



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

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JUN 29 1979

MEMORANDUM FOR: Mitchell Rogovin, Director
NRC/TMI Special Inquiry Group

FROM: Robert M. Bernero, Leader Task Group No. 5,
NRC/TMI Special Inquiry Group

SUBJECT: TASK NO. 5 CHRONOLOGY AND STATUS

At your request we are providing the attached draft chronology prepared for Task No. 5. We enjoyed a substantial head start on this work due to an initial chronology prepared by Stephen K. Conner and others in NRC's Office of Management Planning and Analysis. The work in Task 5 has thus far concentrated on background and NRC activities in the first few days, particularly at the NRC Operations Center (Incident Response Center).

Our general understanding of the NRC response to TMI is as follows:

1. Preparations For Emergency Response

On March 28, 1979 NRC had already experienced a few notable emergencies and had in place some facilities and procedures for emergency response. Drills had been conducted with the arrangements. The agency emergency plans appear to have a number of deficiencies. Perhaps the most significant come from the absence of any complete definition or discussion of NRC's specific role in an accident situation. The specific concept of what the NRC's role would be in a serious extended emergency has not been clearly defined. There are certain legal bases for various roles. It is unclear whether these have been developed in depth to specifically identify the various situations which would warrant various roles.

2. Implementation of Emergency Procedures

With some minor exceptions both Region I and NRC Headquarters were prompt in implementing the initial planned emergency procedures. The proximity of the site to Region I, Headquarters, good roads, and airports was a great advantage.

3. Effectiveness of Emergency Response

Communications were a problem from the outset for two reasons; it was difficult to get phone contact, the contacts were frequently between different people at both ends of the line. Such fragmentary communications made it very difficult to give Region I and Headquarters a clear understanding of events and

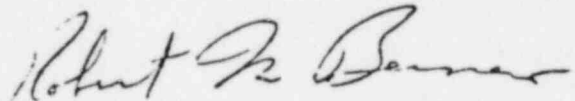
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plant status. The information received at Headquarters was fragmented and delayed so that the understanding of plant status and events at Headquarters lagged significantly behind the understanding of those on site. It is worth noting that NRC people on site in the first two days did not appear to have made independent appraisals of the entire situation. There is constant reference to people on site giving Headquarters answers to questions, but no reference to telling Headquarters what Headquarters needs to know. The only evaluations are vague descriptions of how calmly or professionally the licensee appeared to be performing. The Headquarters staff also seem to have had very low confidence in the accuracy or the completeness of the data they received.

At least for the first two days there is little evidence that the Commission hierarchy was an obstacle to effective response. There was also little call for Commission action. There is the appearance at least that IE and NRR provided the emergency response and the Commission, other offices, and other parties were on the periphery.

Another striking aspect of NRC's early emergency response was the very large effort by NRC senior staff that was taken by public and Congressional Affairs contacts.



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Emergency Response of NRC

cc: G. Frampton
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Task No. 5

Attachment: Draft Chronology

TASK 5 CHRONOLOGY

6/29/79

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday, March 28</u>		
<u>AM</u>		
4:00	Incident sequence begins.	None
6:50	Licensee declares site emergency.	Operations Center (OC) tape
7:02	Licensee notifies PEMA (Pennsylvania Emergency Management Agency) of site emergency.	SP Followup w/PA
7:10 - 7:45	Licensee attempts to contact Region I. Duty officer and Dep. Director en route to office when beeper sounds.	Region I
7:24	Licensee declares general emergency.	OC tape (mentioned in an 8:40 a.m. conversation on OC tape)
7:45	Upon opening switchboard, Region I receives message from licensee.	Reg. I
7:50	Region I contacts TMI control room; maintains open line.	Reg. I
7:55	Region I classifies event as a Level 1 severity incident in accordance with Region I incident response plan.	Reg. I
8:00	Region I Incident Response Center activated; John Davis, HQs., notified by Boyce Grier and also by Public Affairs (Fouchard notified by Region I Public Affairs).	Reg. I
8:05	John Davis orders Hqs Operations Center activated. Region I State Liaison attempts to contact PA bureau of Rad. Health.	Various

