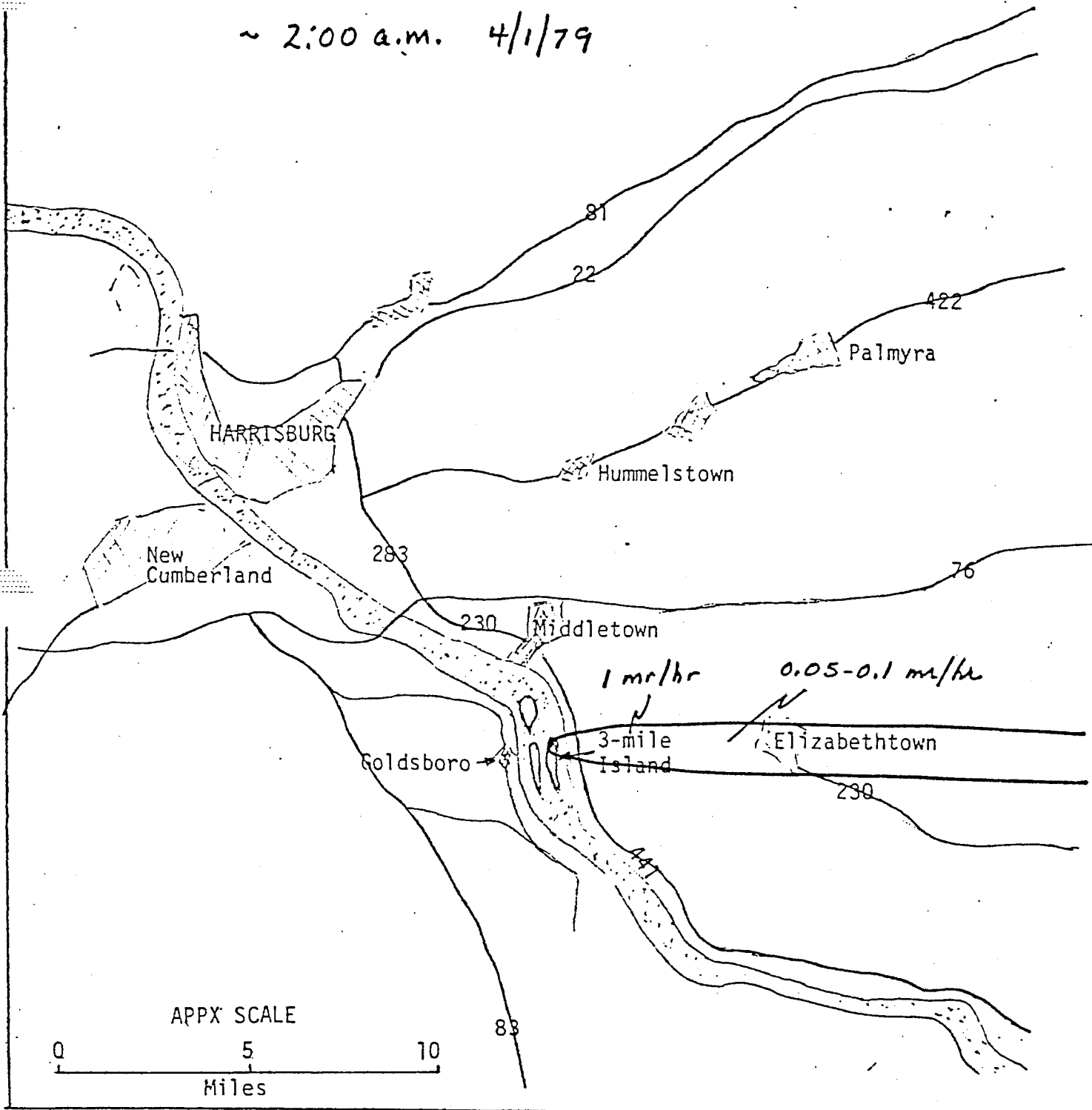
White House Situation Room _____
EPA _____
FDA/BRH _____
DOE/EOC 0840

Attachment (1)
Radiation Survey Map

IMMEDIATE

PRELIMINARY NOTIFICATION

AERIAL SURVEY
~ 2:00 a.m. 4/1/79



IMMEDIATE

PRELIMINARY NOTIFICATION

April 2, 1979

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

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 12 noon on 4/2/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Reactor pressure is being held at about 1000 psi. Incore thermocouples continue to show a decrease in fuel channel temperatures, with all measurements below about 475 degrees F. Bulk core inlet and outlet temperatures are 280 degrees F. At 11 p.m., April 1, a containment air sample indicated 2.3% hydrogen.

Further analyses and consultations with experts has led to the development of a strong consensus that the net oxygen generation rate inside the noncondensable bubble in the reactor is much less than originally conservatively estimated. Also, measurements at the plant appear to indicate that the volume of gases within the bubble is being significantly reduced. Further developments are being closely followed to confirm these favorable indications.

Action on Other Facilities

The Three Mile Island Unit 2 (TMI-2) pressurized water reactor was supplied by Babcock & Wilcox (B&W). All utilities with an operating B&W reactor were sent an NRC Bulletin yesterday to provide them with information about the TMI-2 incident; require a prompt review of their plant conditions, and to effect action to prevent such an incident. NRC inspectors are being sent to each licensed B&W reactor to provide increased inspection coverage. Additional reactor shutdowns or power reductions are not being required by the NRC at this time.

Environmental Status

Thirty-seven thermoluminescent dosimetry (TLD) stations were established by the NRC at distances from about one mile to about 12 miles from the plant. Multiple dosimeters are placed at each location - one will be

CONTINUED

left in place for a cumulative dose measurement; another is pulled and replaced each day. TLD's collected on April 1, 1979 indicated the following dose rates in populated areas:

<u>Location</u>	<u>Dose Rate (Milliroentgens per Hour)</u>
Middletown	0.044
Goldsboro	0.13
Goldsboro	0.040
Lewisberry	0.053
Pleasant Grove	0.041
York Haven	0.074
Conewago Falls	0.044
Emigsville	0.053

The highest dosimeter reading was recorded at a location $\frac{1}{2}$ mile ENE of the plant. The average dose rate at this location was 1.1 milliroentgen per hour.

For comparison purposes, the licensee's environmental report for 1977 when one unit was operating, indicated that the average dose rate at offsite stations located within three miles of the plant was 0.007 mR/hr.

Calculations using the TLD data indicate a population dose of approximately 200 man-rems for the 24-hour period. This means there was an average radiation dose of about 0.3 millirems per person in the population within a 20-mile radius of the plant.

ARM's flights were continued at three-hour intervals on April 1, and 2, 1979. The plume readings were essentially the same for all the flights. Direction of the plume varied from SW to WNW. The maximum level at one mile from the plant was about 3 mR/hr at an altitude of 500 feet. At three miles, the levels were from 0.1 to 0.5 mR/hr.

Offsite ground level surveys taken between 11:00 a.m. April 1, and 4:30 a.m. April 2, on both sides of the river in a southerly direction generally showed levels of 0.01 to 0.04 mR/hr.

Nine milk samples collected and analyzed by the State of Pennsylvania on April 1 showed no detectable radioiodine.

The licensee reported results from 5 milk samples taken from four locations around the plant collected the evening of March 30, 1979. The samples included one sample of goat's milk and four samples of cow's milk. The highest level was reported for the goat's milk and was 41 picocuries per liter (pCi/l.). The highest level in cow's milk was 8.4 pCi/l. The NRC has estimated the thyroid dose to a child drinking milk with concentrations of radioiodine at 41 pCi/l to be about 0.2 millirem per day. The thyroid dose to an adult would be about 0.07 millirem per day. Each of these samples indicated levels slightly above normal background levels for radioiodine.

CONTINUED

The Bureau of Radiological Health, HEW, also reported identifying radioiodine in six samples of milk collected on March 31, 1979 from four locations around the plant. Analyses of the samples identified near background levels of radioiodine. The levels ranged from the minimum detectable limit to about 40 pCi/l.

For comparison, the licensee's environmental report for 1977 showed observations of 0.74 to 31 pCi/l of I-131 in milk throughout the year previous to the incident. At 12,000 pCi/l, the U.S. Department of Health, Education, and Welfare recommends placing dairy herds on stored feed. Local herds are already on stored feed.

Contact: DThompson, IE x28487 NCMoseley, IE x28160

Distribution: Transmitted H St 3:50 p.m.
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 4:00 p.m.
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD
P. Bldg 4:05 p.
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 4:05
W. J. Dircks, NMSS

J. G. Davis, IE
Region I 4:11
Region II 4:25
Region III 4:35
Region IV 4:45
Region V 4:45
(MAIL) 5:00
J. J. Cummings, OIA
R. Minogue, SD

Site - 4:30

White House Situation Room _____
(Handcarry _____)
EPA _____
FDA/BRH _____
DOE/EOC 5:05
FAA _____
FDAA 4:45

Attachment 1:
Radiation Dose Rate Map

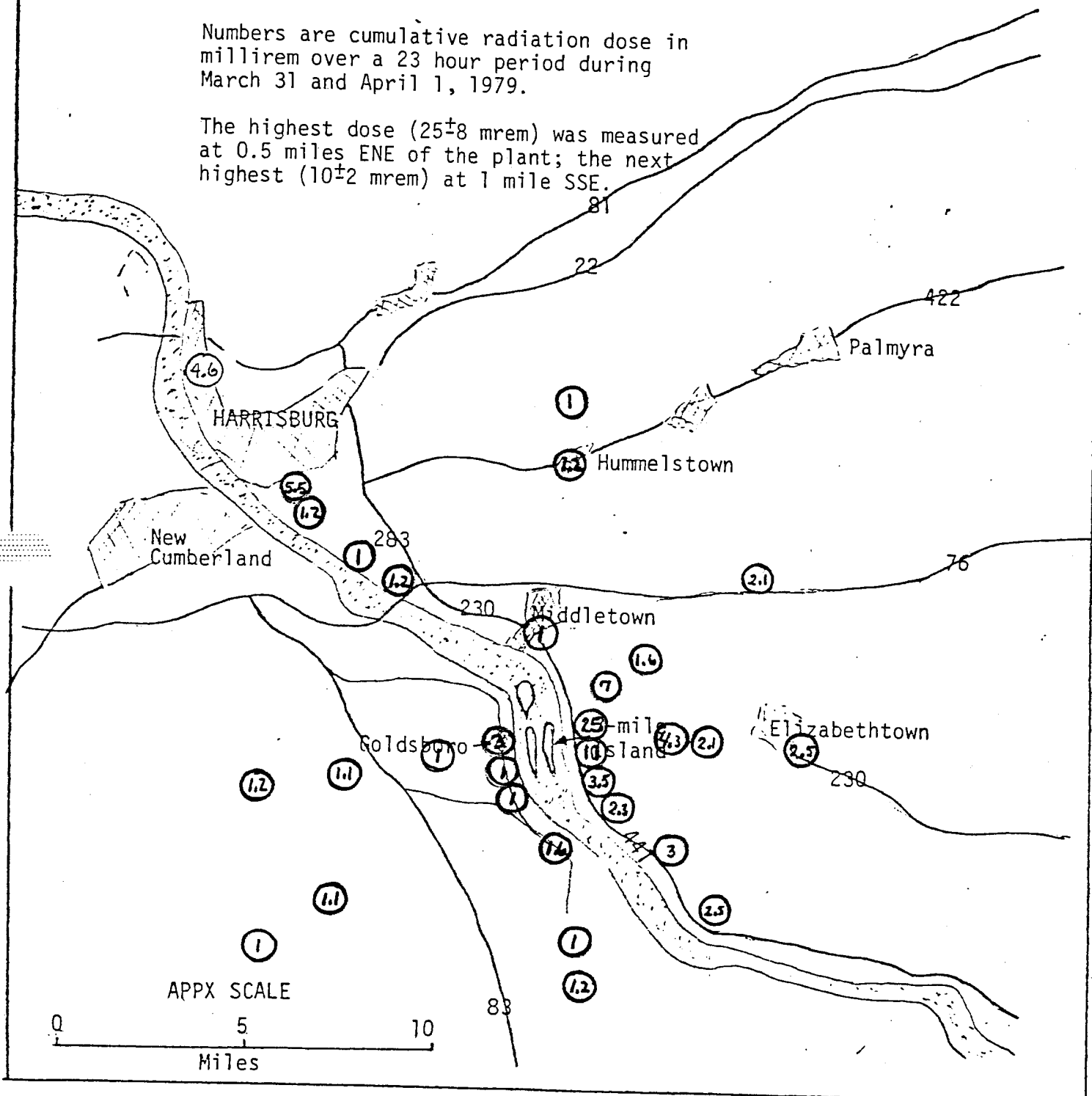
IMMEDIATE

PRELIMINARY NOTIFICATION

NRC THERMOLUMINESCENT DOSIMETER (TLD) DATA

Numbers are cumulative radiation dose in millirem over a 23 hour period during March 31 and April 1, 1979.

The highest dose (25 ± 8 mrem) was measured at 0.5 miles ENE of the plant; the next highest (10 ± 2 mrem) at 1 mile SSE.



IMMEDIATE
PRELIMINARY NOTIFICATION

April 3, 1979

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

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 4/3/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Reactor pressure remains near 1000 psi, with bulk core coolant inlet and outlet temperatures at 280°F. Core thermocouple readings are relatively unchanged and indicate a maximum temperature of 477°F which is well below saturation temperature for this pressure. (Only 3 thermocouples read above 400°F). The gas bubble still appears to be present at a much reduced volume, with bubble size calculations still being evaluated. Degasification continues. Containment atmosphere measurements indicate about 1.9 percent hydrogen. One hydrogen recombiner is operating, and a 12 day time period is projected for reduction of the hydrogen concentration to about 1%.

Plans to use a robot device to obtain a primary coolant sample are being evaluated. Preoperational testing with the robot is in progress.

Environmental Status

No surveillance flights have been conducted since 6:00 AM on April 2 because of weather. All offsite ground surveys indicate about 0.02 millirem/hour, except for a brief period during periodic venting of the Primary System Makeup Tank to the vent header. During this venting, an offsite team detected a brief, downwind 1.5 millirentgen/hour ground level dose rate with a rapid return to 0.02 millirentgen/hour. This level is less than others reported previously for similar operational activities.

Dose rates in populated areas as measured by NRC thermoluminescent dosimeters (TLD) showed a decrease from the previous day. Following are the data for the first two days.

CONTINUED

Dose Rate (Milliroentgens per Hour)

	<u>4/1/79</u>	<u>4/2/79</u>
Falmouth	No Sample	0.01
Middletown	0.044	0.01
Goldsboro	0.13	0.05
Goldsboro	0.040	0.02
Lewisberry	0.053	0.02
Pleasant Grove	0.041	0.02
York Haven	0.074	0.02
Conewago Heights	0.044	0.02
Emigeville	0.053	0.02

On April 2, the Food and Drug Administration reported concentrations of radioiodine in eight milk samples. The results ranged from 10 picocuries per liter (the minimum detectable activity) to 20 ± 10 picocuries per liter.

Since March 30, there have been controlled releases of several hundred thousand gallons of water from the industrial waste tank to the Susquehanna River. The effluents contain radioiodine. On April 2, the FDA reported that a sample of river water collected two miles from the plant was analyzed and found to contain 3.9×10^{-8} microcuries per milliliter of iodine-131, or about 13% of maximum permissible concentration (MPC).

Other Information

Exposure data collected at 1:00 am on April 3 indicated a level of <0.1 mR/hr in the Unit 2 control room compared to a level of 0.4 mR/hr measured early on April 2. On April 3, the auxiliary building access corridor showed 0.05 mR/hr and the personnel access hatch to the reactor building indicated 4 mR/hr.

Analysis of a second sample of containment building gas showed a decrease from concentrations determined as of March 31. Following are the data for the two analyses:

Concentration in Microcuries per Milliliter

<u>Isotope</u>	<u>3/31/79 at 7:00 am</u>	<u>4/2/79 at 10:30 am</u>
Xe 133	676	65
Xe 133m	16	0.27
Xe 135	8.1	0.62
I 131	0.063	0.0097
I 133	<0.03	<0.0061

CONTINUED

Contact: DThompson, IE x28487 NCMoseley, IE x28160

Distribution: Transmitted H St 5:20

Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 5:21
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg ~~535~~ 530
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 536
W. J. Dircks, NMSS

J. G. Davis, IE
Region I 5:35
Region II 5:35
Region III 5:35
Region IV 5:35
Region V 5:35
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

White House Situation Room _____

(Handcarry _____)
EPA 6:50
FDA/BRH 6:50
DOE/EOC 6:40
FAA _____
FDAA 7:10

DCDA 7:33
BRD 8:20

IMMEDIATE

PRELIMINARY NOTIFICATION

IMMEDIATE

PRELIMINARY NOTIFICATION

April 4, 1979

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

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 am on 4/4/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The cooling path to remove core decay heat continues to be through "A" steam generator to the main condenser.

Reactor pressure remains near 1000 psi, with bulk core coolant inlet and outlet temperatures at 280 degrees F. Core thermocouple readings are relatively unchanged and indicate a maximum temperature of 466 degrees F which is well below saturation temperature for this pressure. (Only three thermocouples read above 400 degrees F.) Gas is still indicated to be present based on bubble size calculations, but its volume is erratic indicating the effects of solubility and bubble dispersion. Vent valve on pressurizer has been closed and degasification continues through the letdown system.

Containment atmosphere measurements indicate about 2.1% hydrogen. One hydrogen recombiner is operating and an 11-day time period is projected for reduction of the hydrogen concentration to about 1%. At 1430 on April 3, one of three pressurizer level transmitters failed. Alternate methods of level measurements are being developed and procedures reviewed for implementation while calibration can occur with the existing detectors.

Plans to use a robot device to obtain a primary coolant sample are being evaluated. Preop testing with the robot is in progress.

The containment building, April 3, 1979, gas sample results reported on page 2 of PNO-79-67I have been determined to be incorrect and should be disregarded.

CONTINUED

Environmental Status

FDA has reanalyzed the river water sample collected the afternoon of April 2, 1979 at a location 2 miles downstream. The value of 39 picocuries per liter iodine-131 previously reported for this sample (PN-79-67I) has been found to be incorrect; no iodine above minimum detectable levels has been found.

ARMS flights were conducted at 9:00 am and 12:00 noon on April 3, 1979. The maximum radiation levels were detected during the 12:00 noon flight during which a maximum level of 2.0 mR/hr was measured at 1 mile from the plant; the level at 3 miles was 1.2 mR/hr. At a distance of 1 mile the plume was 1 mile wide with centerline about 290°.

Two other flights were conducted at 12:30 a.m. and 3:00 a.m. on April 4. The earlier flight measured radiation levels of 0.3 mR/hr at 1 mile and 0.1 to 0.2 mR/hr at 3 miles at altitudes of 600-700 feet. The plume was 0.3 mile wide at one mile centered at about 210°. Past 3 miles the plume was undefined and radiation levels were about 0.05 mR/hr. The later flight measured radiation levels of 1.1 mR/hr at 1 mile, 0.5 mR/hr at 3 miles and 0.3 mR/hr at 6 miles, at an altitude of about 500 feet. The plume was 0.6 mile wide at a distance of 1 mile from the plant, centered at 235°.

Offsite ground surveys indicated about 0.5 mR/hr for a brief period on the east side of the site. Radiation levels generally ranged from 0.01 to 0.02 mR/hr around the site.

An air sample for iodine-131 was collected in the plume at a location about 0.8 mile SSE of the plant. The iodine concentration in air was less than 1×10^{-10} microcuries per cubic centimeter.

Dose rates in populated areas as measured by NRC thermoluminescent dosimeters (TLDs) showed a slight increase from the previous day. The highest exposure rate was 0.41 mR/hr at a location 1 mile SSE of the plant. Following are the exposure rates for previously reported locations:

	<u>Dose Rate (Milliroentgens per Hour)</u>		
	<u>4/1/79</u>	<u>4/2/79</u>	<u>4/3/79</u>
Falmouth	0.15	0.01	.20
Middletown	0.044	0.01	.02
Goldsboro	0.13	0.05	.07
Goldsboro	0.040	0.02	.05
Lewisberry	0.053	0.02	.04
Pleasant Grove	0.041	0.02	.06
York Haven	0.074	0.02	.10
Conewago Heights	0.044	0.02	.07
Emigsville	0.053	0.02	.07

CONTINUED

Summary of Environmental Monitoring

Data concerning iodine released to the environment has been gathered and evaluated by the NRC, other Federal agencies, the State of Pennsylvania, and by the licensee. Several of the monitoring programs have been ongoing almost since the outset of the incident which began early on 3/28/79.

This information is based on data available to NRC as of 0630, April 3, 1979.

Water

A total of 130 offsite water samples were analyzed by NRC, DOE, and the Commonwealth of Pennsylvania. None of the 130 have shown any detectable radioiodine.

Based on calculations of the radioiodine released from the station to the river, it is estimated that the thyroid dose to any individual drinking the water is less than 0.2 mrem.

Air

152 offsite air samples were taken during the period 3/28-4/2 and analyzed by NRC, DOE, the Commonwealth of Pennsylvania, and by the licensee at distances up to 40 miles from Three Mile Island. The radioactivity in air which has been measured is principally noble gases--xenon isotopes. Eight of the 152 samples have indicated concentrations of radioiodine ranging from 2.7×10^{-13} - 2.4×10^{-11} microcuries/cc. No radioiodine was detected in the other samples. The maximum activity detected is about one-fourth of the permissible concentration established in the NRC "Standards for Protection Against Radiation," in Title 10, Code of Federal Regulations, Part 20 (10 CFR 20).

Based on calculations of the radioiodines released from the station to the atmosphere, it is estimated that the thyroid dose to an individual at the site boundary is less than 50 mrem over a 5-day period.

Milk

A total of 56 samples were collected from about 20 farms, located up to 13 miles in all directions from Three Mile Island. Of these, 38 showed no detectable radioiodine and 18 were reported as "no data." These analyses were conducted by the Commonwealth of Pennsylvania.

FDA has conducted an analysis of 9 milk samples collected April 1, 1979 and reported "positive" results ranging from 14 to 40 picocuries

CONTINUED

of I-131 per liter of milk. A sample of goat's milk, collected on March 30, 1979, contained 41 picocuries per liter. By comparison, the U.S. Department of Health, Education and Welfare recommends placing dairy herds on stored feed when I-131 in milk reaches 12,000 pCi/liter. Local herds are on stored feed because this is not the pasture season.

Based on measurements of the maximum concentration of radioiodine in all milk samples, the thyroid dose to any individual drinking milk is less than 0.5 mrem/day.

Vegetation

One hundred seventy-one vegetation samples have been collected and analyzed by DOE, NRC, and the Commonwealth of Pennsylvania. None showed any detectable radioiodine. These samples were taken at various locations within 2 miles of the site.

Soil

One hundred forty-seven soil samples were collected and analyzed by NRC and DOE. None showed any detectable radioiodine.

Inventory of Iodine in Plant

The greatest quantity of iodine in the plant is contained in the core and the coolant. The following table shows the inventory as of 0001 on 4/3/79.

	<u>Core*</u>	<u>Coolant**</u>
I-131	49 x 10 ⁶ Ci	3.2 x 10 ⁶ Ci
I-133	2.1 x 10 ⁶ Ci	0.12 x 10 ⁶ Ci

*Based on computer projections of Penn State University

**Based on primary coolant analysis decayed to the above date and time

A small source of iodine is from the industrial waste treatment system (IWTS) which presently contains 272,000 gallons of water having an iodine content as follows:

I-131	0.234 Ci
I-133	<u>0.00087 Ci</u>
TOTAL	0.23487 Ci

As of 2400 on 4/2/79, there were approximately 240,000 gallons of liquid in the IWTS with approximately 280,000 gallons of available storage

CONTINUED

space. Currently, the turbine building sump is filling at a rate of approximately 30 gpm; however, over the last 3-day period the liquid has accumulated in the system at an average rate of 143 gpm. At the later accumulation rate, the IWTS would overflow at approximately 11:00 am on April 4, 1979 unless other action is taken. Efforts are underway by the licensee to obtain state approval for discharge.

The maximum concentration of radioiodine in the IWTS was 1.5×10^{-3} $\mu\text{Ci/ml}$ at 1000, March 31, 1979. That value has steadily decreased since that time. As of 1600, April 2, 1979, radioiodine concentration in the IWTS was 4.2×10^{-5} $\mu\text{Ci/ml}$ which, when diluted in the plant discharge water, would be about 1/3 off the technical specification limit of 3×10^{-7} microcuries per milliliter at the plant discharge.

Other Information

The attached table of collective doses was prepared by a joint NRC/HEW/EPA study group.

Contact: DThompson, IE x28487 NCMoseley, IE x28160

Distribution: Transmitted H St 8:18 - AM
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 8:39
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 9:00
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 8:30
W. J. Dircks, NMSS

J. G. Davis, IE
Region I
Region II
Region III } -Q:45
Region IV
Region V
(MAIL)
J. J. Cummings, OIA
R. Minogee, SD

White House Situation Room 10:20

~~(Handcarry)~~
EPA 11:20 AM
FDA/BRH 12:10 PM
DOE/EOC 12:30 PM
FAA HANDCARRY
FDAA 12:10 PM
BRP 12:50 AM
DCPA 1:00 PM

IMMEDIATE

PRELIMINARY NOTIFICATION

COMPARISON OF COLLECTIVE DOSES TO POPULATION
 WITHIN 50 MILES OF THREE MILE ISLAND
 NUCLEAR GENERATING STATION

Source	Whole-Body Collective Dose (man-rem)	Average Dose to Individual (mrem/year)
Natural Background		
One year's exposure (FES) (1970 population)	233,000	125
(1980 population)	270,700	
Normal Operation (FES) (1970 population)		
One year's exposure (all sources)	31	0.017
Gaseous effluents	2.05	0.0011
30-year operation	930	0.017
Preliminary Estimate of Accident Dose		
Cumulative up to noon 4/2/79	1,800	0.83
1970 population	1,868,000	
1980 census projections	2,165,651	

Note: 1 mrem (millirem) = 0.001 rem

FES = Final Environmental Statement

IMMEDIATE

PRELIMINARY NOTIFICATION

April 5, 1979

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

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 am on 4/5/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Reactor pressure remains near 1000 psi with bulk core coolant inlet and outlet temperatures approximately 280 degrees F. Core thermocouple readings are relatively unchanged and indicate a maximum temperature of 462 degrees F which is well below saturation temperature for the present reactor pressure. Three thermocouple readings remain above 400 degrees F. The number of thermocouple readings that are being monitored has been reduced to 30.

Containment atmosphere measurements indicate about 2% hydrogen. One hydrogen recombiner is in operation, with another unit on standby.

A Heise pressure gauge has been installed to provide an alternate method of determining the pressurizer level by monitoring the steam space pressure and water space pressure in the pressurizer. Testing procedures are under review. The pressurizer is being vented to the containment for about 15 minutes every 6-8 hours.

Plans for use of the robot to obtain a primary system sample have been developed.

Environmental Status

Preliminary analysis by FDA of 16 milk and miscellaneous food products collected on April 3, 1979 showed no detectable iodine concentrations in 12 samples and iodine ranging from 12-18 pCi/l in 4 milk samples. The State of Maryland reported on April 4, 1979 the results of analysis of 12 milk samples collected from 3 to 20 miles from the site. All samples were reported as less than the minimum detectable activity (MDA). One process milk sample from Harrisburg also was reported by the State of Maryland as less than MDA. Three water samples, two at Conewago and one from Holtwood Dam, were reported as less than MDA by the State of Maryland.

CONTINUED

FDA collected 5 other milk samples on April 3, 1979, two of which showed iodine concentrations of 12 and 17 pCi/l. One showed no detectable iodine and there are no results for the other two samples. One of these samples showed a cesium concentration of 13 pCi/l; there are no cesium results for the other four. The State of Pennsylvania analysis of 15 milk samples collected on April 3, 1979 showed one with iodine at 19 pCi/l, 13 with no detectable iodine, and 1 with no result. Four showed cesium levels ranging from 10-26 pCi/l and there are no results for the other 11 samples. All of the samples collected by the State and FDA were split samples, i.e., shared to obtain independent results.

Continuous ground level radiation surveys performed on April 4, 1979 by the NRC survey teams on the east and west sides of the Susquehanna River from a distance of 4 miles north to 4 miles south of TMI showed radiation levels averaging less than 0.03 mR/hr on the east side of the river and 0.01 to 0.04 mR/hr on the west side of the river. Prevalent wind direction during the day was from the east.

Six ARMS surveys were performed on April 4, 1979 at: 0001, 0300, 0600, 0900, 1200 and 1522 hours. The flights identified the plume to be in the sections of 200° and 300°. The maximum radiation levels were detected during the 0600 flight during which levels of 1.2 mR/hr were detected using portable survey meters. The 1522 flight used normally installed ARMS instrumentation and measured radiation levels of about 0.1 mR/hr (about 5 times background) at 1 mile distance and about 0.06 mR/hr (about 3 times background) at 2 miles distance.

On April 4, a 40-minute air sample taken about 0100 near York Haven, and a 60-minute sample taken about 1300 in Goldsboro, both indicated less than 1×10^{-10} $\mu\text{Ci/ml}$ I-131 (maximum permissible concentration for unrestricted areas).

Dose rates in populated areas as measured by NRC thermoluminescent dosimeters (TLDs) showed only minor changes from the previous day. Minor fluctuations are expected at these low dose rates. Following are the exposure rates for previously reported locations:

Dose Rate (Milliroentgens per Hour)

	<u>4/1/79</u>	<u>4/2/79</u>	<u>4/3/79</u>	<u>4/4/79</u>
Falmouth	0.15	0.01	0.20	0.04
Middletown	0.04	0.01	0.02	0.01
Goldsboro	0.13	0.05	0.07	0.07
Goldsboro	0.04	0.02	0.05	0.02
Lewisberry	0.05	0.02	0.04	0.03
Pleasant Grove	0.04	0.02	0.06	0.01
York Haven	0.07	0.02	0.10	0.05
Conewago Heights	0.04	0.02	0.07	0.02
Emigsville	0.05	0.02	0.07	0.02

CONTINUED

Occupational Radiation Exposures

Three occupational radiation doses in excess of the regulatory limit of 3 rems per calendar quarter have been confirmed. All three exposures were licensee personnel and were approximately 4 rems (this includes the two exposures reported in PNO-79-67B).

To date on April 4, 1979, there have been 12 individuals with doses greater than 2 rems but less than 3 rems. Three doses are for the period January 1 to April 4, 1979, but it is believed the majority of exposure was received as a result of the incident. More specific occupational exposure data is expected to be available in the near future.

Industrial Waste Treatment System (IWTS)

As of 0500 on April 5, 1979, the IWTS sump was 74% filled with about 100,000 gallons of capacity still available. The State of Pennsylvania approved release of material from the IWTS that does not exceed permissible values. No releases have been made as of 0500.

Other Information

At about 5:00 pm on April 4, 1979, the licensee initiated the shipment of solidified low level waste which was collected from Unit 1 prior to the Unit 2 event of March 28, 1979. Additional shipments will be made twice daily. The waste is being sent to the Chem Nuclear facility in South Carolina.

The attached table of collective doses updated to April 3 was prepared by a joint NRC/HEW/EPA study group.

Contact: DThompson, IE x28487 NCMoseley, IE x28160

Distribution: Transmitted H St 8:40
Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 8:47
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 8:52
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 8:56
W. J. Dircks, NMSS
Saul Levin, RES

J. G. Davis, IE
Region I
Region II
Region III
Region IV
Region V
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

9:05

Distribution:
IE (TMI) Site: 8:45 (Provide copy to STATE)
White House Situation Room 9:50
EPA 11:00
FDA/BRH 11:30
DOE/EOC 9:35
FDDA/FEMA 11:56
BRP (State of PA) 12:02
DCPA 12:20
HEW _____

Handcarry (FAA)

IMMEDIATE

PRELIMINARY NOTIFICATION

COMPARISON OF COLLECTIVE DOSES TO POPULATION
 WITHIN 50 MILES OF THREE MILE ISLAND
 NUCLEAR GENERATING STATION

Source	Whole-Body Collective Dose (man-rem)	Average Dose to Individual (mrem/year)
Natural Background		
One year's exposure (FES) (1970 population)	233,000	125
(1980 population)	270,700	
Normal Operation (FES) (1970 population)		
One year's exposure (all sources)	31	0.017
Gaseous effluents	2.05	0.0011
30-year operation	930	0.017
Preliminary Estimate of Accident Dose		
Cumulative up to noon 4/3/79	2000	1.0
1970 population	1,868,000	
1980 census projections	2,165,651	

Note: 1 mrem (millirem) = 0.001 rem
 FES = Final Environmental Statement

IMMEDIATE
PRELIMINARY NOTIFICATION

April 6, 1979

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

This preliminary notification constitutes summary information of an event of safety or public interest significance. The information presented in a summary of information as of 7:00 a.m. on 4/6/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Reactor pressure is about 1075 psi with bulk core coolant inlet and outlet temperatures at about 285 degrees F. Core thermocouple readings are relatively unchanged and indicate a maximum temperature of 448 degrees F, well below saturation temperature for the present reactor pressure. Three thermocouple readings remain above 400 degrees F. Thirty thermocouples are being monitored.

Containment atmosphere measurements indicate less than 2% hydrogen. One hydrogen recombiner is in operation, with the second unit on standby.

A Heise pressure gauge, installed to provide an alternate method of monitoring pressurizer level, has been unsatisfactorily pressure tested. (Boron crystals indicate leakage from an elbow in the bypass line around the sample cooler.)

Plans to vent Make-Up Tank (MUT) and one of the Waste Gas Decay Tanks (WGDT) gases to containment have been approved by the NRC. Waste Gas Decay Tank "A" venting to the containment was started at approximately 0545 on April 6, 1979. Venting was terminated at 0630 following an approximately ten-fold increase in radiation levels detected by the auxiliary building exhaust monitor.

Environmental Status

Periodic ground level radiation surveys performed on April 5, 1979 by the NRC survey teams on the east and west sides of the Susquehanna River from a distance of 4 miles north to 4 miles south of TMI detected radiation levels averaging less than 0.01 mR/hr on the west side and from 0.01 to 0.15 mR/hr on the east side. Prevalent wind direction during the day was from the west-northwest.

ARMS surveys were performed on April 5, 1979 at 0600, 0950, 1430, 1515, 1649, and 2120 hours. The flights identified the plume in the sector 110° to 130°. The maximum radiation levels were detected during the 0950 flight during which levels of 0.3 mR/hr were measured at 1 mile. Between 3 and 10 miles, the measured levels were from 0.03 to 0.05 mR/hr.

The State of Pennsylvania reported data on milk, water, precipitation and grass samples. Analysis of ten milk samples collected on April 4 and 5 detected no radioiodine above the minimum detectable activity (MDA). Also, the results of analysis of water samples collected from five cities surrounding TMI from March 31, 1979 to April 4, 1979 detected no levels of iodine above the MDA, as did analysis of precipitation and grass samples for April 2 and 4.

Dose rates in populated areas as measured by NRC thermoluminescent dosimeters (TLDs) showed only minor changes from the previous day. Minor fluctuations are expected at these low dose rates. Ten additional TLD stations at area schools were established on April 5 (making a total of 47 stations). Following are the exposure rates for previously reported locations:

Dose Rate (Milliroentgens per Hour)

	<u>4/1/79</u>	<u>4/2/79</u>	<u>4/3/79</u>	<u>4/4/79</u>	<u>4/5/79</u>
Falmouth	0.15	0.01	0.20	0.04	0.02
Middletown	0.04	0.01	0.02	0.01	0.01
Goldsboro	0.13	0.05	0.07	0.07	0.05
Goldsboro	0.04	0.02	0.05	0.02	0.03
Lewisberry	0.05	0.02	0.04	0.03	0.02
Pleasant Grove	0.04	0.02	0.06	0.01	0.01
York Haven	0.07	0.02	0.10	0.05	0.01
Conewago Heights	0.04	0.02	0.07	0.02	0.01
Emigsville	0.05	0.02	0.07	0.02	0.02

Population Exposure Estimates

Representatives from NRC, EPA and HEW have made estimates of the radiation doses to the public around TMI based primarily on TLD data. The calculated population dose increment for 4/3/79 to 4/4/79 is 70 man-rems. The total cumulative, 50 mile radius population dose since 3/28/79 is estimated to be 2100 man-rems with an average dose to an individual of 1.1 millirems. The estimated maximum dose to an individual offsite (hypothetical, continuously present 0.5 mile NE of plant) is estimated to be less than 100 millirem.

Industrial Waste Treatment System (IWTS)

Industrial waste discharge (other than sewage) began about 3 a.m., 4/6/79 at an average rate of 100 gpm with Iodine 131 radioactivity of 2.3×10^{-5} microcuries per milliliter into the 58,000 gpm cooling tower discharge to the river. The Unit 1 waste evaporator condensate storage tank is also being discharged. The licensee has calculated the release to the river to be about two-thirds the MPC for continuous discharge of Iodine 131 from both units. The discharge from the Unit 2 Industrial Waste Treatment System was stopped at approximately 0400 on 4/6/79 to collect and analyze a sample.

Other Information

IE Bulletin 79-05A was issued on April 5, 1979 and required additional actions by Babcock and Wilcox power reactor facilities with a operating license.

Contact:

<u>Distribution:</u>	Transmitted H St <u>12:00</u>	
Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)
Transmitted: MNBB <u>12:10p</u>	P. Bldg <u>12:15</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I <u>1:05</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>10:40</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>1:10</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>1:15</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>1:20</u>
H. K. Shapar, ELD	SS Bldg <u>12:55</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 11:30p.m (Provide copy to STATE)
 White House Situation Room 1:55
 EPA 2:15
 FDA/BRH 2:16
 DOE/EOC 2:40
 FDDA/FEMA 2:46
 BRP (State of PA) 2:50
 DCPA 3:00
 HEW (Picked up)

Handcarry (FAA)

IMMEDIATE

PRELIMINARY NOTIFICATION

IMMEDIATE

PRELIMINARY NOTIFICATION

April 7, 1979

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

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 4/7/79.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status:

The reactor pressure is about 1075 psi with bulk core coolant inlet and outlet temperatures at about 285° F. At approximately 1:25 p.m. on April 6, reactor coolant pump 1A tripped and reactor coolant pump 2A was started within about two minutes. After the change in operating pumps, there was a shift in the core thermocouple readings. The three thermocouples that had readings above 400° F are presently reading between 285° F and 315° F. The central thermocouple (position 8H) reading changed from approximately 375° F to 455° F and is now reading 453° F, the only reading above 400° F. The average temperature of the 30 thermocouples being monitored is 304° F.

The venting of Waste Gas Decay Tanks (WGDT) "A" and "B" to the containment building was resumed at 9:15 a.m. on April 6, 1979 and stopped at about 3:00 a.m. on April 7 when the pressures of WGDT "A" and "B" were 32 and 30 psig, respectively. At the time the venting was secured, a small release occurred resulting in radiation readings somewhat lower than previously experienced during such operations. Following venting of the WGDT to containment, the hydrogen concentration in the containment was slightly greater than 2%.

The discharge to the river from the industrial waste storage tanks (IWST) was resumed at 6:15 a.m. on April 6, 1979 at an average rate of 100 gpm. The IWST level is now about 52%.

Environmental Status:

Off-site radiation levels as identified by NRC survey teams continue to range between 0.01 and 0.1 mr/hr. These routine survey results were obtained on the east and west sides of the Susquehanna River at distances of four miles north and south of TMI. Prevailing winds during April 6 were from 270° to 300° (SSE).