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
8:20 AM	Region I contacts independent measurement van (at Millstone site) and orders it dispatched to TMI site.	Reg. I
8:21	Incident Response Center (IRC) tape started.	IRC transcript
8:22	IRC returns Grier's earlier call and Grier gives Mosely the details on the accident. Very little is known. Turbine trip - Rapid cooldown of primary system (faster transient than they've ever seen before) safety injection. Lost pressurizer level - pulled bubble in primary vessel - Indications of failed fuel - high activity in secondary system. Containment pressure increased to 1 pound. (01-737-17)	IRC transcript
8:25	Gossick calls Davis.	Incoming Tel. Log
8:30	PA State Police informed that NRC emergency vehicle would be en route.	Reg. I
8:31	Mosely calls Stello - informs him of incident. Suggest Stello send someone with expertise in calculating release. Says Stello, doesn't need to come over as he suggests reactor is O.K. (01-066-3)	IRC transcript
8:33	John Davis calls L. V. Gossick. Davis tells Gossick we should activate the EMT. (01-210-6)	IRC transcript
8:34	Davis calls Denton. Denton not in. Davis informs Case. Case says we will be right over. (01-210-6)	IRC transcript

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
8:36 AM	Davis calls Hendrie. Hendrie not in. Davis talks to Bill Dorie. (01-210-6)	OC tape
8:40 (approx)	Gossick and Case arrive at Operations Center.	
8:40	Mike Wilbur calls Boyce Grier, obtains technical information.	OC tape
8:40	Five inspectors leave Region I for site: Charles Gallina, H.P. Lead, Don Neely, H.P., Carl Plunlee, H.P., Ron Nimitz, H.P., Jim Higgins, reactor inspector.	IE-Int. TMI-147
8:46	Davis calls Dorie, asks for Comm. Gilinsky in Chairman's absence; Gilinsky not in yet.	OC tape
8:48	Dudley Thompson notifies Tom Carter, NMSS. No NMSS action required.	OC tape
8:48	Ward informs J. Davidson of IAT of incident. Says its not an IAT matter. (01-06603)	IRC tape transcript
8:50	Licensee calls Reg. I with current status report.	Reg. I Log
8:54	Ward informs J. Miller of IAT of incident. Miller says he understands its not a safe-guards matter. (01-066-3)	IRC transcript
8:50	State Liaison contacts PA Bureau of Rad Health.	Reg. I
8:52	Davis notifies Comm. Kennedy (first Commissioner contacted). Davis reports that he, Gossick, Case & Fouchard are manning EMT at O.C. Kennedy says he will notify Commissioner Gilinsky.	OC tape

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
8:56 AM	Gossick attempts to reach Gilinsky through Bill Dorie and through Gilinsky's office. Gossick talks to John Austin and requests that Dorie reach the Chairman.	OC Tape
8:57	Davis informs Commissioner Ahearne of incident. Commissioner asks Case to explain what the bubble is about. Case tells him he thinks part of the core was uncovered and activity is due to popping the fuel elements. (01-258 & 259-7)	IRC transcript
8:59	Bernie Weiss calls DOE emergency Operations Center.	OC tape
9:00	Bill Ward informs Randy Pine (CA). Randy Pine indicates that she will inform local Congressmen (Heinz and Schweiker) and Rep. ____.	OC tape
9:00	Second vehicle leaves Region for site (investigator plus inspector); Region I contacts RAP who has already been notified; two teams organized and standing by.	Reg. I
9:00	Ryan notified by SP Region I personnel. Arrives HQs. OC 9:35 AM.	Bob Ryan
9:02	Weiss notifies EPA (Floyd Galpin).	OC tape
9:08	Joe Fouchard calls Carl Abraham, Reg. I Public Affairs.	SP notes
9:10	Gossick calls Congressional Affairs Office. Randy Pine informs Gossick that CA had received several inquiries from local Congressmen.	OC tape