CONTINUED

ARMS surveys were performed at 0700 and 1810 on April 6, 1979. The surveys identified a plume in the 120°-140° sector during both flights. The maximum radiation level identified during the 0700 survey was 0.3 mr/hr one mile from the site at 900 feet elevation. The 1810 flight identified 0.05 mr/hr three miles from the site at 500 feet elevation.

The State of Pennsylvania reported an iodine 131 level of 12 picocuries per liter (pCi/l) for one milk sample collected on April 5, 1979. Pennsylvania's minimum detectable activity (MDA) for this type of measurement is 10 pCi/l. The State of Maryland reported iodine 131 levels less than MDA (10 pCi/l) for one sample collected on April 4, 1979 and a second collected on April 5, 1979.

Airborne concentrations for 34 EPA samples collected between April 4, 1979 and April 5 were reported as at or less than MDA (1.8×10^{-13} microcuries per milliliter).

No new data regarding vegetation and water samples have been reported.

Dose rates in populated areas as measured by NRC thermoluminescent dosimeters (TLDs) showed only minor changes from the previous day. Minor fluctuations are expected at these low dose rates. Ten additional TLD stations at area schools were established on April 5 (making a total of 47 stations). Following are the radiation dose rates for previously reported locations:

Dose Rate (Milliroentgens per Hour)

	<u>4/1/79</u>	<u>4/2/79</u>	<u>4/3/79</u>	<u>4/4/79</u>	<u>4/5/79</u>	<u>4/6/79</u>
Falmouth	0.15	0.01	0.20	0.04	0.02	0.02
Middletown	0.04	0.01	0.02	0.01	0.01	0.01
Goldsboro	0.13	0.05	0.07	0.07	0.05	0.03
Goldsboro - South	0.04	0.02	0.05	0.02	0.03	0.02
Lewisberry	0.05	0.02	0.04	0.03	0.02	0.02
Pleasant Grove	0.04	0.02	0.06	0.01	0.01	0.02
York Haven	0.07	0.02	0.10	0.05	0.01	0.02
Conewago Heights	0.04	0.02	0.07	0.02	0.01	0.02
Emigsville	0.05	0.02	0.07	0.02	0.02	0.02

Contact: DThompson, IE x28487 NCMoseley, IE x28160

CONTINUED

April 7, 1979
PNO-79-67M

Distribution: Transmitted H St 9:50
Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 9:55
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 9:57
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 9:59
W. J. Dircks, NMSS
Saul Levine, RES

J. G. Davis, IE
Region I 10:00
Region II ~~10:05~~ 10:19
Region III ~~10:12~~ 11:10
Region IV 10:13
Region V 10:23
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

Distribution:
IE (TMI) Site: 10:30 (Provide copy to STATE)
White House Situation Room 10:33
EPA 11:13
FDA/BRH 11:30
DOE/EOC 11:40
FDDA/FEMA 11:30
BRP (State of PA) 11:45
DCPA 12:10
HEW _____

Handcarry (FAA)

IMMEDIATE

PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 8, 1979

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

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 4/8/79.

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 are about 281 degrees F. The average core thermocouple temperature is about 299 degrees F, and the higher thermocouple reading (8H) is about 442 degrees F.

At approximately 1955 hours, April 7, the licensee began lowering reactor coolant system pressure in 50 psi increments at a maximum rate of 5 psi per minute. This will continue until pressure reaches 500 psi, providing a 100 psi safety margin above saturation for the current temperature of the highest reading thermocouple. This is a step toward cold shutdown and includes degasification to prevent bubble formation as pressure and temperatures decrease.

During the initial pressure decrease to 700 psi, the auxiliary building stack monitors showed an increase of a factor of 10 at 2213 hours, April 7. Later information indicates that about 1400 gallons of borated water were added to the makeup tank during the initial pressure reduction, causing some gas to leak from the vent header. The ARMS helicopter reported a slight increase in readings downwind (south) of the site. Pressure was held steady for a short period and the auxiliary stack monitors decreased to the original readings. During the following pressure cycles there have been no increases in the radiation readings.

Hydrogen concentration in containment is about 1.9%.

At 2130 hours PST, April 7, airlifting of backup charcoal filters for the auxiliary building stack was initiated from Pasco, WA, to Harrisburg, PA.

The Unit 2 miscellaneous waste tank is being pumped to a bleed holdup tank in preparation for pumping the auxiliary building sump dry. IWTS discharge was stopped late on April 7 when the level reached 32%.

CONTINUED

Environmental Status

Offsite radiation levels identified by NRC survey teams continue to range between 0.01-0.1 mR/hr. These routine survey results were obtained on the east and west sides of the Susquehanna River at distances of 4 miles north and south of the site. Prevailing winds during April 7 were generally from about 320°.

ARMS surveys were performed on April 7 at 0600-0630 hours and 1800-1845 hours. The surveys identified a narrow plume in the 140°-150° sector during both flights. A maximum radiation level of 0.04 mR/hr at 1-10 miles was identified during the 0600-0630 hours flight. The 1800-1845 hours flight identified a maximum reading of 0.05 mR/hr at 1 mile from the site.

The following milk sample results were reported by the licensee.

<u>Location</u>	<u>Iodine Concentration (picocuries/liter)*</u>					
	<u>3/29</u>	<u>3/30</u>	<u>3/31</u>	<u>4/1</u>	<u>4/2</u>	<u>4/3</u>
1.1 miles east-northeast	< 1		8.5	4.5	3	1
1.6 miles southeast	< 1	-	21	-	4	2
2.7 miles west-northwest	< 3	-	4	-	3	2
control 12 miles north-northeast	< 1	-	< 1	< 1	< 1	< 1

*HEW Action Level: 12,000 picocuries/liter

The following table lists the composite results for milk samples collected by various agencies between 3/28/79 - 4/4/79.

<u>Description</u>	<u>STATE</u>	<u>FDA</u>	<u>EPA</u>
Number of analyses performed	133	84	4
Number of positive results	7	53	2
Average value of positive results (pCi/l)	15	19	17
Range of positive results (pCi/l)	11-20	9-41	10-24
Average MDA (pCi/l)	20	11	10

The following iodine-131 concentrations in air and water were identified by the licensee:

CONTINUED

a. <u>Air Samples</u>		<u>Results (picocuries per cubic meter)**</u>		
<u>Location</u>		<u>3/28-3/29</u>	<u>3/29-3/31</u>	<u>3/31-4/3</u>
0.4 mile north		0.47	22.6	0.11
2.3 miles south-southeast		< 0.2	22.1	1.39
0.4 " east		< 0.02	20.3	0.27
15 " northwest		< 0.03	1.83	< 0.024
9 " southeast		< 0.04	0.27	0.16
2.6 " north		0.08	12.7	0.051
1.6 " west-southwest		< 0.30	23.9	0.07
13 " south		< 0.02	0.14	0.36

**10 CFR 20 MPC: 100 picocuries/cubic meter

b. <u>Water Samples</u>		<u>Collected on 4/3/79</u>
<u>Location</u>		<u>Results***</u>
Swatara Creek (2.3 miles north)		< 0.2 pCi/l
Brunner Island (4.1 miles south-southeast)		"
Columbia water treatment plant (15 miles southeast)		"
York Haven (3 miles southeast)		"
York (15 miles southeast)		"

***10 CFR 20 MPC: 100 picocuries/liter

New data regarding dose rates in populated areas have not been processed.

Contact:

<u>Distribution:</u>	Transmitted H St <u>7:50</u>	
Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)
<u>Transmitted:</u>	MNBB <u>7:52</u>	
L. V. Gossick, EDO	P. Bldg <u>7:55</u>	J. G. Davis, IE
H. L. Ornstein, EDO	H. R. Denton, NRR	Region I <u>8:02</u>
J. J. Fouchard, PA	R. C. DeYoung, NRR	Region II <u>8:05</u>
N. M. Haller, MPA	R. J. Mattson, NRR	Region III <u>8:08</u>
R. G. Ryan, OSP	V. Stello, NRR	Region IV <u>8:15</u>
H. K. Shapar, ELD	R. S. Boyd, NRR	Region V <u>8:17</u>
	SS Bldg <u>7:58</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 8:22 (Provide copy to STATE)
White House Situation Room 9:30
EPA 9:25
FDA/BRH 9:18
DOE/EOC 8:35
FDDA/FEMA 9:18
BRP (State of PA) 10:30
DCPA 10:45
HEW _____

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

(CORRECTED COPY)
IMMEDIATE
PRELIMINARY NOTIFICATION

April 9, 1979

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-79-67P*

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 6:00 a.m. on 4/9/79.

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 are about 280 degrees F. The average core thermocouple temperature is about 300 degrees F, and the highest thermocouple reading (8H) is about 425 degrees F.

At approximately 0430 hours, April 9, the reactor coolant system pressure reached the 400 psig endpoint established for the second degassing evolution. At lower pressures in the 400 to 1,000 psig range, noise monitoring indicated possible presence of some gas in Loop B of the reactor cooling system. Noise monitoring verified re-solution of gas with time. The operating reactor coolant pump vibration increased to 8.5-9 mils but the level of vibration was still significantly below the limit (30 mils). Pressure variation for degassing is continuing. Following reduction to 400 psig, the licensee plans to increase pressure to the 900-1,000 psig range and a phased cooldown is under consideration as the next step.

The licensee requested and received permission to temporarily change the minimum pressurizer level to 150" from 200" to prevent high pressurizer levels on pressure decreases.

At approximately 1320 hours, April 8, the reactor coolant system began to heat up. This was due to a decrease in steam generator level. Steam Generator A level was increased to decrease the primary temperature.

Hydrogen concentration in containment is about 1.85%.

At approximately 1942 hours EST, the last airplane involved in the filter airlift left Pasco, WA, for Harrisburg, PA.

CONTINUED (CORRECTED COPY)

* (The letter "O" was not used, previous issuance was PNO-79-67N)

ENVIRONMENTAL STATUS

Offsite radiation levels identified by NRC survey teams continue to range between 0.01-0.1 mR/hr. The results were obtained from routine surveys performed on the east and west side of the Susquehanna River at distances of up to 4 miles north and south of the site.

The following ARMS surveys were conducted during April 8, 1979:

<u>TIME</u>	<u>MAXIMUM RADIATION LEVELS</u>	<u>LOCATION</u>	<u>DISTANCE FROM SITE</u>
00:00-00:30	1 mR/hr	sector 180° (south)	½ - 1 mile
06:00-06:20	0.3 mR/hr	sector 200° (west-southwest)	1 mile
09:00-09:50	0.03 mR/hr	sector 170° (south-southeast)	1 mile
18:05-18:30	0.05 mR/hr	sector 275° (west-northwest)	3 miles

Eight offsite air samples collected near the NRC trailer during April 1-8 indicated iodine-131 concentrations between 0.9 - 3.3 picocuries per cubic meter (pCi/m³). The maximum permissible concentration per 10 CFR 20 is 100 pCi/m³.

No new data were reported for milk, water, and vegetation samples.

Offsite dose rates as determined by NRC thermoluminescent dosimeters (TLDs) indicate that present radiation levels are in close agreement with expected natural background levels. Minor fluctuations among individual TLDs are expected due to the limitations of the TLD system. Forty-seven TLDs are presently positioned at various locations around the site.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters have ranged from 0.01 to 0.02 milliroentgens per hour for the past 24-hour periods of April 7 and 8.

Contact: EJordan, IE x28180 NCMoseley, IE x28160

Distribution: Transmitted H St ^{9:55 AM} ~~10:00 AM~~
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 10:00 AM
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD
P. Bldg 10:02 AM
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 10:04 AM
W. J. Dircks, NMSS
S. Levine, RES

J. G. Davis, IE
Region I 10:10 AM
Region II 10:12 AM
Region III 10:14 AM
Region IV 10:16 AM
Region V 10:21 AM
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 10:07 AM (Provide copy to STATE)
White House Situation Room 10:35 AM
EPA 11:08 AM
FDA/BRH 11:30 AM
DOE/EOC 10:27 AM
FDDA/FEMA 11:30 AM
BRP (State of PA) 12:13 AM
DCPA 12:15 PM
HEW Pickup
PEMA 1100
Handcarry (FAA)

IMMEDIATE

PRELIMINARY NOTIFICATION
CORRECTED COPY

IMMEDIATE
PRELIMINARY NOTIFICATION

April 10, 1979

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

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 6:00 a.m. on 4/10/79.

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 about 280 degrees F. The average core thermocouple temperature is about 295 degrees F, and the highest thermocouple reading (8H) is about 400 degrees F.

A 24-hour period of additional degasification by reducing primary pressure to 400 psig in small decrements was completed on April 9. No significant change in reactor coolant pump vibration occurred during this period. Noise measurements did indicate some gas in the coolant at lower pressures, with return into solution over time. The licensee plans to repeat the degassing operation, cycling down to approximately 300 psig, and subsequently to hold reactor coolant system pressure at approximately 1000 psig. A phased cooldown is under consideration as the next step.

A primary coolant system sample is planned to be taken this morning.

Hydrogen concentration in containment is about 1.7%.

ENVIRONMENTAL STATUS

Offsite radiation levels identified by NRC survey teams range between .02 - .2 mR/hr. The higher level lasted only a short time and is believed to be associated with operation of the waste gas compressors. The results were obtained from routine surveys performed on the east and west side of the Susquehanna River at distances of up to 4 miles north and south of the site.

CONTINUED

The following ARMS surveys were conducted during April 9, 1979:

<u>TIME</u>	<u>MAXIMUM RADIATION LEVELS</u>	<u>LOCATION</u>	<u>DISTANCE FROM SITE</u>
12:38 - 13:08	2 mR/hr	sector 235 -270	1 mile
18:05 - 18:45	1 mR/hr	sector 120	1 mile

No new data were reported for milk, water, and vegetation samples.

Offsite dose rates as determined by NRC thermoluminescent dosimeters (TLDs) indicate that present radiation levels are in close agreement with expected natural background levels.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters have ranged from 0.01 to 0.05 milliroentgens per hour for the past 24-hour period of April 9.

Contact: EJordan, IE x28180 NCMoseley, IE x28160

Distribution: Transmitted H St 8:10
 Chariman Hendrie Commissioner Bradford
 Commissioner Kennedy Commissioner Ahearne
 S. J. Chilk, SECY
 C. C. Kammerer, CA
 (For Distribution)

Transmitted: MNBB 8:18 P. Bldg 8:13 J. G. Davis, IE
 L. V. Gossick, EDO H. R. Denton, NRR Region I 8:25
 H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 8:28
 J. J. Fouchard, PA R. J. Mattson, NRR Region III 8:31
 N. M. Haller, MPA V. Stello, NRR Region IV 8:37
 R. G. Ryan, OSP R. S. Boyd, NRR Region V 8:40
 H. K. Shapar, ELD SS Bldg 8:21 (Mail)
 W. J. Dircks, NMSS J. J. Cummings, OIA
 S. Levine, RES R. Minogue, SD

IE (TMI) Site 8:15 (Provide copy to STATE)
 White House Situation Room 8:43
 EPA 9:50
 -FDA/BRH 10:30
 DOE/EOC 10:15
 -FDDA/FEMA 10:30
 BRP (State of PA) 9:14
 DCPA 9:55
 HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

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.

CONTINUED

IMMEDIATE
PRELIMINARY NOTIFICATION

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.

CONTINUED

IMMEDIATE
PRELIMINARY NOTIFICATION

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.

Contact: RCPaulus, IE x 27246: DThompson, IE x28487

Distribution: Transmitted H St 7:27

Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 7:41

L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 7:33
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 7:45
W. J. Dircks, NMSS
S. Levine, RES

J. G. Davis, IE
Region I 7:49
Region II 7:56
Region III 8:07
Region IV 8:19
Region V 8:38
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 7:36 (Provide copy to STATE)

White House Situation Room 11:10

EPA 10:40

FDA ~~12:30~~

DOE/EOC 10:20

PEMA 3:20

BRP (State of PA) 2:10

DCPA 3:30

HEW (Pickup)

~~EDOC~~

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 12, 1979

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

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 12, 1979.

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 remain less than 400 degrees F with the exception that one thermocouple read 401⁰F during reduced pressure operation.

The degassing operations were completed at about 0115 on April 12, 1979. The minimum reactor coolant system pressure was 303 psig. Noise analysis evaluations indicate considerable degassing took place during these operations. Pressure is being returned to about 1000 psig and will be held at that level.

A second pressurizer level measuring channel failed at 2045 on April 11, 1979. There is one original pressurizer level channel still operating. An approved procedure is available for monitoring pressurizer level by balancing makeup tank level. Calibration of the Heise pressure gauge (backup level indicator installed several days ago) is planned during the current increase in pressure; it is expected this will provide an additional method of monitoring pressurizer level.

Cooling water flow was restored to the coolers in the containment at 0730 on April 11, 1979, and the containment temperatures have decreased from about 93 degrees F to about 85 degrees F. The hydrogen concentration in containment is about 1.6%.

Preliminary results of the primary coolant samples analyzed at Oak Ridge and Savannah River have been received. Very little uranium was identified in either sample, supporting previous analyses which formed the basis to conclude insignificant fuel melting occurred.

Changeout of the Auxiliary Building filters has commenced. Filters on its condenser vacuum pumps are expected to be operational today.

CONTINUED

Environmental Status

Offsite radiation levels identified by NRC survey teams range between 0.02 and 0.1 mR/hr. The radiation levels continue to be low. 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 7:00 a.m. on April 12, one hundred seventy-six local residents were scanned with the whole-body counter which was set up in Middletown. The scan results reported do not indicate radiation levels above normal body levels. Over 650 individuals have signed up to be scanned.

The following Aerial Measuring System surveys were conducted on April 11. These were previously reported as ARMS surveys. Winds were calm during these surveys.

<u>Time</u>	<u>Max. Radiation Level</u>	<u>Distance from Site</u>
0917-0452	0.025 mR/hr	1 mile
1700-1735	0.010 mR/hr	1 mile

The State of Pennsylvania reported that an air sample taken at the observation center from April 2 to April 10 indicated 1.4 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 10, 1979. The results indicated 1.6 picocuries per cubic meter of iodine-131. The 10 CFR 20 limit for iodine-131 is 100 picocuries per cubic meter.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters have ranged from 0.01 to 0.02 milliroentgens per hour for the past 24-hour period of April 11, 1979. These levels are in close agreement with expected natural background levels.

At 0100 hours on April 12, 1979, two tanks previously used as temporary storage for Unit 2 condensate storage tank overflow left the site for New Jersey to undergo some repair work. The tanks had been flushed previously and sample results from one tank indicated levels of radioactivity of 1×10^{-6} uCi/ml gross beta activity. While the truck drivers had obtained property releases for the tanks they had not obtained radiation safety releases. Shortly after the trucks departed the site, the error was realized. At the request

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

of the Unit 2 Shift Supervisor, NRC personnel contacted the Pennsylvania State Police and the truck from which the high gross beta activity sample was obtained was intercepted about 5 miles outside of Harrisburg and escorted back to the site where it arrived at about 0300 hours. The returned tank was surveyed and no leakage or external radiation levels were detected. A sample of the tank's residual liquid contents was taken and is being analyzed. The licensee is making procedural revisions to prevent recurrence of the problem.

Corrections:

PNO-79-67N, dated April 8 - Item b on page 3 listed the MPC for iodine-131 as 100 picocuries per liter. It should have read 300 picocuries per liter.

PNO-79-67R, dated April 11 - On page 2, the ARMS results were listed as 0.15 mR/hr for the 1833 to 1913 survey. It should have read 0.015 mR/hr. Also the ARMS surveys were described as being in sector 310° for the 0627-0800 survey and in sector 340° for the 1833 - 1913 survey. It should have read 130° and 160°, respectively.

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution:	Transmitted H St <u>9:48</u>	
Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)

Transmitted: MNBB <u>9:53</u>	P. Bldg <u>9:44</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I <u>10:42</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>10:05</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>10:20</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>10:32</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>10:54</u>
H. K. Shapar, ELD	SS Bldg <u>9:57</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 10:25 (Provide copy to STATE)
 White House Situation Room 10:17
 FDAA 9:47 (Provide copies to the Administrator and the Operations Center)
 EPA ~~11:10~~ 11:10
 DOE/EOC 10:38
 PEMA 12:45
 BRP (State of PA) 11:31
 DCPA 1:50
 HEW (Pickup)
 Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 13, 1979

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67T (Correction)

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 12, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

The radiation activity for soil and vegetation samples on page 2 of PNO-79-67T should read:

".... 80 to 260 picocuries per square meter (pCi/m²) iodine-131.

The minimum detectable activity (MDA) is 30 pCi/m². The remaining 28 samples were below MDA. Twelve (12) soil samples were less than the MDA of 600 pCi/m²."

Contact: RCPaulus, IE x27246; DThompson, IE x28487

Distribution: Transmitted H St 9:45a
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky
Transmitted: MNBB 9:46a P. Bldg 9:48
L. V. Gossick, EDO H. R. Denton, NRR
H. L. Ornstein, EDO R. C. DeYoung, NRR
J. J. Fouchard, PA R. J. Mattson, NRR
N. M. Haller, MPA V. Stello, NRR
R. G. Ryan, OSP R. S. Boyd, NRR
H. K. Shapar, ELD SS Bldg 9:50
W. J. Dircks, NMSS
S. Levine, RES

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)
J. G. Davis, IE
Region I 9:55
Region II 10:06
Region III 10:00
Region IV 10:02 10:05
Region V 10:03
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 9:56 (Provide copy to STATE)
White House Situation Room 10:35
FDAA 10:45 (Provide copies to the Administrator and the Operations Center)
EPA 10:55
DOE/EOC 10:20
PEMA 11:00
BRP (State of PA) 11:10
DCPA 11:20
HEW (Pickup)
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

(PNO-79-67T (Correction))

IMMEDIATE
PRELIMINARY NOTIFICATION

April 14, 1979

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

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 14, 1979.

Facility: Three Mile Island Unit 2
Middletown, Pennsylvania (DN50-320)

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status:

At 1003 on April 13, 1979, cooldown of the primary coolant system was initiated marking the first step toward placing the reactor into natural circulation. It is anticipated that the primary system would be cooled from 280 degrees F to approximately 230 degrees F during this phase. As of 0200 on April 14, primary coolant temperature had decreased to approximately 250 degrees F and cooldown had slowed considerably. Four of the incore thermocouple readings remained above 300 degrees F with the highest at 350 degrees F.

A pressurized primary coolant sample was taken on April 13 and is being sent to Idaho Falls, Idaho for analysis by Allied Chemical. The sample left Harrisburg at 0400 on April 14 and estimated time of arrival at Idaho Falls is 0945 EST.

Environmental Status:

Offsite radiation levels identified 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 11:15 a.m. on April 13, 1979, 292 local residents were scanned with the whole body counter located in Middletown. Scan results indicate no radiation levels above normal body levels.

The following Aerial Measuring System surveys were conducted on April 13. Wind speed ranged from 14 to 16 mph. No defined plume was identified.

<u>Time</u>	<u>Max. Radiation Level</u>	<u>Distance from Site</u>
0908 - 0940	0.03 mR/hr	1000 feet
1454 - 1530	0.03 mR/hr	900 feet

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

The NRC took a 24-hour air sample near the observation center starting at 1600 hours on April 12, 1979. The results indicated less than 1.5 picocuries per cubic meter of iodine-131. The 10 CFR 20 limit for iodine-131 is 100 picocuries per cubic meter.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters for the past 24-hour period of April 13 are near expected natural background levels.

The State of Maryland reported finding less than 6 picocuries of iodine per liter of milk in 6 samples taken during April 7 to April 11. The milk samples were taken from farms around TMI.

Sixty-two EPA air samples collected on April 9 and 10, indicated no detectable activity, while six indicated activities which ranged from 0.092 to 0.81 picocuries per cubic meter of iodine-131. EPA samples of milk, soil, vegetation, water and various species of fish did not reveal any activity above background.

Correction to PNO-79-67E dated March 31, 1979. The initial report of licensee TLD data was based on a telephone report. The following is based on the TLD vendor's formal report. The first quarter 1979 TLD readings ranged from background to a high of 1044 mR at the licensee fence in the NNW sector. The highest reading TLD located in an offsite populated area was about 26 mR of which about 15 mR was background exposure. A TLD located midway across the north bridge about 0.3 miles NNE of the plant recorded 44 mR, including background. These revised estimates do not significantly affect previous estimates of population doses.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 10:25
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB <u>10:28</u>	P. Bldg <u>10:32</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I <u>10:43</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>10:50</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>10:53</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>10:59</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>11:04</u>
H. K. Shapar, ELD	SS Bldg <u>10:36</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 10:39 (Provide copy to STATE)
White House Situation Room 1324
FDAA 13:04 (Provide copies to the Administrator and the Operations Center)
EPA
DOE/EOS 11:11
PEMA
BRP (State of PA) 1407
DCPA 1345
HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 13, 1979

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

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 13, 1979.

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 thermocouple readings have declined to below 385 degrees F. The primary system pressure is being maintained between 950 psig and 1000 psig.

There are presently two of the three original pressurizer level channels in operation (the pressurizer level indicator that was reported to have failed on April 11 started to function again at 1955 on April 12 and has been tracking reasonably well). Calibration of the Heise pressure gauge is in progress. A differential pressure sensor is being installed on the pressurizer instrument lines in an attempt to provide an additional method of monitoring pressurizer level.

The hydrogen recombiner tripped off at 0115 on April 13 (burned out heaters). The hydrogen concentration in the containment building was about 1.5% at 2200 on April 12. A decision has not been made whether to replace the heaters or to initiate operation of the backup recombiner.

Environmental Status

The maximum offsite radiation level identified by NRC survey teams was 0.02 mR/hr. 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 4:15 p.m. on April 12, 214 local residents were scanned with the whole-body counter which was set up in Middletown. The scan results reported to not indicate radiation levels above normal body levels.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

The following Aerial Measuring System surveys were conducted on April 12. Winds were calm during these surveys.

<u>Time</u>	<u>Max. Radiation Level</u>	<u>Distance from Site</u>
0938 - 1016	0.03 mR/hr	1 mile
1510 - 1603	0.01 mR/hr	1000 feet

The NRC took a 24-hour air sample near the observation center starting at 1600 hours on April 11, 1979. The results indicated less than 2.2 picocuries per cubic meter of iodine-131. The 10 CFR 20 limit for iodine-131 is 100 picocuries per cubic meter.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters for the past 24-hour period of April 12, are in close agreement with expected natural background levels.

Samples of air, water, soil and vegetation continue to be analyzed by Federal agencies. DOE reported the following positive results:

2 of 30 vegetation samples yielded 80 to 260 microcuries per square meter ($\mu\text{Ci}/\text{m}^2$) iodine-131. The minimum detectable activity (MDA) is $30 \mu\text{Ci}/\text{m}^2$. The remaining 28 samples were below MDA. 12 soil samples were less than the MDA of $600 \mu\text{Ci}/\text{m}^2$.

All air and water analyses by DOE and EPA were less than the MPC in 10 CFR 20.

Exposures of Met Ed and Contractor personnel from March 29 to April 11 are:

<u>Dose Range (Whole Body Gamma)</u>	<u>Number in Range</u>
100 - 250 mrem	118
251 - 500 mrem	25
501 - 750 mrem	12
751 - 1000 mrem	2
1000 - 2000 mrem	3
2000 - 3000 mrem	0
3000 - 4000 mrem	3*

* Reported in PNO-79-67K

April 13, 1979
PNO-79-67T

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 7:16
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 7:30
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 7:34
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 7:38
W. J. Dircks, NMSS
S. Levine, RES

J. G. Davis, IE
Region I 7:42
Region II 7:53
Region III 7:57
Region IV 8:03
Region V 8:07
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 7:21 (Provide copy to STATE)

White House Situation Room 7:52

FDA 7:35 (Provide copies to the Administrator and the Operations Center)

EPA 8:17

DOE/EOC 9:05

PEMA 9:40

BRP (State of PA) 8:18

DCPA 8:42

HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 14, 1979

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

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 14, 1979.

Facility: Three Mile Island Unit 2
Middletown, Pennsylvania (DN50-320)

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status:

At 1003 on April 13, 1979, cooldown of the primary coolant system was initiated marking the first step toward placing the reactor into natural circulation. It is anticipated that the primary system would be cooled from 280 degrees F to approximately 230 degrees F during this phase. As of 0200 on April 14, primary coolant temperature had decreased to approximately 250 degrees F and cooldown had slowed considerably. Four of the incore thermocouple readings remained above 300 degrees F with the highest at 350 degrees F.

A pressurized primary coolant sample was taken on April 13 and is being sent to Idaho Falls, Idaho for analysis by Allied Chemical. The sample left Harrisburg at 0400 on April 14 and estimated time of arrival at Idaho Falls is 0945 EST.

Environmental Status:

Offsite radiation levels identified 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 11:15 a.m. on April 13, 1979, 292 local residents were scanned with the whole body counter located in Middletown. Scan results indicate no radiation levels above normal body levels.

The following Aerial Measuring System surveys were conducted on April 13. Wind speed ranged from 14 to 16 mph. No defined plume was identified.

<u>Time</u>	<u>Max. Radiation Level</u>	<u>Distance from Site</u>
0908 - 0940	0.03 mR/hr	1000 feet
1454 - 1530	0.03 mR/hr	900 feet

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

The NRC took a 24-hour air sample near the observation center starting at 1600 hours on April 12, 1979. The results indicated less than 1.5 picocuries per cubic meter of iodine-131. The 10 CFR 20 limit for iodine-131 is 100 picocuries per cubic meter.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters for the past 24-hour period of April 13 are near expected natural background levels.

The State of Maryland reported finding less than 6 picocuries of iodine per liter of milk in 6 samples taken during April 7 to April 11. The milk samples were taken from farms around TMI.

Sixty-two EPA air samples collected on April 9 and 10, indicated no detectable activity, while six indicated activities which ranged from 0.092 to 0.81 picocuries per cubic meter of iodine-131. EPA samples of milk, soil, vegetation, water and various species of fish did not reveal any activity above background.

Correction to PNO-79-67E dated March 31, 1979. The initial report of licensee TLD data was based on a telephone report. The following is based on the TLD vendor's formal report. The first quarter 1979 TLD readings ranged from background to a high of 1044 mR at the licensee fence in the NNW sector. The highest reading TLD located in an offsite populated area was about 26 mR of which about 15 mR was background exposure. A TLD located midway across the north bridge about 0.3 miles NNE of the plant recorded 44 mR, including background. These revised estimates do not significantly affect previous estimates of population doses.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 10:25
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB <u>10:28</u>	P. Bldg <u>10:32</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I <u>10:43</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>10:50</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>10:53</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>10:59</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>11:04</u>
H. K. Shapar, ELD	SS Bldg <u>10:36</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 10:39 (Provide copy to STATE)
White House Situation Room 1324
FDAA 13:04 (Provide copies to the Administrator and the Operations Center)
EPA
DOE/EOS 11:11
PEMA
BRP (State of PA) 1407
DCPA 1345
HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 15, 1979

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

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 15, 1979.

Facility: Three Mile Island Unit 2
Middletown, Pennsylvania (DN50-320)

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status:

As of 0600 on April 15, 1979, primary coolant temperature had stabilized at approximately 250 degrees F. Four of the incore thermocouple readings remain above 300 degrees F with the highest at 348 degrees F.

The hydrogen recombiner that failed on April 13 has been repaired and is in the process of being restored to service.

The staff has completed a preliminary evaluation of TMI-2 fuel damage. Examinations of data from core thermocouples, incore detectors and excore ion chambers, and analyses of core parameters such as primary coolant pressure for the first fifteen hours of the transient show several periods of significant core uncovering. These were time periods during which portions of the fuel elements were cooled by steam rather than pressurized water which is the normal cooling method.

It was during these periods of deficient cooling that extensive damage to the fuel elements occurred. This damage occurred primarily by oxidation of the fuel cladding and other zirconium alloy components, which were embrittled and lost structural integrity in some regions of the core. Estimates of the extent of damage were calculated from fission product and hydrogen releases inside the plant and radiochemical analysis of the reactor coolant water. The analyses indicate that significant cladding oxidation occurred in the upper regions of the core and most fuel rods have some damage. The core geometry in the upper regions of the core, especially near the center, is believed to be severely distorted due to loss of fuel cladding integrity in that region. However, the lower and peripheral portions of the core are believed to have retained their basic structural integrity. The highest fuel temperature during the transient is estimated by these damage mechanism analyses to be well below the 5100 degrees F fuel melting point. Previous results of radiochemical analyses of primary coolant samples support this conclusion of little or no fuel melting.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Environmental Status:

Offsite radiation levels identified 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 9:30 a.m. on April 14, 1979, 375 local residents were scanned with the whole body counter located in Middletown. Scan results indicate no radiation levels above normal body levels.

The following Aerial Measuring System surveys were conducted on April 14. Wind speed was variable. The principle isotope is Xe-133.

<u>Time</u>	<u>Max. Radiation Level</u>	<u>Sector</u>	<u>Distance from Site</u>
1138 - 1221	0.04 mR/hr	270°	1000 feet

The NRC took a 24-hour air sample near the observation center starting at 1600 hours on April 13, 1979. The results indicated less than 3.0 picocuries per cubic meter of iodine-131. The 10 CFR 20 limit for iodine-131 is 100 picocuries per cubic meter.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters for the past 24-hour period of April 14 are near expected natural background levels.

A pressurized primary coolant sample was taken April 13, 1979. The six individuals involved received a total radiation dose of 800 mrem. The highest individual dose was 270 mrem.

During the period of 1600 hours on April 13 to 1600 hours on April 14, DOE collected and analyzed the following samples:

<u>Number/Type</u>	<u>I-131 MDA</u>
4 Water	7×10^{-8} microcuries/cubic centimeter
4 Vegetation	0.04 nanocuries/square meter
4 Air (3 ground level and 1 helicopter)	3×10^{-12} microcuries/cubic centimeter
<u>12 Total</u>	

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

All water, 3 vegetation, and 1 ground level air samples indicated less than MDA for I-131. One vegetation (grass) sample indicated 0.16 nanocuries/square meter I-131. Two ground level air samples (collected at the same location and time side-by-side on April 13 at 11:45 a.m.) indicated I-131 levels of 9.5 picocuries per cubic meter. An air sample taken by helicopter 100 meters downwind of the auxiliary building stack (within the restricted area) indicated an I-131 activity of 119 picocuries per cubic meter. The 10 CFR 20 limit is 9000 picocuries per cubic meter.

The cause of this increase in radioactivity in certain environmental samples is not known but is under investigation. It is possible that the increase is the result of the change-out of the charcoal filters.

Contact: GCGower, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 1520
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky

Transmitted: MNBB 1555
L. V. Gossick, EDO P.Bldg 1524 J. G. Davis, IE
H. L. Ornstein, EDO H. R. Denton, NRR Region I 1600
J. J. Fouchard, PA R. C. DeYoung, NRR Region II 16:25
N. M. Haller, MPA R. J. Mattson, NRR Region III 16:03
R. G. Ryan, OSP V. Stello, NRR Region IV 16:05
H. K. Shapar, ELD R. S. Boyd, NRR Region V 16:07
SS Bldg 1540 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD

IE (TMI) Site 16:30 (Provide copy to STATE)
White House Situation Room 16:40
FDAA 17:40 (Provide copies to the Administrator and the Operations Center)
EPA 17:52
DOE/EQS 17:50
PEMA no answer
BRP (State of PA) 18:05
DCPA 18:20
HEW (Pickup)

Handcarry (FAA)

W

IMMEDIATE
PRELIMINARY NOTIFICATION

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)

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 4.1×10^{-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)	2.3×10^{-8}
4/11 (1920) - 4/13 (2315)	1.2×10^{-7}
4/14 (1030) - 4/14 (1915)	1.4×10^{-7}
4/14 (1915) - 4/15 (0525)	2.5×10^{-7}
4/15 (0525) - 4/15 (0804)	2.7×10^{-7}
4/15 (0805) - 4/15 (1802)	3.8×10^{-7}
4/15 (1802) - 4/15 (2140)	2.1×10^{-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 9.4×10^{-11} uc/cc for NRC sample, 7.4×10^{-11} uc/cc for licensee sample and 6.0×10^{-11} uc/cc for the DOE sample. The MPC for iodine-131 in unrestricted areas is 1×10^{-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

Distribution: Transmitted H St 12:42
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB 12:46 P. Bldg 1:18 J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I 1:27
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 1:30
J. J. Fouchard, PA R. J. Mattson, NRR Region III 1:35
N. M. Haller, MPA V. Stello, NRR Region IV 1:40
R. G. Ryan, OSP R. S. Boyd, NRR Region V 1:50
H. K. Shapar, ELD SS Bldg 1:24 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD

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)
EPA ~~2:20~~ 3:25
DOE/EOC 1:55
PEMA 2:42
BRP (State of PA) ~~2:42~~ 4:50
DCPA 4:21
HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

28

IMMEDIATE
PRELIMINARY NOTIFICATION

April 17, 1979

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

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 17, 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. Three of the incore thermocouple readings remain above 300 degrees F with the highest at 340 degrees F.

As of 0330 April 17, twenty of 90 charcoal filter elements in train A of the Auxiliary Building Ventilation system have been replaced. This work began on April 12.

The containment hydrogen concentration has been tested. Results indicate a level of about 1.36%.

Environment Status

Offsite radiation levels identified by NRC survey teams were consistent with normal background levels (0.02 mR/hr. maximum) with the exception of one reading of 0.14 mR/hr. These results were obtained from routine surveys performed downwind on the east side of the Susquehanna River at distances up to five miles north and south of the site.

By 3:00 p.m. on April 16, 571 local residents had been scanned with the whole body counter located in Middletown. Scan results indicate no radiation levels above normal body levels.

An Aerial Measuring System (AMS) survey was conducted on April 16. The wind speed was 5 mph. No plume could be identified. At 1/4 mile from the reactor building, readings of 0.030 - 0.040 mR/hr were observed from 180 - 270°. These readings appeared to be independent of the wind direction.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters (TLD's) for the past 24-hour period of April 17 are near expected natural background levels.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Iodine concentrations measured in the Unit 2 ventilation stack since PNO-79-67W (April 16, 1979) are:

<u>Time</u>	<u>Activity (uCi/cc)</u>
4/15 (2140) - 4/15 (2357)	2.5×10^{-7}
4/16 (0408) - 4/16 (0758)	2.3×10^{-7}
4/16 (1156) - 4/16 (1550)	2.1×10^{-7}
4/16 (1556) - 4/16 (1810)	3.6×10^{-7}
4/16 (1810) - 4/16 (2356)	1.4×10^{-7}

The NRC took the daily air sample near the observation center starting at 1703 on April 15 and ending at 1747 on April 16. Analysis of this sample indicated that the concentration of Iodine-131 during the 24-hour period averaged 1.7×10^{-11} uCi/cc (17 picocuries/m³) which correlates with the plume wind being in this sector a large percentage of the time.

In response to increased Iodine-131 levels observed in environmental air samples, NRC has been taking approximately 5 air samples in each 8-hour period. During the 24-hour period ending midnight - April 16, 1979, three air samples from areas downwind of the plant were between 1.1 and 1.2×10^{-10} uCi/ml (110-120 picocuries per cubic meter). The average of the 11 air samples was 6.5×10^{-11} uCi/cc (65 picocuries/m³). The 8 samples taken since 10 p.m. on April 16, 1979, have shown no activity above the MDA (approximately 20 picocuries/m³). Since the Iodine-131 release rates are similar to previous rates, the observed increases are believed due to meteorological differences. Review of plant operations and possible release paths indicate that the source of the Iodine-131 is apparently the monitored release through the ventilation stack. However several changes to in-plant conditions were made. The makeup tank pressure was reduced. A portion of the charcoal filters in the Auxiliary Building ventilation system was replaced and areas in the Auxiliary Building were sprayed with sodium hydroxide and sodium thiosulfate.