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
9:10 to 9:30	OCA places call to majority and minority staffs of House of Representatives Committee on Energy and Environment, House Subcommittee on Energy and Power and Senate Subcommittee on Nuclear Regulation as well as Senators Heinz and Schweiker and Representatives Walker and Ertel to advise of declaration of site emergency at Three Mile Island.	OCA
9:06	Bill Ward informs Communications Branch.	OC tape
9:10	Grier calls Moseley to explain technical aspects of incident.	OC tape
9:11	Gilinsky calls Gossick and Davis.	Incoming Log
9:16	Fouchard notifies DOE Public Affairs Office (Bob Dulin).	OC tape
Between 9:00 - 9:30	B. Weiss calls White House Situation Room and informs them of accident. (01-355-8)	IRC transcript
9:15	White House Situation Room Log contacted.	OC Notifications
9:27	Defense Civil Preparedness Agency (DCPA) calls Joe Hegner.	Incoming Log
9:53 to 10:30	Morris Howard calls each of the Region Offices informing them of the incident. (01-500 & 501-12)	IRC transcript
9:54	McCool of DOE calls to get information on TMI. B. Weiss tells him there is no offsite problem at the present but that its possible that there coule be an offsite problem later on. McCool says Brookhaven Laboratory is on alert and ready for dispatch. Weiss tells him not to dispatch them at present time but to keep them on alert. (01-836-19)	IRC transcript

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
10:05	Reg. I response team arrives at site.	PN79-67
10:05	Reg. I contacts EPA Hqs. (Also attempts to contact EPA:III).	Reg. I
10:05 to 10:10	Discussion w/RAP re Accident Response Monito. ... Survey Team (ARMS) aircraft survey. ARMS people put on standby.	Reg. I
10:15	Onsite team informs PA Rad. Health that they are available for questioning.	Reg. I
✓ 10:15	Gossick and Case call Commissioners Bradford, Gilinsky and Kennedy who are assembled together at H Street and brief them on the latest status of the incident. (01-213-6)	IRC transcript
10:20	Telephone to PA State Rad Health Dept. (Gerusky not available). Call returned at 10:45 (1st liaison established by Hqs) subsequent calls every hour or two, starting about 5:25 pm to discuss status of sampling and monitoring.	SP Log
10:25	B. Weiss calls DOE - EOC to discuss possible "upping" of the alert for NEST or ARMs". This is not a request for planes to depart but a check on their location and readiness. (01-837-19)	IRC transcript
10:30 to 11:30	OCA calls principal oversight committees (including appropriations subcommittees) and Pennsylvania representatives from vicinity of site to advise of release of radioactive materials.	OCA
10:30	Reg. I contact Delaware.	Reg. I
10:40	Reg. I contacts PA Governor's action center.	Reg. I

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
10:40	Tom Gerusky of Pa. State describes iodine detected in the emission plume to someone in IRC. (19-203) (01-203-19)	IRC transcript
10:45	Reg. I contacts NY State Energy Office	Reg. I
10:30	First Press Release based on Preliminary Notification.	PR#79-64
10:40	Press Conference (from where?) patched through to PA Rad Health Dept.	SP Log
10:46	Grier calls Davis and advises him there is an indication of offsite iodine. (01-214-6)	IRC transcript
10:55	Telephone call to PA Civil Defense (second call to Operations Officer at 11:30 am).	SP Log
10:57	B/ Weiss calls DOE-EOC and requests that they preposition the helicopter out of Andrews (apparently because of the iodine detected by the State of Pa. people). (01-838-19)	IRC transcript
10:58	White House Duty Officer to Weiss.	Incoming Log
11:00	Second Team arrives at site and in control room.	Reg. I
11:35	FPA region II contacted.	Reg. I
11:37	In response to question from DOE-EOC in Germantown, Weiss tells them we are not planning to send an NRC representative over to DOE-EOC. (01-840-19)	IRC transcript
11:45	NJ Dept of Energy contacted.	Reg. I
11:55	State of MD, Power Plant Siting council contacted.	Reg. I

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
12:04 PM	EPA Region III contacted.	Reg. I
12:10	DOE (Valley Forge Office) contacted.	Reg. I
12:30	OCA calls principal oversight committees and PA representatives regarding latest information (arranged for briefing by Mr. Stello in response to request from Henry Myers for technical information).	OCA
12:38	DOE informs IRC that it has two airforce choppers at Andrews ready to take off if we need them. One airforce chopper has left and the DOE chopper will be leaving momentarily. (01-074-3).	IRC transcript
1:00	Third vehicle departs for site.	Reg. I
1:00	Reg. I contacts MD Health Dept.	Reg. I
1:01	Stello calls Henry Myers. (Udall committee staff).	Incoming Log
1:12	SP calls VA Civil Defense.	SP Log
1:30	DOE advance party establishes command post at Capitol City Airport.	DOE Logs
2:00 ?	Vic Stello tells Greg Hitz that instruments could be showing the core is uncovered and NRC is concerned. Hitz relays to Unit 2.	IE-Int. TMI-147
2:15	ARMS helicopter arrives at site and begins tracking.	DOE Logs
2:30	Battelle Northwest Laboratories (BNL) RAP arrives Capitol City Airport; sampling begins.	DOE Logs