During the period April 13 to 16, a total of 54 DOE samples including 1 soil sample, 4 rain water samples, 16 standing water samples, 22 grass samples, 8 ground level air filter samples and 3 air filter samples from helicopter flights were analyzed by DOE using a GE-Li gamma spectrometer. The samples were collected in the path of air discharges from the Three Mile Island station. Fourteen of the grass samples indicated that

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Iodine-131, if present, was less than the minimum detectable activity (MDA) of 4.0×10^{-5} microcuries per square meters (40 picocuries/square meter). The eight samples that showed results above MDA ranged from 4.0×10^{-5} microcuries per square meter (40 picocuries/square meters) to 7.3×10^{-4} microcuries per square meter (730 picocuries/square meters). Soil, standing water, and rain water samples all indicated less than the MDA's. The MDA for soil is 7.0×10^{-4} microcuries per square meter (700 picocuries/square meters); and for water is less than 7.0×10^{-8} microcuries per cubic centimeter (70 picocuries per liter).

The Commonwealth of Pennsylvania, DER, analyzed two milk samples taken on April 16, 1979. There was no detectable Iodine-131.

EPA analyzed nine air samples between April 10 and April 11. Iodine-131 activity ranged from 1.2×10^{-13} to 1.7×10^{-12} uCi/cc. (0.12 - 1.7 picocuries per cubic meter). Twenty-five soil samples were analyzed and showed only natural activity, including normal background levels of Cs-137. EPA TLD's from 34 locations for the period March 31 through April 8 showed background except for two, York Haven and Goldsboro, which showed 2.0 and 2.5 mR respectively for this period. Personnel badges from 44 residents for the same period showed no net exposures above background.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: GCGower, IE x 27246; DThompson, IE x28487

Distribution:	Transmitted H St	<u>1:46</u>	
Chairman Hendrie			Commissioner Bradford
Commissioner Kennedy			Commissioner Ahearne
Commissioner Gilinsky			
Transmitted: MNBB	<u>1:49</u>	P. Bldg	<u>1:53</u>
L. V. Gossick, EDO		H. R. Denton, NRR	
H. L. Ornstein, EDO		R. C. DeYoung, NRR	
J. J. Fouchard, PA		R. J. Mattson, NRR	
N. M. Haller, MPA		V. Stello, NRR	
R. G. Ryan, OSP		R. S. Boyd, NRR	
H. K. Shapar, ELD		SS Bldg	<u>1:58</u>
		W. J. Dircks, NMSS	
		S. Levine, RES	
			S. J. Chilk, SECY
			C. C. Kammerer, CA
			(For Distribution)
			J. G. Davis, IE
			Region I <u>2:04</u>
			Region II <u>2:13</u>
			Region III <u>2:20</u>
			Region IV <u>2:20</u>
			Region V <u>2:34</u>
			(MAIL)
			J. J. Cummings, OIA
			R. Minogue, SD

IE (TMI) Site 1:44 (Provide copy to STATE)
 White House Situation Room 3:30
 FDAA 4:07 (Provide copies to the Administrator and the Operations Center)
 EPA 2:55
 DOE/EOC 4:44
 PEMA 2:35
 BRP (State of PA) 2:55
 DCPA 2:20
 HEW (Pickup)
 Handcarry (FAA)

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IMMEDIATE
PRELIMINARY NOTIFICATION

April 18, 1979

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

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 18, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is 236 degrees F. The decrease in primary coolant temperature was a result of an increase in the steaming rate. This increase was achieved by opening additional valves to the main condenser. Two of the incore thermocouple readings remain above 300 degrees F with the highest at 330 degrees F.

As of 0530 April 18, fifty of 90 charcoal filter elements in train A of the Auxiliary Building Ventilation system have been replaced. This work began on April 12.

Pressurizer level transmitter LT-2 became erratic over the period 1745 - 2235 on April 17 but is now tracking again. Calibration of the Heise gauge, to be used as a backup pressure level measurement, is continuing.

Environment Status

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

By 2:15 p.m. on April 17, 632 local residents had been scanned with the whole body counter located in Middletown. Scan results indicate no radiation levels above normal body levels.

No Aerial Measuring System (AMS) survey was conducted on April 17. However, an AMS survey was requested by NRC based on a short lived increase in the iodine discharge rate between 3 and 4 a.m. on April 18. The AMS survey results are not yet available.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

During the 24-hour period ending midnight April 17, 1979, seven of 12 air samples showed no activity above the minimum detectable activity. None of the other five samples showed Iodine-131 greater than 1×10^{-10} uCi/cc (100 picocuries per cubic meter). On the morning of April 18, 1979, one of three samples showed Iodine-131 concentration of 2×10^{-10} microcuries/milliliter (200 picocuries per cubic meter) during the period of 3 to 4 a.m. The remaining two samples were approximately 5.0×10^{-11} microcuries/milliliter (50 picocuries/cubic meter). The last sample analyzed covered the period 0420 to 0527. The cause of the high reading is believed to be due primarily to meteorological conditions; however, several in-plant events were also in progress. They are being analyzed for possible contributions to this reading to determine appropriate corrective action. One grass sample taken downwind of the plant showed 6.13×10^{-4} microcuries per square meter (613 picocuries per square meter). Additional milk and vegetation samples have been taken, but have not been analyzed.

Dose rates (47 locations) as measured by NRC thermoluminescent dosimeters (TLD's) for the past 24-hour period of April 18 are near expected natural background levels.

Iodine concentrations measured in the Unit 2 ventilation stack since PNO-79-67X (April 17, 1979) are:

<u>Time</u>	<u>Activity (uCi/ml)</u>
4/16 (2356) - 4/17 (0402)	1.2×10^{-7}
4/17 (0402) - 4/17 (0803)	1.2×10^{-7}
4/17 (0803) - 4/17 (1226)	1.4×10^{-7}
4/17 (1226) - 4/17 (1634)	1.3×10^{-7}
4/17 (1640) - 4/17 (1946)	2.3×10^{-7}
4/17 (1958) - 4/17 (2357)	2.1×10^{-7}

The NRC took the daily air sample near the observation center starting at 1747 on April 16 and ending at 1620 on April 17. Analysis of this sample indicated that the concentration of Iodine-131 during the approximate 23-hour period averaged less than 2.4×10^{-12} uCi/cc (less than 2.4 picocuries/cubic meter). The plume wind was not in this sector a large percentage of the time during the sampling period.

No new data were available from DOE, EPA, FDA or Commonwealth of Pennsylvania, Department of Environmental Resources.

The Commonwealth of Pennsylvania has been informed of these results.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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

Distribution: Transmitted H St 12:15p
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution):

Transmitted: MNBB 12:20p P. Bldg 12:25 J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I 12:32
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 12:41
J. J. Fouchard, PA R. J. Mattson, NRR Region III 12:45
N. M. Haller, MPA V. Stello, NRR Region IV 12:50
R. G. Ryan, OSP R. S. Boyd, NRR Region V 12:55
H. K. Shapar, ELD SS Bldg 12:36 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD

IE (TMI) Site 12:28 (Provide copy to STATE)
White House Situation Room 2:00
FDAA 2:30 (Provide copies to the Administrator and the Operations Center)
EPA 3:25
DOE/EOC 2:55
PEMA 3:00
BRP (State of PA) 3:20
DCPA 3:45
HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

QIB

April 19, 1979

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

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 19, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is 235 degrees F. Preparations are being made to further decrease coolant temperature by admitting steam to the main condenser through the main turbine. Two of the incore thermocouple readings remain above 300 degrees F with the highest at 329 degrees F.

Replacement of the charcoal filter elements in train A of the Auxiliary Building Ventilation system is expected to be completed this morning. Preoperational tests of train A will then be conducted.

Pressurizer level transmitter LT-2 failed at 11:30 p.m. on April 18. Calibration of an alternate method to be used as a backup pressure level measurement is continuing.

A pressurized primary coolant sample was taken at 9:45 p.m. on April 18, 1979 and sent to B&W, Lynchburg, VA. for analysis via a National Guard Aircraft at 11:35 p.m.

Environment Status

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

By 7:00 p.m. on April 18, 721 local residents had been scanned with the whole body counter located in Middletown. Scan results indicate no radiation levels above normal body levels due to TMI operations. The scanning of local residents has been terminated.

An Aerial Measuring System (AMS) survey was conducted beginning at 6:38 a.m. on April 18, 1979. A plume reading 0.02 mR/hr was identified 0.25 miles SE of the plant and followed to 1.5 miles. Spectral analysis indicated

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

the presence of Xenon-133. An air sample taken in the plume 200 meters downwind from the stack showed 8.6×10^{-11} microcuries per cubic centimeter of Iodine-131 (86 picocuries per cubic meter).

During the period from 0530 April 18 to 0530 April 19 three of four air samples collected around the site showed no activity above the minimum detectable activity (MDA). The meteorological conditions during this period were more favorable than those of the previous day. The fourth sample shows an Iodine-131 concentration of 2.7×10^{-11} uc/cc (27 picocuries per cubic meter). Data from five other samples have not as yet been analyzed. Three soil samples and three grass samples showed no activity above the MDA. The MDA for grass was 2.4×10^{-4} microcuries per square meter (240 picocuries per square meter); the MDA for soil was about 3.7×10^{-7} microcuries per gram (0.37 picocuries per gram). One grass sample taken showed 5.5×10^{-4} microcuries per square meter (550 picocuries per square meter).

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

Iodine concentrations measured in the Unit 2 ventilation stack since PNO-79-67Y (April 18, 1979) are:

<u>Time</u>	<u>Activity (uCi/ml)</u>
4/17 (2357) - 4/18 (0405)	2.2×10^{-7}
4/18 (0405) - 4/18 (0550)	4.5×10^{-7}
4/18 (0550) - 4/18 (0800)	2.1×10^{-7}
4/18 (0805) - 4/18 (0945)	1.8×10^{-7}
4/18 (0945) - 4/18 (1200)	1.4×10^{-7}
4/18 (1204) - 4/18 (1647)	7.2×10^{-8}
4/19 (0001) - 4/19 (0358)*	7.5×10^{-8}

*The stack monitor used for these measurements was out of service from 12:00 a.m. on April 18 to 12:00 p.m. April 18, 1979.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

April 19, 1979
PNO-79-67Z

The NRC took the daily air sample near the observation center starting at 1600 on April 17 and ending at 1600 on April 18. Analysis of this sample indicated that the concentration of Iodine-131 during the approximate 24-hour period averaged less than 2.6×10^{-12} microcuries per milliliter (less than 2.6 picocuries per cubic meter).

EPA submitted airborne iodine analyses of air samples collected from 31 stations on April 12 and 13. Nineteen of the samples were reported to have positive measurements of Iodine-131 from 7.2×10^{-14} microcuries per cubic centimeter (0.072 picocuries per cubic meter) for a location 25 miles west of the plant to 6.6×10^{-13} microcuries per cubic centimeters (0.66 picocuries per cubic meter) at a location about 5 miles west of the plant. EPA air samples collected on April 14 showed positive Iodine-131 on 6 of the 31 samples with a range of 1.5×10^{-13} to 7.9×10^{-13} microcuries for cubic centimeter (0.15 to 0.79 picocuries per cubic meter). EPA milk samples collected on April 12, 13 and 14 from 9 locations were less than MDA (10-15 picocuries per liter). Soil and vegetation samples collected on April 11 showed no activity above background.

On April 18, during a tour by NRC personnel of Hill Island, adjacent to TMI, three persons were observed. Two of the persons reported that they had been on Hill Island on March 28-30, 1979. An evaluation of their exposure is in progress. One of the three has already been counted in the whole body counter in Middletown.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: RPaulus, IE x27246; DThompson, IE x28487

Distribution: Transmitted H St 12:44
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)
Transmitted: MNBB 12:49 P. Bldg 12:52 J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I 1:38
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 1:02
J. J. Fouchard, PA R. J. Mattson, NRR Region III 1107
N. M. Haller, MPA V. Stello, NRR Region IV 1:17
R. G. Ryan, OSP R. S. Boyd, NRR Region V 1:31
H. K. Shapar, ELD SS Bldg 12:57 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD
IE (TMI) Site 1:12 (Provide copy to STATE)
White House Situation Room 2:31
FDAA 2:14 (Provide copies to the Administrator and the Operations Center)
EPA 1:44
DOE/EOC 1:24
PEMA 3:05
BRP (State of PA) 3:25
DCPA 403
HEW (Pickup)
Handcarry (FAA)

IMMEDIATE PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 20, 1979

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

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 20, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is 185 degrees F. The drop in temperature of 50 degrees F is due to steam being admitted directly to the main condensor through the main turbine. The highest incore thermocouple reading is 284 degrees F.

Replacement of the charcoal filter elements in Train A of the Auxiliary Building Ventilation System is completed. Work is in progress to replace several HEPA filters in the system. Train A is expected to be in service today.

Environmental Status

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

An Aerial Measuring System (AMS) survey was conducted beginning at 6:05 p.m. on April 19, 1979. A small plume reading 0.007 mR/hr was identified 0.25 miles SSE of the plant. Spectral analysis indicated the presence of a small amount of Xenon-133. An air sample taken in the plume showed no iodine-131.

During the period from 5:30 a.m. April 19 to 5:30 a.m. April 20, ten air samples collected around the site showed no activity above the minimum detectable activity (MDA). The five air samples taken between 5:30 a.m. April 18 and 5:30 a.m. April 19 (and not analyzed prior to issuance of PNO-79-67Z) showed no activity above the MDA. Two of three soil samples showed no activity above the MDA. The other soil sample showed 2.8×10^{-7} microcuries per gram of iodine-131. The MDA for soil was 1.4×10^{-7} microcuries per gram. All MDA's have been reduced (sensitivity increased) by a factor of two due to addition of a shield to the detector in the NRC's mobile laboratory.

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

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Iodine concentrations measured in the Unit 2 ventilation stack since PNO-79-67Z (April 19, 1979) are:

<u>Time</u>	<u>Activity (uCi/cc)</u>
4/19 (0358) - 4/19 (0800)	6.6 x 10 ⁻⁸
4/19 (0803) - 4/19 (1210)	1.0 x 10 ⁻⁷
4/19 (1226) - 4/19 (1634)	1.8 x 10 ⁻⁷
4/19 (1728) - 4/19 (2025)	1.8 x 10 ⁻⁷
4/19 (2025) - 4/20 (0001)	1.2 x 10 ⁻⁷
4/20 (0001) - 4/20 (0351)	3.3 x 10 ⁻⁷

The NRC took the daily air sample near the observation center starting at 4:00 p.m. on April 18 and ending at 4:00 p.m. on April 19. Analysis of this sample indicated that the concentration of Iodine-131 during the 24-hour period averaged less than 2.4 x 10⁻¹² microcuries per cubic centimeter (less than 2.4 picocuries per cubic meter).

No additional environmental data have been received from EPA or FDA.

The three persons found on Hill Island on April 18, 1979 have been whole body counted. No radiation levels above normal body levels were found.

As stated in PNO-79-67Z, the whole body scanning program for local residents has been completed. A joint press release on this subject was issued by the Commonwealth of Pennsylvania and the NRC on this date. A copy of the press release is attached to this PN.

The Commonwealth of Pennsylvania has been informed of these results.

Attachment: Press Release dated 4/20/79

Contact: RCPaulus, IE x27246 DThompson, IE x27246

Distribution: Transmitted H St 10:25
Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky
Transmitted: MNBB 10:44
L. V. Gossick, EDO 10:58
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD
Commissioner Bradford
Commissioner Ahearne
P. Bldg 11:05
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 11:45
W. J. Dircks, NMSS
S. Levine, RES

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)
J. G. Davis, IE
Region I 11:15
Region II 11:20
Region III 11:25
Region IV 11:32
Region V 11:35
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 11:50 (Provide copy to STATE)

White House Situation Room 3:53

FDA 12:40 (Provide copies to the Administrator and the Operations Center)

EPA 2:06

DOE/EOC 2:48

PEMA 12:00

BRP (State of PA) 10:40

DCPA 12:00

HEW (Pickup)

IMMEDIATE
PRELIMINARY NOTIFICATION

ATTACHMENT 1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555



FOR IMMEDIATE RELEASE
(Friday April 20, 1979)

Middletown, Pennsylvania -- An examination of 721 persons who live close to the site of the accident that occurred March 28, 1979 at Three Mile Island has shown them to have no internal contamination from the accident, officials of the Pennsylvania Departments of Health and Environmental Resources and the Nuclear Regulatory Commission announced today. The screening program by means of a process called whole body counting was conducted jointly by these agencies, using a portable computerized detector housed in a truck parked in front of the Middletown Community Building, about three miles from the site.

The examination of these people found no radioactive elements, such as iodine-131, that have been released from the Three Mile Island facility. Trace amounts of radionuclides that are normally found in people everywhere, such as potassium-40 and cesium-137, were found by the examination.

Nine of the persons examined showed slightly more than normal amounts of naturally occurring radioactive elements that come from the noble gas radon-222 and that are called "radon daughters", because these come from the radioactive decay of radon. All nine persons have been informed by agency officials of the finding of these radon daughters in more than normal amounts. They have been told that these elements are not related to the Three Mile Island incident and that the most likely source is the natural release of low amounts of radon gas from building materials used in their homes or possibly in work places, built of stone or brick, or from other natural sources. The levels detected do not warrant any concern for the health of these nine persons and others living with them.

The 721 persons tested generally lived within three-miles of the site, on both the east and west shores of the Susquehanna River. Children as well as adults were surveyed in this program, which took place over a period of eight days and ended at 7 p.m. Wednesday, April 18.

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IMMEDIATE
PRELIMINARY NOTIFICATION

April 21, 1979

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

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 21, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is being maintained at 175 degrees F by admitting steam directly to the main condensor through the main turbine. The highest incore thermocouple reading is 275 degrees F.

Train A of the Auxiliary Building Ventilation System was placed in service at 11:45 p.m. on April 20. Work is now in progress to change the charcoal filters in Train B of the Fuel Handling Building Ventilation System.

Environmental Status

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

An Aerial Measuring System (AMS) survey was conducted 8:20 a.m. to 9:12 a.m. April 20, 1979. A small plume reading 0.008 mR/hr was located about 250 meters E of the Unit II vent stack at an altitude of 100 meters. Spectral analysis indicated small amount of Xenon-133. An AMS survey from 11:45 p.m. April 20 to 12:20 a.m. April 21 did not detect any airborne radioactivity. This flight occurred following the change from Filter Train B to Train A in the Auxiliary Building.

During the period from 5:30 a.m. April 20 to 5:30 a.m. April 21, seven air samples collected around the site showed no activity above the minimum detectable activity.

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

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Iodine concentrations measured in the Unit 2 ventilation stack since PNO-79-67AA (April 20, 1979) are:

<u>Time</u>	<u>Activity (uCi/cc)</u>
4/20 (0351) - 4/20 (0820)	2.0×10^{-7}
4/20 (0820) - 4/20 (1105)	1.9×10^{-7}
4/20 (1105) - 4/20 (1300)	2.8×10^{-7}
4/20 (1300) - 4/20 (1621)	Not Analyzed
4/20 (1621) - 4/20 (2019)	1.8×10^{-7}
4/20 (2023) - 4/20 (2204)	2.3×10^{-7}
4/20 (2208) - 4/20 (2249)	3.0×10^{-7}
4/20 (2249) - 4/21 (0317)	1.1×10^{-7}
4/21 (0317) - 4/21 (0402)	7.6×10^{-8}

The NRC took the daily air sample near the observation center starting at 4:00 p.m. on April 19 and ending at 4:00 p.m. on April 20. Analysis of this sample indicated that the concentration of Iodine-131 during the 24-hour period averaged less than 1.0×10^{-12} microcuries per cubic centimeter (less than 1.0 picocuries per cubic meter).

EPA reported that of the air samples collected at 31 sampling locations on April 15 and 16 only nine showed Iodine-131 above the minimum detectable activity (MDA). The highest sample result was 2.3×10^{-12} microcuries per cubic centimeter (2.3 picocuries per cubic meter) for a sample collected April 15, 2.9 miles SSW of the plant. All other positive values were less than 4.5×10^{-13} microcuries per cubic centimeter (0.45 picocuries per cubic meter).

EPA reported that water samples taken at the plant discharges to the river on April 18, 19 and 20 and at Brunner Island on April 16, 17 and 18 downstream showed no activity above the MDA.

EPA reported no milk samples collected on April 15 or 16 contained Iodine-131 above the MDA of 15 picocuries per liter. The Pennsylvania DER reported that one sample of milk collected on April 19 at Elizabethtown contained about 15 picocuries of Iodine-131 per liter. The licensee reported that a cow's milk sample collected on April 17 contained 3.7 picocuries per liter and a goat's milk sample collected on April 16 contained 3.3 picocuries per liter. The action level is 12,000 picocuries per liter, at which time animals would be taken off pasture.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: G. C. Gower, IE x27246 H. D. Thornburg, IE x28484

Distribution: Transmitted H St 10:05
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky
Transmitted: MNBB 10:10 P. Bldg. 10:14
L. V. Gossick, EDO H. R. Denton, NRR
H. L. Ornstein, EDO R. C. DeYoung, NRR
J. J. Fouchard, PA R. J. Mattson, NRR
N. M. Haller, MPA V. Stello, NRR
R. G. Ryan, OSP R. S. Boyd, NRR
H. K. Shapar, ELD SS Bldg. 10:18
W. J. Dircks, NMSS
S. Levine, RES

IE(TMI) Site 4:00 pm (Provide copy to STATE)
White House Situation Room 11:25
FDAA 12:35 (Provide copies to the Administrator and the Operations Center)
EPA 12:02
DOE/EOC 11:30
PEMA 12:20
BRP (State of PA) 11:55
DCPA 11:30
HEW (Pickup)

S. J. Chilk, SECY
C. A. Kammerer, CA
(For Distribution)
J. G. Davis, IE
Region I 10:20
Region II 10:22
Region III 10:24
Region IV 10:47
Region V 10:52
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 22, 1979

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

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 22, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is still being maintained at 175 degrees F by admitting steam directly to the main condenser through the main turbine. The highest incore thermocouple reading is 274 degrees F.

Now that Train A of the Auxiliary Building Ventilation System is in service, preparations are being made to change the filters in Train B. Work is also in progress to change the charcoal filters of Train A of the Fuel Handling Building Ventilation System. Train A was selected for replacement instead of Train B as reported in PNO-79-67AB.

Environmental Status

Onsite Measurements

Two Aerial Measuring System (AMS) surveys were conducted during the period 3:00 p.m. - 10:00 p.m. on April 21, 1979. No airborne radioactivity was detected.

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

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
4/21 (0404) - 4/21 (0819)	5.2×10^{-8}
4/21 (0819) - 4/21 (1201)	8.0×10^{-8}
4/21 (1204) - 4/21 (1625)	8.8×10^{-8}
4/21 (1648) - 4/21 (2017)	4.9×10^{-8}
4/21 (2018) - 4/22 (0103)	1.1×10^{-7}
4/22 (0103) - 4/22 (0441)	1.1×10^{-7}

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Off Site Measurements

Radiation Levels

Offsite radiation levels identified by NRC survey teams continue to be consistent with normal background levels (0.02 mR/hr maximum). These results were obtained from routine surveys performed downwind on the east and west sides 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 are near expected natural background levels.

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/21-22	9	Less than MDA*
daily air	4/21-22	1	Less than MDA
grass	4/20-21	2	Highest 2.4×10^{-4} microcurie per square meter
milk	4/19-20	5	Less than MDA

* MDA = minimum detectable activity

EPA Environmental Samples (Analyzed at Remote Laboratory)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/18	27	Less than MDA
air	4/18	4	Highest 2.9×10^{-12} microcuries per cubic centimeter (2.9 pico-curies/cubic meter)
milk	4/18	3	Less than MDA

All EPA samples were taken at distances greater than 3 miles from the site.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: G. C. Gower, IE x27246 S. E. Bryan, IE x28019

Distribution: Transmitted H St 11:18
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearne
Commissioner Gilinsky
Transmitted: MNBB 11:32 P. Bldg. 11:37
L. V. Gossick, EDO H. R. Denton, NRR
H. L. Ornstein, EDO R. C. DeYoung, NRR
J. J. Fouchard, PA R. J. Mattson, NRR
N. M. Haller, MPA V. Stello, NRR
R. G. Ryan, OSP R. S. Boyd, NRR
H. K. Shapar, ELD SS Bldg. 11:41
W. J. Dircks, NMSS
S. Levine, RES
S. J. Chilk, SECY
C. A. Kammerer, CA
(For Distribution)
J. G. Davis, IE
Region I 11:45
Region II 11:49
Region III 11:54
Region IV 11:58
Region V 12:03
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD
IE(TMI) Site 11:26 (Provide copy to STATE)
White House Situation Room 11:55
FDAA 8:52 (Provide copies to the Administrator and the Operations Center)
EPA 4:00 4/23
DOE/EOC 12:31
PEMA 12:21
BRP (State of PA) 10:07 4/23
DCPA 4:45 4/23
HEW (Pickup)

IMMEDIATE
PRELIMINARY NOTIFICATION

April 23, 1979

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

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 23, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is still being maintained at 175 degrees F by admitting steam directly to the main condenser through the main turbine. The highest incore thermocouple reading is 272 degrees F.

The charcoal filters in Train A of the Fuel Handling Building have been replaced. This train is scheduled to be placed in service this date. This action is expected to further reduce the concentration of Iodine being released from the ventilation stack. The previous action of changing the charcoal filters in Train A of the Auxiliary Building Ventilation System was successful and reduced Iodine discharges by approximately 40 percent. Preparations are still being made to change the charcoal filters in Train B of the Auxiliary Building Ventilation System.

A pressurized primary coolant sample was taken at 11:30 a.m. on April 22, 1979 and sent to B&W Lynchburg, Va. for analysis.

Environmental Status

Onsite Measurements

No Aerial Measuring System (AMS) survey was conducted on April 22, 1979.

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

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
4/22 (0447) - 4/22 (0804)	8.8×10^{-8}
4/22 (0807) - 4/22 (1229)	9.3×10^{-8}
4/22 (1230) - 4/22 (1621)	9.6×10^{-8}
4/22 (1624) - 4/22 (2024)	1.3×10^{-7}
4/22 (2036) - 4/22 (2130)	1.3×10^{-7}
4/22 (2130) - 4/23 (0004)	9.6×10^{-8}
4/23 (0007) - 4/23 (0440)	5.9×10^{-8}

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Offsite Measurements

Radiation Levels

Offsite radiation levels identified by NRC survey teams continue to be consistent with normal background levels (0.02 mR/hr maximum). These results were obtained from routine 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 are near expected natural background levels.

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Sample</u>	<u>Results</u>
air	4/22-23	7	Less than MDA*
daily air	4/21-22	1	Less than MDA

* MDA = minimum detectable activity

EPA Environmental Samples (Analyzed at Remote Laboratory)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Sample</u>	<u>Results</u>
air	4/21	21	Less than MDA
air	4/21	10	Highest 8.6×10^{-13} microcuries per cubic centimeter (.86 picocuries per cubic meter)
air	4/21	2	118 picocuries per cubic meter of Xe-133 in one sample. 20 and 24 picocuries per cubic meter Kr-85.** These are approximately background levels.
Soil	4/21	31	Nothing above natural background
Vegetation	4/21	31	Nothing above natural background

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

** Maximum Permissible Concentration for Xe-133 and Kr-85 is 300,000 picocuries per cubic meter.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 12:00

Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 12:04

L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 12:19
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 12:09
W. J. Dircks, NMSS
S. Levine, RES

J. G. Davis, IE
Region I 1:31
Region II 1:36
Region III 1:24
Region IV 1:44
Region V 1:03
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 12:41 (Provide copy to STATE)

White House Situation Room ~~2:20~~

FDA 1:30 (Provide copies to the Administrator and the Operations Center)

EPA 2:10

DOE/EOC 2:15

PEMA 2:39

BRP (State of PA) ~~2:30~~

DCPA 3:30

HEW (Pickup)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

QUB

April 24, 1979

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

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 24, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average primary coolant temperature is still being maintained at 175 degrees F by admitting steam directly to the main condenser through the main turbine. The highest incore thermocouple reading is 271 degrees F.

The charcoal filters in Train A of the Fuel Handling Building Ventilation System have been replaced. This train was placed in service at 6:30 a.m. April 24, 1979. Twenty-eight of 90 charcoal filters in Train B of the Auxiliary Building Ventilation System have been replaced.

Environmental Status

One Aerial Measuring System (AMS) Survey was made between 10:15 p.m. and 11:15 p.m. on April 23, 1979. No radioactivity above natural background was detected.

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

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
4/23 (0007) - 4/23 (0406)+	6.7 x 10 ⁻⁸
4/23 (0407) - 4/23 (0758)	5.9 x 10 ⁻⁸
4/23 (0801) - 4/23 (1201)	3.6 x 10 ⁻⁸ ++
4/23 (1223) - 4/23 (1614)	1.4 x 10 ⁻⁷ ++
4/23 (1617) - 4/23 (2010)	6.3 x 10 ⁻⁸
4/23 (2014) - 4/23 (2156)	5.7 x 10 ⁻⁸
4/23 (2159) - 4/24 (0001)	5.9 x 10 ⁻⁸
4/24 (0004) - 4/24 (0404)	4.9 x 10 ⁻⁸

+ This entry was incorrectly reported in PNO-79-67AD.

++ These are licensee contractor values.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Offsite Measurements

Radiation Levels

Offsite radiation levels indentified by NRC survey teams continue to be consistent with normal background levels (0.02 mR/hr maximum). These results were obtained from routine 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 normal background levels.

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/23-24	10	Less than MDA
milk	4/21	4	Less than MDA
daily air	4/22-23	1	Less than MDA

EPA Environmental Samples (Analyzed at Remote Laboratory)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/19	26	Less than MDA
air	4/19	5	Range from 2.1 to 6.9 x 10 ⁻¹³ microcuries per cubic centimeter (0.21 to 0.69 picocuries per cubic meter)
air	4/20	5	Range from 9 to 168 picocuries per cubic meter of Xe-133. 14 to 22 picocuries per cubic meter Kr-85.** These are approximately background levels.
milk	4/18	6	Less than MDA
milk	4/19	9	Less than MDA

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

*MDA = minimum detectable activity.

**Maximum Permissible Concentration for Xe-133 and Kr-85 is 300,000 picocuries per cubic meter.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: RPaulus, IE x27246; DThompson, IE x28487

Distribution: Transmitted H St 1:45
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB 1:55 P. Bldg 2:00 J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I 2:26
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 2:44
J. J. Fouchard, PA R. J. Mattson, NRR Region III 2:21
N. M. Haller, MPA V. Stello, NRR Region IV 3:10
R. G. Ryan, OSP R. S. Boyd, NRR Region V 2:59
H. K. Shapar, ELD SS Bldg 2:04 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD

IE (TMI) Site 4:00 (Provide copy to STATE)
White House Situation Room 2:50 4/25
FDAA 3:20 (Provide copies to the Administrator and the Operations Center)
EPA 8:30 4/25
DOE/EOC 8:40 4/25
PEMA 3:40
BRP (State of PA) 9:15
DCPA 9:40 4/25
HEW (Pickup)

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

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 highest 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).

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
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)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
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)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/23	28	Less than MDA
air	4/23	3	Range from 2.3 to 7.1×10^{-13} microcuries 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 Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 3:20
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

A P. Bldg 3:00
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 3:45
W. J. Dircks, NMSS
S. Levine, RES

J. G. Davis, IE
Region I 3:00
Region II 2:00
Region III 3:00
Region IV 3:00
Region V 3:00
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

*Broadcast
by
Comm.
Ph. 71:95 AM*

adcat IE (TMI) Site 3:25 (Provide copy to STATE)
White House Situation Room 4:20
FDAA _____ (Provide copies to the Administrator and the Operations Center)
EPA _____
DOE/EOC 10:00 4/27
PEMA 4:00
BRP (State of PA) _____
DCPA _____
HEW (Pickup)
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

Revised 10 - 2017 - (Energy) TUVI)

AD

IMMEDIATE
PRELIMINARY NOTIFICATION

April 26, 1979

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

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 26, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average coolant temperature is being maintained at 225 degrees F by admitting steam to the main condenser through the turbine bypass valves. The highest incore temperature reading is 311 degrees F.

Environmental Status

No Aerial Measuring System (AMS) Surveys were made on April 25, 1979.

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

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
4/25 (0004) - 4/25 (0512)	2.0 x 10 ⁻⁸
4/25 (0520) - 4/25 (0658)	1.5 x 10 ⁻⁸
4/25 (0701) - 4/25 (1200)	1.0 x 10 ⁻⁸
4/25 (1200) - 4/25 (1555)	2.0 x 10 ⁻⁸
4/25 (1557) - 4/25 (2010)	1.2 x 10 ⁻⁸
4/25 (2013) - 4/26 (0013)	1.2 x 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 and west sides 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.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/25-26	5	Less than MDA*
milk	4/23-25	6	Less than MDA
daily air	4/24-25	1	Less than MDA
grass	4/23-25	5	Less than MDA

EPA Environmental Samples (Analyzed at Remote Laboratory)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/24	29	Less than MDA
air	4/24	2	Range from 5.4 to 7.0 x 10 ⁻¹³ microcuries per cubic centimeter (0.54 to 0.70 picocuries per cubic meter)

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

*MDA - minimum detectable activity.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: RCPaulus, IE x27246 DThompson, IE x27246

Distribution: Transmitted H St 1:25

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)
Transmitted: MNBB <u>1:20</u>	P. Bldg <u>1:30</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I <u>1:40</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>1:45</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>1:50</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>2:05</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>2:47</u>
H. K. Shapar, ELD	SS Bldg <u>1:35</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 3:05 (Provide copy to STATE)

White House Situation Room _____

FDAA _____ (Provide copies to the Administrator and the Operations Center)

EPA _____

DOE/EOC 10:10 4/27

PEMA _____

BRP (State of PA) 5:00 p.m.

DCPA _____

HEW (~~Disposal~~) _____

Handcarry (FAA) _____

IMMEDIATE
PRELIMINARY NOTIFICATION

PD

IMMEDIATE
PRELIMINARY NOTIFICATION

April 27 1979

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

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 27, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average coolant temperature is being maintained at 225 degrees F by admitting steam to the main condenser through the turbine bypass valves. The highest incore temperature reading is 310 degrees F.

Pressurizer level transmitter LT-3 became erratic over the period of 12:30 - 1:30 a.m. on April 27, but is now tracking again. Calibration of the Heise Gauge, to be used as a back-up pressurizer level measurement has been completed.

Environmental Status

No Aerial Measuring System (AMS) Surveys were made on April 26, 1979.

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

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
4/26 (0016) - 4/26 (0357)	1.2 x 10 ⁻⁸
4/26 (0400) - 4/26 (0800)	1.1 x 10 ⁻⁸
4/26 (0805) - 4/26 (1220)	1.1 x 10 ⁻⁸
4/26 (1220) - 4/26 (1558)	7.4 x 10 ⁻⁹
4/26 (1606) - 4/26 (1913)	1.4 x 10 ⁻⁸
4/26 (1913) - 4/27 (0006)	1.4 x 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 and west sides of the Susquehanna River at distances up to five miles north and south of the site.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/26-27	7	Less than MDA*
daily air	4/25-26	1	Less than MDA
rain water	4/26	1	Less than MDA

EPA Environmental Samples (Analyzed at Remote Laboratory)

EPA reported orally that the air samples collected on 4/24 - 4/25 from the 31 sampling stations were all less than MDA for I-131.

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

*MDA - minimum detectable activity.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: RCPaulus, IE 27246 DThompson, IE x27246

Distribution: Transmitted H St 12:45p

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)
Transmitted: MNBB <u>12:45p</u>	P. Bldg <u>3/12</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I <u>3815</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>3125</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>4100</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>4015</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>4150</u>
H. K. Shapar, ELD	SS Bldg <u>12:50p.</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 2:30 12:51 (Provide copy to STATE)

White House Situation Room 500

4 Xerox FDAA (Provide copies to the Administrator and the Operations Center)

EPA 12:25 (Xerox) (6m)

Pop. DOE/EOC

Am. Yacht PEMA 4/15

Auto 3-m BRP (State of PA) 4/27-1:00p.

DCPA 12:25 (3m) (6m)

4 Xerox HEW

Handcarry (FAA)

4 Xerox C. Abraham, PA (Middletown Information Center) 2:45p.m.

IMMEDIATE
PRELIMINARY NOTIFICATION

NEW

IMMEDIATE
PRELIMINARY NOTIFICATION

April 28, 1979

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

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 28, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average coolant temperature is 179 degrees F. Steam is being admitted to the main condenser through the turbine bypass valves from the A Steam Generator. The highest incore temperature reading is 319 degrees F.

Pressurizer level Lt-3 failed at 9:15 a.m. on April 27. Pressurizer level is now being monitored by the back-up Heise Gauge and a mass balance calculation. Because of the degradation of the level instrumentation natural circulation was initiated ahead of schedule. Reactor Coolant Pump 2A was shut down at 2:08 p.m. on April 27 and natural circulation was established on both Steam Generators.

Increasing levels of radioactivity were noted shortly after the start of steaming the B Steam Generator. Offsite monitoring was conducted and the levels returned to natural background levels within three to four hours.

Steaming of the B Steam Generator was stopped at 1:10 a.m., April 28 due to an indicated increase in the level of ventilation stack activity. This indication was later found to be in error. Natural circulation is continuing on the A Steam Generator.

Environmental Status

Aerial Measuring System (AMS) surveys were conducted from late morning until 6:00 p.m. on April 27. Xe-133 activity was detected up to 10 miles downwind (SSE). Maximum readings were 0.2 mR/hr. No iodine was detected during aerial surveys.

Offsite Measurements

Radiation Levels

Offsite radiation levels indentified by NRC survey teams were consistent with the AMS Survey. Readings from background to 0.35 mR/hr were present in SSE direction from 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.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/27	17	Less than MDA*
daily air	4/26-27	1	Less than MDA

EPA Environmental Samples (Analyzed at Remote Laboratory)

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/25-26	5	Less than MDA
air	4/25-26	1	3.4 x 10 ⁻¹³ microcuries per cubic centimeter (0.34 picocuries per cubic meter) I-131
discharge water	4/21-26	7	Less than MDA

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

*MDA - minimum detectable activity.

EPA provided spike milk samples on 4/27/79 for interlab comparison of analytical methods by each agency performing milk analysis.

The Commonwealth of Pennsylvania has been informed of these results.

Contact:

Distribution: Transmitted H St _____

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky		(For Distribution)
Transmitted: MNBB _____	P. Bldg _____	J. G. Davis, IE
L. V. Gossick, EDO _____	H. R. Denton, NRR	Region I _____
H. L. Ornstein, EDO _____	R. C. DeYoung, NRR	Region II _____
J. J. Fouchard, PA _____	R. J. Mattson, NRR	Region III _____
N. M. Haller, MPA _____	V. Stello, NRR	Region IV _____
R. G. Ryan, OSP _____	R. S. Boyd, NRR	Region V _____
H. K. Shapar, ELD _____	SS Bldg _____	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site _____ (Provide copy to STATE)
 C. Abraham, PA _____ (Middletown - TMI- Information Center)
 White House Situation Room _____
 FDAA _____ (Provide copies to the Administrator and the Operations Center)
 EPA _____
 DOE/EOC _____
 PEMA _____
 BRP (State of PA) _____
 DCPA _____
 HEW _____
 Handcarry (FAA) _____

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

April 29, 1979

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

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 29, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average coolant temperature is 175 degrees F. Steam is being admitted to the main condenser through the turbine bypass valves from the A Steam Generator. The highest incore temperature reading is 320 degrees F. Natural circulation is continuing on the A Steam Generator.

Environmental Status

Two Aerial Measuring System (AMS) Surveys were made on April 28, 1979. No radioactivity above natural background was detected.