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
2:30 PM	Commissioner Gilinsky suggests to Case that we assign someone to think about what to do with the radioactive water inside the containment (i.e., the recovery plans). (01-222-6)	IRC transcripts
2:45	State liaison contacts Governor's office in Connecticut.	Reg. I
2:45	Jim Stone of DOE-EOC asks B. Weiss if we need additional assistance for fixed wing aircraft. Answer was no. (01-078-3)	IRC transcripts
2:53	Case informs Denton of Gilinsky's request for considering and forming a post accident recovery team. Denton has already discussed the idea with Stello and they concluded Vollmer would be best person to head it up - Plan is to have Vollmer put together team of 4 or 5 people to send to TM once the reactor is cold. (01-222-6)	IRC transcripts
2:53	Case tells Denton the reason why circulating pumps have not been run is that B&W advised them not to because they're afraid they'll blow out the seals. (01-222-6)	IRC transcripts
3:00	Proposed NRC Press release cleared with PA rad Health Dept.	SP Log
3:07	Case advises Vollmer of plan for recovery group and that Vollmer will probably be going up to the site in a day or so. (01-223-6)	IRC transcripts
3:37	Region people call to discuss political problems caused by the Regions inability (presumably prevented by HQ) to respond to news inquiries directly. (01-080-3)	IRC transcripts

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
3:45 PM	First formal preliminary notification report distributed by NRC.	PN 79-67
3:54	Joe Deal of DOE-EOC tells B. Weiss that DOE has turned on its ARAC outfit at Livermore Laboratory. (Computer system that predicts radiation levels based on meteorology and radiation source inputs). Deal tells Weiss that the DOE helicopter is up and flying and offers to give Weiss a telephone number for talking to the helicopter. Weiss takes number but says were letting the Region handle contacts with the helicopter. (01-848-19)	IRC transcripts
3:56	Mosely calls Grier to tell him IRC - HQ is having problems getting operational information from site - Grier says problem is we're not set up to communicate directly between the control rooms - and have to send people over to the Unit 2 control room to get and bring back information. Grier says he will establish a new procedure. (01-126 & 127-4)	IRC transcripts
4:00	Telephone briefing for Senate Subcommittee on Nuclear Regulation and Senator Heinz.	OCA
4:00	Gilinsky requests Davis to assure that measurement info NRC gets from DOE is furnished to the Pa. State people - to assure that NRC-ARMS-RAT and State info are coordinated. (01-225-6)	IRC transcripts
4:00 ?	Boyce Grier notifies Richard Keimig he is to go to site as senior IE/NRC person on site.	IE-Int. TMI-149
4:13	Comm. Gilinsky spoke to Nat Golkhaver, Office of Gov. of Pa.	Comm. Gilinsky's Telephone Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
4:14 PM	Stello asks Eisenhut to contact B&W concerning anomolous temperature reading and to come up with suggestions on ways for increasing the flow in the system to get rid of the steam bubble. (01-225-6)	IRC transcripts
4:18	ARAC at Livermore Lab calls NRC to transmit calculations done for J. Buffet - sending info by telefax. (01-849-19)	IRC transcripts
4:30	Gossick, Stello & Davis call Gilinsky and brief him on significant development with core. Stello tells him that 1) Core may not be covered, 2) We don't have enough information to decide what we would do (recommend), 3) We're relying on information for too many different channels, 4) Express concern that utility think through what they're going to do before they do it. 5) He spoke to Unit 1 shift supervisor and suggested that they ought to think if their instruments are properly recording, whether there's a possibility of a steam bubble and they ought to get B&W's judgements also. 6) Utility is absolutely in charge. (Gilinsky warns we have to be careful that utility doesn't start asking us what to do when. (01-226-6)	IRC transcripts
4:34	Three-way telephone connection established between TMI Unit II control room - Region 1 - and IRH at Hq. to permit Hq. conversation directly with TMI control room. (01-082-3)	IRC transcripts
4:44	Eisenhut discusses anomolous temperature with B&W. (01-225-6)	IRC transcripts
4:47	D. Thompson calls Grier to confirm who is senior NRC man at site, senior man for Met-Ed, senior NRC ops man at site. Senior NRC man at site is Gallina, senior NRC ops man is J. Higgins.	IRC transcripts