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

<u>Date/Time</u>	<u>Activity (uCi/cc)</u>
4/27 (0011) - 4/28 (0038)	1.11×10^{-8}
4/28 (0042) - 4/28 (0830)	3.35×10^{-9}
4/28 (0832) - 4/28 (1625)	9.51×10^{-9}

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 and west sides 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.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/28	9	Less than MDA*
daily air	4/28-29	1	Less than MDA

EPA Environmental Samples (Analyzed at Remote Laboratory)

No Sample Results Reported.

*MDA - minimum detectable activity.

The Commonwealth of Pennsylvania has been informed of these results.

Contact: DChapell, IE x28080; DThompson, IE x 28487

Distribution: Transmitted H St 11:20a.
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)
Transmitted: MNBB 11:21a. P. Bldg 11:23a J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I 11:27a.
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 11:30a.
J. J. Fouchard, PA R. J. Mattson, NRR Region III 11:33a
N. M. Haller, MPA V. Stello, NRR Region IV 11:35a
R. G. Ryan, OSP R. S. Boyd, NRR Region V 11:36a
H. K. Shapar, ELD SS Bldg 11:25 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD

IE (TMI) Site 11:40a. (Provide copy to STATE)
C. Abraham, PA 11:46a. (Middletown - TMI- Information Center)
White House Situation Room 1:00p.m.
FDAA 12:00 a.m. (Provide copies to the Administrator and the Operations Center)
EPA 12:10p.
DOE/EOC 12:50
PEMA 12:20p.
BRP (State of PA) 12:50
DCPA 12:50
HEW 710 answer
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

PD

IMMEDIATE
PRELIMINARY NOTIFICATION

April 30, 1979

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

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 30, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average coolant temperature is being maintained at 175 degrees F by natural circulation. Steam is being admitted to the main condenser through the turbine bypass valves from the A Steam Generator. The highest incore temperature reading is 323 degrees F.

Environmental Status

One Aerial Measuring System (AMS) Survey was made on April 29, 1979. No radioactivity above natural background was detected.

Iodine concentration at Unit 2 ventilation stack for the 24 hour period ending at 12:25 a.m. April 29 was 8.21×10^{-9} microcuries per cubic centimeter (Analyzed by NRC Mobile Laboratory).

An NRC survey of the site perimeter was conducted on April 29. Radiation levels were in the range of 0.02 - 0.03 mR/hr.

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 and west sides 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.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/29	4	Less than MDA*
daily air	4/28-29	1	Less than MDA
milk	4/29	3	Less than MDA
discharge water	4/29	34	Less than MDA
vegetation	4/29	1	2.7 x 10 ⁻⁴ microcuries/ square meter

EPA Environmental Samples (Analyzed at Remote Laboratory)

No Sample Results Reported.

The Commonwealth of Pennsylvania has been informed of these results.

*MDA - minimum detectable activity.

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 10:40

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA (For Distribution)
Commissioner Gilinsky		J. G. Davis, IE
Transmitted: MNBB <u>10:45</u>	P. Bldg <u>10:50 11:32</u>	Region I <u>11:35</u>
L. V. Gossick, EDO	H. R. Denton, NRR	Region II <u>11:05</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region III <u>11:10</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region IV <u>11:</u>
N. M. Haller, MPA	V. Stello, NRR	Region V <u>11:15</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	(MAIL)
H. K. Shapar, ELD	SS Bldg <u>10:50 11:00</u>	J. J. Cummings, OIA
	W. J. Dircks, NMSS	R. Minogue, SD
	S. Levine, RES	

IE (TMI) Site 11:26 (Provide copy to STATE)
C. Abraham, PA 1:18 (Middletown - TMI-Information Center)
White House Situation Room 1:45
FDAA 11:40 (Provide copies to the Administrator and the Operations Center)
EPA 12:17
DOE/EOC 11:29
PEMA 2:34
BRP (State of PA) 3:45
DCPA 4:00
HEW 1:30 (Pick up)
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

PD

IMMEDIATE
PRELIMINARY NOTIFICATION

May 1, 1979

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

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 May 1, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

The average coolant temperature is being maintained at 175 degrees F by natural circulation. Steam is being admitted to the main condenser through the turbine bypass valves from the A Steam Generator. The highest incore temperature reading is 326 degrees F.

Environmental Status

One Aerial Measuring System (AMS) Survey was made on April 30, 1979. No radioactivity above natural background was detected.

Iodine concentration at Unit 2 ventilation stack for the 24 hour period ending at 12:08 a.m., April 30 was 1.5×10^{-8} microcuries per cubic centimeter (Analyzed by NRC Mobile Laboratory).

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 and west sides 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.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

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

<u>Sample Type</u>	<u>Date of Sample</u>	<u>Number of Samples</u>	<u>Results</u>
air	4/30	4	Less than MDA*
daily air	4/29-30	1	Less than MDA
cow's milk	4/28	1	Less than MDA
discharge water	4/30	1	Less than MDA
vegetation	4/30	3	Less than MDA
goat's milk	4/30	1	3.19 x 10 ⁻⁸ uCi/ml

EPA Environmental Samples (Analyzed at Remote Laboratory)

<u>Sample Type</u>	<u>Date Collected</u>	<u>Number</u>	<u>Results</u>
Air Iodine	4/23	25	Two samples had detectable I-131 (Highest at 1.0 picocuries per cubic meter) - (Less than MDA on all others)
	4/24	7	
Milk	4/23, 24, 25	18	Less than MDA for I-131
Noble gases	4/26, 27, 28	6	Xe-133 level from 10 to 958 picocuries per cubic meter. The highest was collected on 4/26-4/28 5.3 mi @ 145°. Kr-85 was within the range of normal Kr-85 background.)
Water	4/22-4/27	3	Less than MDA.
Air Iodines	4/28	31	Less than MDA. 2 were less than MDA, two showed I-131 at 0.38 and 0.48 picocuries per cubic meter.
	4/29	4	

No other agency data received.

The Commonwealth of Pennsylvania has been informed of these results.

*MDA - minimum detectable activity.

Correction

PNO-79-67AK, 4/30/79, reported 34 discharge water samples collected on 4/29/79. It should have read 4.

IMPORTANT NOTE - FUTURE PN'S

This is the last daily update of information on the Three Mile Island incident. Henceforth, updates will be issued each Monday. Significant information, however, will be reported immediately in a Preliminary Notification.

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 1:55
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky (For Distribution)

Transmitted: MNBB 1:58 P. Bldg 2:05 J. G. Davis, IE
L. V. Gossick, EDO H. R. Denton, NRR Region I 2:15
H. L. Ornstein, EDO R. C. DeYoung, NRR Region II 3:140
J. J. Fouchard, PA R. J. Mattson, NRR Region III 2:130
N. M. Haller, MPA V. Stello, NRR Region IV 3:150
R. G. Ryan, OSP R. S. Boyd, NRR Region V 3:55
H. K. Shapar, ELD SS Bldg 2:09 (MAIL)
W. J. Dircks, NMSS J. J. Cummings, OIA
S. Levine, RES R. Minogue, SD

IE (TMI) Site 2:53 (Provide copy to STATE)
C. Abraham, PA 2:20 (Middletown - TMI-Information Center)
White House Situation Room 3:10
FDAA 3:20 (Provide copies to the Administrator and the Operations Center)
EPA 4:15
DOE/EOC 4:05
PEMA 3:40
BRP (State of PA) 4:40
DCPA 4:50
HEW 3:50
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

206

IMMEDIATE
PRELIMINARY NOTIFICATION

May 7 1979

PRELIMINARY NOTIFICATION OF AN EVENT OR UNUSUAL OCCURRENCE - PNO-79-67AM

This preliminary notification provides updated information of safety or public interest significance.

Facility: Three Mile Island Unit 2
Middletown, Pennsylvania

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Operational Status:

1. Three of four trains of an independent, additional charcoal filter system are presently in operation. Iodine concentrations in the gaseous effluent are consistently below continuous release limits and below normally detectable levels most of the time.
2. Hydrostatic testing of the existing decay heat removal system ("B" loop) is in progress.
3. The pressurizer has been taken "solid" to demonstrate continued decay heat removal capability with the primary coolant system completely filled and to obtain confirmatory information on pressurizer level.
4. Measurement of the liquid level inside containment is planned in the near future by measuring the hydrostatic head on the sump discharge piping using a recently installed Heise gage.
5. A measurement was made of the radioactivity inside the containment building. It indicates that the present dose level from gases within the building is about 100 R/hr. Other radiation sources such as activity deposited on the containment walls and water on the reactor building floor also contribute to the dose levels in the containment but cannot be directly estimated at this time.

Environmental Status

Environmental radiation levels continue to be consistent with natural background levels. Approximately thirteen minor releases have occurred during the past week (May 1-6) in conjunction with venting of the primary make-up tank. Aerial and ground surveys taken during these releases indicated radiation levels at background, except for the periods 2000-2100 hrs on 5/1, 1500-2000 hrs on 5/3, and 0700-0800 hrs on 5/4, when aerial measurements reported I-131 at MDA levels and ground survey readings were 0.034 to 0.04 mr/hr. During the period May 1-6, approximately 37 air samples were collected and all were less than MDA. Vegetation samples collected following the releases were all less than MDA. EPA air and water samples collected during the period April 26 to May 3 showed no evidence of fission products (0.1-0.2 picocuries per cubic meter I-131 for air, and 130 picocuries per liter I-131 for water).

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Contact: RCPaulus, IE x27246; DThompson, IE, x28487

Distribution: Transmitted H St ~~11:50~~

Chairman Hendrie	Commissioner Bradford	S. J. Chilk, SECY
Commissioner Kennedy	Commissioner Ahearne	C. C. Kammerer, CA
Commissioner Gilinsky <u>11:45</u>	<u>11:50</u>	(For Distribution)
Transmitted: MNBB <u>11:20</u>	P. Bldg <u>11:20</u>	J. G. Davis, IE
L. V. Gossick, EDO	H. R. Denton, NRR	Region I 11:25 <u>11:47</u>
H. L. Ornstein, EDO	R. C. DeYoung, NRR	Region II <u>11:25</u>
J. J. Fouchard, PA	R. J. Mattson, NRR	Region III <u>11:30</u>
N. M. Haller, MPA	V. Stello, NRR	Region IV <u>11:33</u>
R. G. Ryan, OSP	R. S. Boyd, NRR	Region V <u>11:35</u>
H. K. Shapar, ELD	SS Bldg <u>11:40</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site ~~11:55~~ 4:10 (Provide copy to STATE)
C. Abraham, PA 11:55 (Middletown - TMI- Information Center)
White House Situation Room 2:05
FDAA 4:22 (Provide copies to the Administrator and the Operations Center)
EPA 2:20
DOE/EOC 12:30 5/8
PEMA 2:35
BRP (State of PA) 9:45 5/8
DCPA 12:00 5/8
HEW 12:15 5/8
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

IMMEDIATE
PRELIMINARY NOTIFICATION

May 14, 1979

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67AN (Corrected)

This preliminary notification constitutes summary information of an event of safety or public interest significance.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Operational Status

1. The average coolant temperature is being maintained at 170 degrees F by natural circulation. Pressure is about 650 psi. Steam is being admitted to the main condenser through the turbine bypass valves from the A Steam Generator. The highest incore temperature reading is 308 degrees F.
2. All four trains of the independent, additional charcoal filter system are presently operable. Normally three trains are operating at any one time to provide additional filtration for the entire gaseous effluent flow from Unit 2. Iodine concentrations in the gaseous effluent have been below instantaneous release limits and below detectable levels most of the time.
3. Preliminary hydrostatic testing of the existing decay heat removal system ("A" and "B" loops) has been performed. Leaks have been identified and are being corrected.
4. The pressurizer has been taken "solid" periodically to obtain confirmatory information on pressurizer level and to check primary system leak rate.
5. Measurements of the liquid level inside containment is planned in the near future by measuring the hydrostatic head on the sump discharge piping using a recently installed Heise gage.

Environmental Status

Environmental radiation levels continue to be consistent with natural background levels. There were approximately four minor releases during the past week (May 7-13, 1979) associated with venting of the primary makeup tank and work on the new filter train system and monitors. During this period 14 24-hour continuous air samples and 27 air grab (1 to 2 hr.) samples were collected, and all were less than MDA. A goat milk sample taken on May 8, 1979 contained an I-131 concentration of 12 pCi/liter. The latest goat milk sample collected and analyzed on May 13 showed less than MDA for I-131 (F10 pCi/l). Grass samples taken at the goat farm showed I-131 levels less than MDA. Cow milk samples and grass samples from other locations show less than MDA levels for I-131. Ground surveys continued to show radiation to be at background levels. Aerial surveillance flights have not shown any levels of I-131 above MDA. Other Federal Agencies have not reported any positive values for samples taken during this period.

CONTINUED
IMMEDIATE PRELIMINARY NOTIFICATION

Contact: RCPaulus, IE x27246; DThompson, IE x28487

Distribution: Transmitted H St 4:05

Chairman Hendrie	Commissioner Bradford
Commissioner Kennedy	Commissioner Ahearne
Commissioner Gilinsky	ACRS
Transmitted: MNBB <u>4:12</u>	P. Bldg <u>4:10</u>
L. V. Gossick, EDO	H. R. Denton, NRR
H. L. Ornstein, EDO	R. C. DeYoung, NRR
J. J. Fouchard, PA	R. J. Mattson, NRR
N. M. Haller, MPA	V. Stello, NRR
R. G. Ryan, OSP	R. S. Boyd, NRR
H. K. Shapar, ELD	SS Bldg <u>4:20</u>
	W. J. Dircks, NMSS
	S. Levine, RES

S. J. Chilk, SECY
 C. C. Kammerer, CA
 (For Distribution)
 J. G. Davis, IE
 Region I 4:20 4:35
 Region II 4:25
 Region III 4:20
 Region IV 4:38
 Region V 4:45
 (MAIL)
 J. J. Cummings, OIA
 R. Minogue, SD

IE (TMI) Site 3:40 5/15 (Provide copy to STATE)
 C. Abraham, PA _____ (Middletown - TMI- Information Center)
 White House Situation Room 9:08 5/15
 FDAA 9:30 5/15 (Provide copies to the Administrator and the Operations Center)
 EPA 9:35 5/15
 DOE/EOC 8:45 5/15
 PEMA 9:40 5/15
 BRP (State of PA) 9:40 5/15
 DCPA 9:58 5/15
 HEW 3:00 5/15
 Handcarry (FAA)

IMMEDIATE
 PRELIMINARY NOTIFICATION

DLB

IMMEDIATE
PRELIMINARY NOTIFICATION

May 21, 1979

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67A0

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 May 21, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Plant Status

Operational:

1. The average coolant temperature is being maintained at 170 degrees F by natural circulation. Pressure is about 300 psi. Steam is being admitted to the main condenser through the turbine bypass valves from the A Steam Generator. The highest incore temperature reading is 301 degrees F.
2. Hydrostatic testing of the existing decay heat removal system "B" loop has been performed satisfactorily. Leaks have been identified and are being corrected in the "A" loop.
3. The pressurizer has been taken "solid" periodically to obtain confirmatory information on pressurizer level and to check primary system leak rate.
4. The water level in the reactor building was measured and found to be 6.1' above floor level. This is about 450,000 gallons.
5. One of two primary system pressure indications now in use is giving erratic readings. Direct reading pressure gages can be connected to the system if needed.

Environmental Status

Environmental radiation levels continue to be consistent with natural background levels. Approximately six minor releases have occurred during the past week (May 14-20) in conjunction with changing levels in the primary make-up tank and sampling the primary system. Aerial and ground surveys taken during these releases indicated no radiation levels above background, except for a release at 1300 on May 16, when an aerial measurement above the stack read 0.05 mR/hr. No radiation was detected on the ground. During the period May 14-20, approximately 36 air samples were collected and all were less than MDA. Vegetation and milk samples collected during this period also showed no activity above MDA. EPA and FDA air, water milk and food samples collected during this past week up to May 19 showed no detectable activity from TMI.

CONTINUED

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 11:04

Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky

Commissioner Bradford
Commissioner Ahearne
ACRS

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MNBB 4:40
3:35

L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
N. M. Haller, MPA
R. G. Ryan, OSP
H. K. Shapar, ELD

P. Bldg 11:00
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg 1:00
W. J. Dircks, NMSS
S. Levine, RES

J. G. Davis, IE
Region I 11:06 11:15
Region II 11:10
Region III 11:55
Region IV 12:10
Region V 12:00
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 9:30 5/22 (Provide copy to STATE)
C. Abraham, PA _____ (Middletown - TMI-Information Center)
White House Situation Room 9:35 5/22
FDAA 9:55 5/22 (Provide copies to the Administrator and the Operations Center)
EPA 10:35 5/22
DOE/EOC 4:15
PEMA 10:00 5/22
BRP (State of PA) 10:25 5/22
DCPA 9:45 5/22
HEW 3:00 pm
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

Doc

IMMEDIATE
PRELIMINARY NOTIFICATION

May 22, 1979

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

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 May 22, 1979.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND - REPORTED DEATHS OF COWS

Newspaper, television and radio stories this past weekend have reported that a number of cows have died in a herd near TMI at the Hoover Farm in Bainbridge, Pennsylvania. The article in the Harrisburg Sunday Patriot News reported that the owner of the herd believed the deaths were caused by the accident at TMI. The deaths all involved cows giving birth. Twelve calves have been stillborn and 7 cows have died after giving birth. The article stated that the state lab and the Hershey Medical Center have conducted post mortems and other tests on the dead animals. The symptoms common to all the deaths were intrauterine infections and anemia.

On Sunday afternoon, May 20, 1979, an NRC survey team accompanied by an EPA representative went to the Hoover Farm located about six miles southeast of the plant. Mr. Hoover and his wife stated that they suspect the cows died from leukemia caused by the radiation from TMI. They stated that they never had this problem in the past. They also stated that they knew of two other farmers that were having similar problems. The initial death occurred on April 5. The survey team took samples of feed, grass, soil, well water and milk for radiological analysis. The EPA representative also collected samples.

The Pennsylvania State Department of Agriculture has veterinarians looking into the problem. They are investigating the possibility that a virus infection is the cause of the deaths and that, if so, in a few days they will have identified the virus. The State Bureau of Radiological Health will make a radiological examination of the internal organs of one cow. Another State Agency will examine them for heavy metals. The FDA has sent a veterinarian from the Philadelphia regional office to examine the herds involved.

CONTINUED

Contact: EDFlack, IE 28188 LJCunningham, IE x28188 LBHigginbotham, IE x28188

Distribution: Transmitted H St 11:05

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

Transmitted: MNBB 11:20

L. V. Gossick, EDO	P. Bldg <u>11:52</u>	J. G. Davis, IE
H. L. Ornstein, EDO	H. R. Denton, NRR	Region I <u>11:35</u>
J. J. Fouchard, PA	R. C. DeYoung, NRR	Region II <u>12:00</u>
M. Haller, MPA	R. J. Mattson, NRR	Region III <u>11:15</u> N.
R. G. Ryan, OSP	V. Stello, NRR	Region IV <u>12:03</u>
H. K. Shapar, ELD	R. S. Boyd, NRR	Region V <u>11:48</u>
	SS Bldg <u>11:10</u>	(MAIL)
	W. J. Dircks, NMSS	J. J. Cummings, OIA
	S. Levine, RES	R. Minogue, SD

IE (TMI) Site 11:45 (Provide copy to STATE)

C. Abraham, PA (Middletown - TMI-Information Center)

White House Situation Room 1:20

FDAA 2:45 (Provide copies to the Administrator and the Operations Center)

EPA 2:50

DOE/EOC 3:55

PEMA 4:00

BRP (State of PA) 4:05

DCPA 9:45 5/23

HEW

Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

226

IMMEDIATE
PRELIMINARY NOTIFICATION

May 29, 1979

PRELIMINARY NOTIFICATION OF AN EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67AQ

This preliminary notification provides updated information of safety or public interest significance.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Operational:

1. The average coolant temperature is 158 degrees F and being maintained around that temperature by natural circulation. Pressure is about 450 psi with the pressurizer in solid operation. Steam is being admitted to the main condenser through the turbine bypass valve from the A Steam Generator. The highest incore temperature reading is 291°F.
2. Water level in the reactor building is being measured daily, and was 6.8 feet above floor level this morning. The lowest decay heat system motor-operated valve (DH-V2) in the reactor building was opened on May 25 as a precautionary measure, due to increasing water level. Secondary sources of water into the reactor building have since been isolated, including the fan coolers water supply, to reduce water in-leakage.
3. Preoperational testing is in progress for the Spent Fuel Pool Tank Farm, Once-Through Steam Generator "B" Long-Term Cooling System, and the modified rad waste treatment system (EPICOR). The testing is scheduled for completion by June 1.

Environmental Status

Environmental radiation levels continue to be consistent with natural background levels. A slight change in background level on May 24 and 25 was shown to be due to changing levels of naturally occurring Rn-222 caused by a weather front moving through the area. Airborne releases have been below Technical Specification limits. During the period May 21-28, approximately 35 air samples were collected by the NRC and all were less than MDA. Vegetation and milk samples collected during this period also showed no activity above MDA. EPA air, water and milk samples collected during this past week up to May 24 showed no detectable activity from TMI.

The State of New Jersey reported that they detected no I-131 in any of the 83 milk samples they analyzed between March 29, 1979 and April 24, 1979. These samples included milk from counties within 50 miles of Harrisburg, Pennsylvania and supplied to New Jersey consumers, the Salem, New Jersey area, and northern New Jersey farms.

CONTINUED

Analyses have been completed on samples of milk, water, soil, feed and grass collected at the Claire Hoover farm on May 20, 1979 (Reference PNO-79-67AP). No reactor related radionuclides were detected by either the EPA or NRC.

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 3:57
Chairman Hendrie Commissioner Bradford S. J. Chilk, SECY
Commissioner Kennedy Commissioner Ahearne C. C. Kammerer, CA
Commissioner Gilinsky ACRS (For Distribution)

Transmitted: MNBB 3:55
L. V. Gossick, EDO P. Bldg 10:00
H. L. Ornstein, EDO H. R. Denton, NRR J. G. Davis, IE
J. J. Fouchard, PA R. C. DeYoung, NRR Region I 10:52 5/30
N. M. Haller, MPA R. J. Mattson, NRR Region II 10:45 5/30
R. G. Ryan, OSP V. Stello, NRR Region III 10:49 5/30
H. K. Shapar, ELD R. S. Boyd, NRR Region IV 12:20 5/30
SS Bldg 4:55 Region V 10:55 5/30
W. J. Dircks, NMSS (MAIL)
S. Levine, RES J. J. Cummings, OIA
R. Minogue, SD

IE (TMI) Site 9:20 5/30 (Provide copy to STATE)
C. Abraham, PA (Middletown - TMI-Information Center)
White House Situation Room 12:15 5/30
FDAA 1:34 5/30 (Provide copies to the Administrator and the Operations Center)
EPA 2:30 5/30
DOE/EOC 1:20 5/30
PEMA 1:50 5/30
BRP (State of PA) 2:45 5/30
DCPA 3:15
HEW 3:00 5/30
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

J&E DUB

**IMMEDIATE
PRELIMINARY NOTIFICATION**

June 4, 1979

PRELIMINARY NOTIFICATION OF AN EVENT OR UNUSUAL OCCURRENCE — PNO-79-67AR

This preliminary notification provides updated information of safety or public interest significance.

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

Subject: FUGITIVE INCIDENT AT THREE MILE ISLAND

Operational:

1. The average coolant temperature is 157 degrees F and being maintained around that temperature by natural circulation. Pressure is about 340 psi with the pressurizer in solid operation. Steam is being admitted to the main condenser through the turbine bypass valve from the A Steam Generator. The highest incore temperature reading is 286°F.
2. Water level in the reactor building is being measured daily, and was 7.0 feet above floor level this morning.
3. Preoperational testing remains in progress for the Spent Fuel Pool Tank Farm, Once-Through Steam Generator "B" Long-Term Cooling System, and the modified rad waste treatment system (EPICOR). The testing is scheduled for completion by June 8. The pressure/volume control system is due to be turned over for preoperational testing in a few days.
4. An individual posing as an employee of a legitimate contractor at TMI-2 attempted to gain access to the site at 10:45 p.m. on June 2, 1979. The person did not have a site photo identification badge and was refused access by the security guard at the south gate. The individual left the site access area while the guard was attempting to verify his identity. The guard obtained the impostor's vehicle license number (California plates). The individual has been tentatively identified by the Pennsylvania State Police. No further action is planned by the licensee. Additional followup of this matter will be conducted by the Region I office.
5. PNO-79-67T reported: "The hydrogen recombiner tripped off at 0115 on April 13 (burned out heaters)... A decision had not been made whether to replace the heaters or to initiate operation of the backup recombiner." It was later determined that the recombiner trip was caused by a shorted quick-disconnect plug. The failure was corrected and the recombiner was returned to operation on April 15.

Environmental Status

Environmental radiation levels continue to be consistent with natural background levels. Airborne releases have been below Technical Specification limits. During the period May 29 - June 4, approximately 37 air samples were collected

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by the NRC and all were less than MDA. Vegetation, soil, and milk samples collected during this period also showed no activity above MDA. EPA air, water and milk samples collected during this past week up to June 1 showed no detectable activity from THI.

Contact: RCPalmas, IR x17246 DThompson, IR x28487

Distribution: Transmitted H St 350
Chairman Hendrie
Commissioner Kennedy
Commissioner Gilinsky
Commissioner Bradford
Commissioner Ahearn
ACRS

S. J. Chalk, SDCY
C. C. Kammerer, CA
(For Distribution)

Transmitted: NRRB 352
L. V. Gossick, EDO
H. L. Ornstain, EDO
J. J. Fouchard, PA
E. M. Haller, MPA
K. G. Ryan, OSP
E. K. Shapar, KLD

P. Bldg _____
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
V. Stallo, NRR
R. S. Boyd, NRR
SS Bldg 354
W. J. Dirksen, NRRS
S. Levine, NRS

J. G. Davis, IR
Region I 351
Region II _____
Region III _____
Region IV _____
Region V _____
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (THI) Site _____ (Provide copy to STATE)
C. Abraham, PA _____ (Middletown - THI-Information Center)
White House Situation Room _____
FDAA _____ (Provide copies to the Administrator and the Operations Center)
EPA _____
DOE/EOC _____
FEMA _____
BRP (State of PA) _____
DCPA _____
HEW _____
Handcarry (FAA) _____

IMMEDIATE
PRELIMINARY NOTIFICATION

DB

**IMMEDIATE
PRELIMINARY NOTIFICATION**

June 11, 1979

PRELIMINARY NOTIFICATION OF AN EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67AS

This preliminary notification provides updated information of safety or public interest significance.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Operational:

1. The average coolant temperature is 157 degrees F. The highest incore thermocouple temperature reading is 280 degrees F. Core cooling is being maintained by natural circulation. Pressure is about 340 psi with the pressurizer in solid operation. Steam is being admitted to the main condenser through the turbine bypass valve from the A Steam Generator.
2. Water level in the reactor building is being measured daily, and is 7.3 feet above floor level this morning.
3. Preoperational testing for the Spent Fuel Pool Tank Farm, Once-Through Steam Generator "B" Long-Term Cooling System, the modified rad waste treatment system (EPICOR), and the pressure/volume control system should be completed by June 15.

Environmental Status:

Environmental radiation levels remain consistent with natural background levels. Airborne releases have been below Technical Specification limits. From June 5 - June 10, about 37 air samples were collected by the NRC. All were less than MDA. Vegetation, soil and milk samples collected last week also showed no activity above MDA. EPA air, water and milk samples collected during the week (up to June 8) showed no detectable activity from TMI.

CONTINUED



299
7906270031

June 11, 1979
FNO-79-67AS

Contact: RCPaulus, IE x27246 DThompson, IE x28487

Distribution: Transmitted H St 3:40
Chairman Hendrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahearns
Commissioner Gilinsky

S. J. Chilk, SECY
C. C. Kammerer, CA
(For Distribution)

Transmitted: MRBB 3:45
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
M. M. Haller, MPA
R. O. Ryan, OSP
H. K. Shaper, ELD

P. Bldg 3:55
H. R. Denton, NRR
R. C. DeYoung, NRR
R. J. Mattson, NRR
R. S. Boyd, NRR
SS Bldg 4:00
W. J. Dircks, NMSS
S. Levine, RES

V. Stello, IE
Region I 4:20
Region II
Region III 4:10
Region IV
Region V 4:25
(MAIL)
J. J. Cummings, OIA
R. Minogue, SD

IE (THI) Site _____ (Provide copy to STATE)
White House Situation Room _____
FDAA _____ (Provide copies to the Administrator and the Operations Center)
EPA _____
DOE/EOC _____
PEMA _____
NEP (State of PA) _____
DCFA _____
HEV _____
Handcarry (FAA)

IMMEDIATE
PRELIMINARY NOTIFICATION

6/18/79

QCB

**IMMEDIATE
PRELIMINARY NOTIFICATION**

June 18, 1979

PRELIMINARY NOTIFICATION OF AN EVENT OR UNUSUAL OCCURRENCE -- PRO-79-67AT

This preliminary notification provides updated information of safety or public interest significance.

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

Subject: NUCLEAR INCIDENT AT THREE MILE ISLAND

Operational:

1. The average coolant temperature is 153 degrees F and the highest incore thermocouple temperature reading is 273 degrees F. Core cooling is being maintained by natural circulation. Pressure is about 350 psi with the pressurizer in solid operation. Steam is being admitted to the main condenser through the turbine bypass valve from the A Steam Generator.
2. Reactor building water level is being measured daily, and is now 7.0 ± 0.5 feet above floor level. This lower than previously reported level is due to refinement of the measurement technique, and does not reflect an actual level decrease.
3. Preoperational testing for the Spent Fuel Pool Tank Farm, Once-Through Steam Generator "B" Long-Term Cooling System, the modified radwaste treatment system (EPICOR), and the pressure/volume control system progressed slowly during the past week due to various operational/procurement problems encountered. The testing may be completed within the next two weeks.

Environmental Status:

Environmental radiation levels remain consistent with natural background levels. Airborne releases have been below Technical Specification limits. From June 11-17, 42 air samples, 2 milk samples, 4 vegetation samples and 2 soil samples were collected by the NRC. All analytical results were less than MDA. EPA air, water and milk samples collected during the week (up to June 15) showed no detectable activity from TMI.

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2pp.

June 18, 1979
FEO-79-67A

Contact: RCPaulus, IE x27246 UThompson, IE x28487

Distribution: Transmitted to St 1:45
Chairman Contrie Commissioner Bradford
Commissioner Kennedy Commissioner Ahasrne
Commissioner Gilinsky ACRS

S. J. Chalk, SICV
C. C. Kammerer, CA
(For Distribution)

Transmitted: MEMO 1:50
L. V. Gossick, EDO
E. L. Ornstain, EDO
J. J. Fouchard, PA
E. H. Haller, MPA
E. G. Ryan, OSP
E. K. Sasper, ELD

P. Bldg 2:00
E. R. Deaton, NRR
E. C. DeYoung, NRR
E. J. Mattson, NRR
E. S. Boyd, NRR
SS, Bldg 2:12
V. J. Dircks, RMSS
S. Levine, RES

V. Stallo, IE
Region I 2:55
Region II _____
Region III _____
Region IV _____
Region V _____
(MAIL)
J. J. Cummings, OIA
R. Minogus, SD

IK (THI) Site _____ (Provide copy to STATE)

White House Situation Room _____

FDAA _____ (Provide copies to the Administrator and the Operations Center)

EPA: _____

DOE/EOC _____

PEMA _____

HEP (State of PA) _____

DCEPA _____

HEW _____

Handcarry (YAA) _____

IMMEDIATE
PRELIMINARY NOTIFICATION

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**IMMEDIATE
PRELIMINARY NOTIFICATION**

June 26, 1979

PRELIMINARY NOTIFICATION OF AN EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67AU

This preliminary notification provides updated information of safety or public interest significance.

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

Subject: UPDATED STATUS REPORT

Operational:

1. Average coolant temperature is 154 degrees F. The highest incore thermocouple temperature indication is 267 degrees F. Core flow is being provided by natural circulation. Core cooling is being maintained by steaming the "A" Steam Generator to the main condenser on the bypass valve. Primary pressure is about 325 psi. The licensee plans to slowly decrease pressure to about 250 psi.
2. Daily measurements of reactor building water level still indicate 7.0 ± 0.5 feet above floor level.
3. The Pressure-Volume Control system is nearing completion. Completion and testing of systems continues to progress slowly, with procurement problems and system changes being significant contributors.

Environmental Status:

Environmental radiation levels remain consistent with natural background levels. Airborne releases have been below Technical Specification limits. From June 18-24, 35 air samples, 2 milk samples, 4 vegetation samples and 2 soil samples were collected by the NRC. All analytical results were less than minimum detectable activity (MDA). EPA air, water and milk samples collected during the week (up to June 22) showed no detectable activity from TMI.

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PNO-79-67AU 7957635118

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**IMMEDIATE
PRELIMINARY NOTIFICATION**

July 2, 1979

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

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 1, 1979.

Facility: Three Mile Island Unit 2
Middletown, Pennsylvania (DN 80-120)

Subject: UPDATED STATUS REPORT

Operational:

Average coolant temperature is 152 degrees F. The highest incore thermocouple temperature indication is 270 degrees F. Core flow is being provided by natural circulation. Core cooling is being maintained by steaming the "A" Steam Generator to the main condenser on the bypass valve. The increases in temperatures over the past week are due to deliberate reduction of the opening of the bypass valve in order to increase the thermal driving head for natural circulation flow. Primary pressure is about 325 psi. The licensee still plans to slowly decrease pressure to about 250 psi.

Daily measurements of reactor building water level still indicate 7.0 ± 0.5 feet above floor level.

The Pressure/Volume Control system continues to progress toward completion slowly.

Environmental Status:

Environmental radiation levels remain consistent with natural background levels. Airborne releases remain well below Technical Specification limits. From June 25-July 1, 1979, 19 air samples, 8 milk samples, 4 vegetation samples and 2 soil samples were collected by the NRC. All analytical results were less than MDA. EPA air, water, and milk samples collected during the week (up to June 29) showed no detectable activity from TMI.

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Page 2

RI
A 21

RI
75-70-57-2V
July 23 1979

Contact: RCPaulus, IE x27246

DT: Thompson, IE x29187

Transmitted 11 51

Commissioner Handria
Commissioner Kennedy
Commissioner Gillinsky

Commissioner Bradford
Commissioner Ahearn

S. J. Child, SECY
C. C. Kommerer, CA
(For Distribution)

Transmitted: INBA 312

P. Bligh 2:30
H. R. Condon, MRR
R. C. Esfahani, MRR
R. J. Mattson, MRR
V. Stallo, MRR
H. S. Lloyd, MRR
SS Bligh
W. J. Uffels, MRS
S. Lovine, MRS

J. G. Davis, IE
Region I 4:30
Region II 4:30
Region III 4:30
Region IV 4:30
Region V 4:30
(MAIL)
J. W. Cummings, OIA
R. Hinnogue, SO

IE (TII) Site 7493 (Provide copy to STATE)

C. Spruhan, PA (Hightstown - TII-Information Center)

White House Situation Room

FDA (Provide copies to the Administrator and the Operations Center)

EPA

DOE/NEC

PEM

CRP (State of PA)

DCFA

HEV

Handcarry (FAA)

RI
JUL 23 1979
FEDERAL BUREAU OF INVESTIGATION
U.S. DEPARTMENT OF JUSTICE

IMMEDIATE
PRELIMINARY NOTIFICATION

JUL 23 1979
7:51
FBI

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512
512

RECEIVED
JUL 23 1979
FBI

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**IMMEDIATE
PRELIMINARY NOTIFICATION**

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

This preliminary notification provides updated information of safety or public interest significance.

FACILITY: Three Mile Island, Unit 2
Middleton, Pennsylvania (OH 50-320)

SUBJECT: UPDATED STATUS REPORT

Operational:

1. Average coolant temperature is 165 degrees F. The highest incore thermocouple temperature indication is 270 degrees F. Core flow is being provided by natural circulation. Core cooling is being maintained by steaming the "A" Steam Generator to the main condenser on the bypass valve. Primary pressure is about 275 psi.
2. Daily measurements of reactor building water level still indicate 7.0 ± 0.2 feet above floor level.
3. Functional testing of the Pressure/Volume Control system has begun and will continue throughout the week.

Environmental Status:

Environmental radiation levels remain consistent with natural background levels. Airborne releases remain well below Technical Specification limits. From July 2 - July 8, 1979, 23 air samples, 2 milk samples, 4 vegetation samples and 2 soil samples were collected by the NRC. All analytical results were less than MDA. EPA air, water, and milk samples collected during the week (up to July 4) showed no detectable activity from TMI.

Contact: DThompson, IE, x28487 RPaulus IE, x27246

Distribution:

Transmitted H St V145
Chairman Hendrie
Commissioner Kennedy
Commissioner Gillinsky

Commissioner Bradford
Commissioner Ahearns

S. J. Chilk, SECY
C. C. Kozmerer, CA
(For Distribution)

Transmitted: MNB
L. V. Gossick, EDO
H. L. Ornstein, EDO
J. J. Fouchard, PA
H. M. Haller, KPA
R. G. Ryan, OS?
H. K. Shaper, ELD

P. Bldg 440
H. R. Denton, NRR
R. C. DeYoung, NRR
N. J. Mattson, NRR
V. Stello, NRR
R. S. Boyd, NRR
SS Bldg
W. J. Dircks, NRS
S. Levine, RES

J. G. Davis, IE
Region I _____
Region II _____
Region III _____
Region IV _____
Region V _____
(MAIL)
J. J. Cummings, CIA
R. Minogue, SD

CONTINUED

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IE (TMI) Site _____ (Provide copy to STATE)
 G. Abraham, PA _____ (Middletown - TMI-Information Center)
 White House Situation Room _____
 FDAA _____ (Provide copies to the Administrator and the Operations Center)
 EPA _____
 DOE/EOC _____
 PEMA _____
 BRP (State of PA) _____
 DCPA _____
 HEW _____
 Handcarry (TAA)

**IMMEDIATE
 PRELIMINARY NOTIFICATION**

RECEIVED
 JUL 11 1979 PM 4 43
 TELLICOM-OR-1705
 U.S. DEPARTMENT OF ENERGY

~~SECRET~~ *SECRET*

Doc

**IMMEDIATE
PRELIMINARY NOTIFICATION**

July 17, 1979

PRELIMINARY NOTIFICATION ON EVENT OR UNUSUAL OCCURRENCE -- PNO-79-67AX

This preliminary notification provides updated information of safety or public interest significance.

Location: Three Mile Island, Unit 2
Middletown, Pennsylvania (DN 60-320)

Subject: UPDATED STATUS REPORT

Operational:

1. Average coolant temperature is 163 degrees F. The highest incore thermocouple temperature indication is 259 degrees F. Core flow is being provided by natural circulation. Core cooling is being maintained by steaming the "A" Steam Generator to the main condenser on the bypass valve.
2. Daily measurements of reactor building water level have remained at 7.0 ± 0.2 feet above floor level.
3. Functional testing of the Pressure/Volume Control system has been delayed to allow vendor review of installed nitrogen regulator valves for compatibility with system applications.

Environmental Status

Environmental radiation levels remain consistent with natural background levels. Airborne releases remain well below Technical Specification limits. During July 9 - July 15, 1979, 19 air samples, 2 milk samples, 7 vegetation samples, 2 soil samples and 7 water samples were collected by the NRC. All analytical results were less than MDA. EPA air, water and milk samples collected during the week (up to July 11) showed no detectable activity from TMI.

Contact: R. C. Reulus, IE x27246 G. C. Gower, IE x27246

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