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
4:47 PM (cont'd)	Herbein is senior man for Met-Ed. Current plant superintendents for Unit 1 and Unit 2 are at site. NRC is in contact with them. (01-850-19)	IRC transcripts
5:00	Second press release issued.	PR 79-65
5:09	Case discusses plant status and radiation level criteria for determining if evacuation required with Senator Hart. Also explains that licensee determines course of action for plant operation under all circumstances - unless it gets to a point that we think we know enough here that we ought to tell them to do something. (01-227-6)	IRC transcripts
5:15	NRC mobile lab arrives at site.	Reg. I
6:00	Fourth Reg. I vehicle leaves for site.	Reg. I
6:37	DOE informs HQ IRC that Ed Patterson will be sent to TMI area as the DOE representative. He will coordinate Brookhaven and ARM's activities. NRC says this will help because were not getting all the information from Brookhaven, maybe because its filtered through the State. (01-470-11)	IRC transcripts
6:44	Ed Case tells Eddie <u> ?</u> that with respect to his discussion with Senator Hart about the possibility of overriding the licensee- that the licensee has taken a course of action that we're satisfied with - so the issue of overriding the licensee is no longer before us. (01-230-6)	IRC transcripts

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
7:08 PM	IRC call to Abraham, PA. officer of Region 1. Abraham advised that we (NRC) should not participate in any news conference by the company (licensee) - that NRC should stay in investigative mode. (01-135-4)	IRC transcripts
7:55	Call to PA Rad Health Dept (ARMS data shows count is up, status of BNL monitoring activities).	SP Log
6:15	PA Rad Health Dept acknowledges receipt of ARMS data and says they are keeping Governor informed.	SP Log
8:17	Reg I notified of decision to send NRR team to site; arrival expected next AM.	Reg. I Log
8:30	Fourth vehicle arrives on site.	Reg. I
8:30 - 9:45	NRC, State, RAP Team brief LT. Governor Scranton.	Reg. I
9:00	Reg I notified that Salem providing equipment.	Region I Log
9:00	R. Keimig arrives on site as senior IE/NRC person.	IE-Int. TMI-149
9:00	SP verifies (how?) that FAA has not been notified.	SP Log
9:08	Site inspectors informed by Grier that licensing is sending team of people headed by Dick Vollmer to site tomorrow (3/29), and their object is not to inspect but to handle any licensing actions that come up. (01-139-4)	IRC transcript
9:08	Confirmation that NRC mobile lab is at site and set up to operate is noted. (01-139-4)	IRC transcript

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Wednesday (cont'd)</u>		
9:08 PM	Grier notes that communication is greatly improved. (01-139-4)	IRC transcripts
10:00 - 11:00	Reg I participates in Lt. Governor's press conference.	Reg. I
✓11:00	Commissioner Kennedy calls IRC. Gossick informed him that things took a turn for the better insofar as the reactor is concerned around 9:00 PM. The plant bumped the main circulating pumps and the steam binding or air lock cleared up. The plant is now coming down in an orderly fashion. The main worry now is cleaning up the water transferred from the containment go the aux. bldg. pump that is responsible for the airborne releases (✓1/3 mr/hr over Harrisburg). (01-287-7)	IRC transcripts
✓11:00	Gossick informs Kennedy that one problem is that two NRC guys sent up to the site to pull together all this information got hauled off to brief the governor - and were not organized as well as we'd like to be in pulling together inputs from the ARMS airplane, the RAT team and our own team and the State people and getting the information down here. (01-287-7)	IRC transcripts

Thursday, March 29

AM

11:30 (PM) to 12:30 (AM)	Team briefs Governor Thornburgh.	Reg I
12:10	Press release by NRC: Plant temperatures & pressure continue to drop. Releases from water in the auxiliary building.	IRC transcript
12:15	Press Release	PR #79-66

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Thursday, (cont'd)</u>		
1:00 AM	SP notifies Defense Civil Preparedness Agency and reads press release.	SP Log
2:00	SP telephones PA Emergency Management Agency, reads press release.	SP Log
2:10	SP tries to telephone Health Center for Disease Control (Atlanta) (PA radiological Health says they will try again in morning).	SP Log
2:40	Doc Collins tells D.C./P.A. Region 2 that there is a problem with the bubble in the primary system. (02-102)	IRC transcript
2:45	Discussion between Weiss and person or DOE ARMS team regarding saturation of instruments near plant. ARMS person (shipman) tells Weiss plane equipment was for background measurement - so it saturated. Now has a regular geiger counter, a portable air sampler, and a portable sodium iodide scintillator that they are going to take up as well as the regular ARMS equipment. (02-438-11)	IRC transcript
7:00	Joe Fouchard & Dudley Thompson briefed Dan Ford (UCS) and Bob Pollard (UCS) by telephone. Pollard was on the TODAY Show at the moment.	IRC transcript
8:00	Release of 1 Ci/sec reported. Noted that detectors in the monitoring aircraft are saturated, unable to measure the activity. Ed Case to ? telling that NRR will send a team to site at 11:00 a.m.	IRC transcript
8:00	Someone reports to Mosely that NRC has a total of 11 people in the vicinity of the site. This includes those at the site and those sleeping. (02-401-10)	IRC transcript

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
Thursday, (cont'd)		
8:30 AM	Lee Gossick called Bob Minogue's office (reaching Ray Smith). Gossick stated his intention to recommend to the Chairman that Minogue lead the NRC Incident Investigation Review Committee (IIRC) per Manual Chapter 0502, Part 3. He estimated it would work for the month of May.	IRC transcript
8:30	SP calls H. Calley, EPA, to read press release and suggests he call Gerusky and offer assistant.	SP Log
9:00	John Villforth (BRH-HEW) ? calls Doc Collins for lengthy discussion. Concern expressed about possible need for evacuation because of m/hr releases adding up to 1 R or more.	IRC transcripts
9:00	Two additional vehicles (6 people) dispatched to site.	Reg I
9:30	Mark Nelson? of Lt. Gov. Scranton's office called back by Harold Denton. Denton told him there was fuel cladding damage, but not core or fuel melting. Radioactivity is outgassing from spilled water - mostly Xe-133. Nelson asked if small children should be kept indoors because of possible iodine release; Denton didn't think iodine should be the concern. Nelson asked about the elderly; Denton said the stress on them or the sick would be worse than the small exposure. (02-212-6)	IRC transcript
9:30	Food and Drug Administration calls and offers to have Baltimore Field Office provide assistance in looking at food pathways.	SP Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Thursday (cont'd)</u>		
9:30 AM	Commission briefed by Gossick, Eisenhut and Jordan at "H" Street.	
10:00	D. Thompson and E. Case to E. Fay (OCA) about problems in diverting NRC people at TMI site to provide transportation for Senator Hart's party. Also discussed need for Chmn. Hendire to request helicopter for Hart's entourage flight. (02-213-6)	IRC transcripts
10:09	Weiss ask Lafleur of IP to have someone come to IRC - to handle international cables - has one from Japan and expects more.	IRC transcripts
10:25	Issued.	PN-79-67A
10:30	Jerry Homan gives H. Denton a rundown on TMI operators qualifications and experience, saying this group is probably an industry leader. (02-214-6)	IRC transcript
11:00	SP tries to contact NY Bureau of Radiological Health (call completed at 12:17 pm).	SP Log
11:05	SP calls NJ Dept. of Health.	SP Log
11:15	Comm. Gilinsky spoke to Lt. Gov. Scranton of Pa.	Comm. Gilinsky's telephone log
11:30	Chairman Hendrie and NRC staff brief members of Subcommittee on Energy and Environment, other Members of Congress, and Congressional staff on status of incident.	OCA
11:45	SP calls Delaware Rad-Health Dept.	SP Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Thursday (cont'd)</u>		
12:00 (Approx)	NRR team (Vollmer +7) arrive on site; Strasma (Region III Public Affairs) on site.	
12:05 PM	SP returns call to Gov. Ray's (Washington) assistant.	SP Log
12:10	SP calls WV Rad Health contact.	SP Log
12:15	SP calls Va. Radiological Health (call finally completed at 1:15).	SP Log
12:30	Ed Case returns call to Gov. Dixy Lee Ray to brief her on TMI status. (02-218-6)	IRC transcript
12:00 - 1:00	Vehicles 6 and 7 on site (total IE personnel: 17).	Reg I
1:22	Weiss informed by Mike? that plant says they are willing to go into a 200 R/hr area and pull a primary system water sample if NRC can get it analyzed - sample will be ~10 curies per liter. Weiss tells him - if the plant needs the sample - promise them anything. (02-459-11)	IRC transcript
2:15	Congressional group (Hart, Udall, "Inz, et al.) arrive observation center; receive briefing.	Reg I
2:40	SP telephones Fish and Wildlife Service.	SP Log
3:00	Licensee pulls thermoluminescent dosimeters from 17 fixed positions located within a 15 mile radius of site. Dosimeters had been in place for three months and had been exposed for about 32 hours after incident. Only two dosimeters showed exposures above normal levels.	PN-79-67E
3:01	SP briefs (by phone) Md. Radiological Health on status of samples	SP Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Thursday (cont'd)</u>		
3:20 PM	State liaison contact with Vermont.	Reg I
3:15 - 6:30	NRC representatives are called to State Capital to brief Governor and Lt. Governor prior to Governor's 5:00 PM press conference.	Reg I
3:30	Senator Hart's airplane about to land at the airport near the site. (02-464-11)	
3:35	In response to inquiry from Minnesota Rad. Health, SP gives status briefing.	SP Log
4:50- 7:00	Multiple attempts to reach EPA:III concerning industrial awaste dumps; finally contacted at 7:00 p.m.	Reg I
5:00	Caller tells John Davis? that Stern-glass and two others recommend evacuation. John and ? prepare words to announce NRC sees no reason to evacuate. (02-227-6)	IRC transcript
5:30	Case and Mattson give status to Chairman Hendrie. Mattson describes hourly monitoring of in core TC's, still seeing superheat temperatures on some. Licensee is holding status quo because of bubble question and because reactor coolant is too hot for DHR. (02-228-6)	IRC transcript
5:30	Briefings provided by Met. Edison to Senator Schweiker, Congressmen Gooding (York), Mike McCormack; Waller (Lancaster), Weidler (L.I., NY).	Reg I Log
5:55	The Executive Management Team directs the licensee to stop dumping all water. RI notifies HQ that stopping the dumping will cause backing of water into the Turbine Building. (Late entry - the licensee has been dumping water to the river -- the water is within TS limits WRT contamination).	Reg I Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Thursday (cont'd)</u>		
6:00 PM	PA Rad Health says NRC can make decisions on rad. water dump without checking further with them.	Log???
6:00	NRC requests Met. Edison to terminate release of slightly contaminated industrial waste. Permission to resume release granted at 12:15 am and coordinated with State. State press release issued.	PN-67B
6:00	Primary coolant sample measured 1000 R/hr from a 100 ml. sample.	IRC Transcript
6:06	Boyce Grier talking to Morris Howard about discharge of water to the river. Boyce says he's talked to the plant manager and the discharge is stopped. Plant discharged 100,000 gallons. Boyce doesn't know exactly where its coming from - except that its from somewhere in the waste treatment system. Will find out where it comes from - i.e., how it gets to the waste treatment system. (02-421-10)	
6:10	Licensee notifies NRC that he is stopping the discharge.	Reg. I Log
6:33	Thompson asks Sniezek to get some information for Commissioner Bradford on radiation level at Yorkhaven and surrounding communities. (02-422-10)	
6:35	PA Rad Health calls back and asks NRC to hold river dump because of Governor's concern. SP provides update on ARMS data.	SP Log
7:05	Offer from DOE Emergency Assistance.	SP Log
8:00 - 8:30	Updated status reports to MD, WVA and US Bureau of Rad. Health.	SP Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Thursday (cont'd)</u>		
8:30 PM	Call to Governor's aide to inform of core damage.	Reg I
8:30	Reference to call to State of PA. (Dr. MacLeod, Secy. of Health) by Anthony Robbins of OHSA recommending evacuation to 1½ mile radius (@ 4:00 pm 3/29/79). (02-138)	IRC transcript
10:00	Tell Stello it looks like 10% of the core is in the primary coolant.	IRC transcript
10:05	PA Rad Health says "go" if NRC wants to have water dumped.	SP Log
10:12	Industrial Waste Discharge verified to be off.	Reg I Log
10:30	Case to Hendrie that calculation shows 10% of core inventory in the coolant, no discussion of evacuation, only of problem of dumping waste water from the Turbine Bldg. (02-334-6)	
11:00	Vic Stello ? and Karl Abraham? discuss status. Someone on site (Met-Ed?) says the fuel is damaged more than previously thought; cooldown will take much longer. They are expecting releases to continue much longer. Vic asks why since releases are from water on Aux. Bldg. floor. (02-239-6)	
<u>Friday, March 30</u>		
<u>AM</u>		
12:05	EMT asks IE/site to relay to Met. Ed that NRC says OK to release industrial waste. Notify NRC when release commences.	Reg I Log
2:06	Industrial Waste Tank overflowing onto ground.	Reg I Log
5:35	Fire in Unit One Aux. Building Basement - (picked up from intercom). Fire in ventilation system.	Reg I Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Friday (cont'd)</u>		
8:00 AM	Status report to EPA.	SP Log
8:20	Status report to FDA, Bureau of Radiological Health.	SP Log
8:30	Status report to Md. Rad Health.	SP Log
8:50	Call from FPA requesting status.	SP Log
9:00	Control room personnel (Unit 1) hear announcement that evacuation in a 10-mile radius around plant has been recommended by NRC.	Reg I
9:05	Onsite inspector calls Region to verify that the above was true. Were told recommendation was not official.	Reg. I
9:25	State notified of release; evacuation rumored; site does not plan to call for evacuation.	Reg I Log
9:15-10:10	SP calls PA Civil Defense re potential evacuation.	SP Log
9:50	Issued.	PN 79-67B
10:00	Some confusion exists because State evidently has recommended evacuation of Middletown (Doc. Collins). Plant/NRC has not recommended evacuation.	Reg I Log
10:25	Communication Lost with Unit 2 Control Room.	Reg I Log
10:30-10:45	State has advised residents within 10 miles to go inside and shut windows. NRC position remains: No evacuation/unnecessary to take any special precautions.	Reg I Log
10:47	Conference call between Gossick and Commissioners: decision to send Denton to site.	Cmrs. Tel. Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Friday (cont'd)</u>		
11:00 AM	Unit 1 Control Room becomes aware that an evacuation <u>was</u> suggested by Governor.	Reg I
11:40	Hendrie and Governor discuss evacuation.	Cmsr. Tel. Log
11:45	Release at 11:09 for about 15 secs.	Reg I Log
<u>PM</u>		
12:03	Chairman of NRC recommends that Governor of PA evacuate 5-mile radius.	Reg I Log
12:07	EPA, Region III advised of evacuation recommendation.	Reg I Log
12:30	The NRC evacuation recommendation is changed or is clarified as follows: pregnant women and preschool children in the 5 mi. radius should be evacuated. This recommendation to Gov. of PA - not public. Dr. Langford of EPA is notified of this change.	Reg I Log
1:00	Another conversation with FDAA re Governor's recommendation for President to call National Security Council meeting at 1:30.	SP Log
1:15 - 1:30	Calls to MD, Delaware, NY, NJ VA, WV Rad Health regarding Governor's recommendation.	SP Log
1:25	Hendrie conference at White House followed by 1:30 p.m. NSC meeting.	Cmsr. Tel. Log
1:30	Another vehicle (2 HPs) departs for site.	Reg I
2:00	Denton +12 arrive by helicopter at site:	Mossburg Gossick Notes
2:20	NRR Operations Center established at nearby residence; notifications to President Carter and Governor Thornburgh.	Mossburg Gossick Notes

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Friday (cont'd)</u>		
2:30 PM	Director and Branch Chief plus 2 HPs dispatched by helicopter.	Reg I
(About) 3:30	Wayne Kerr (OSP) +5 arrive at site to assist IE Health Physics.	Unverified
By this time, 83 NRC personnel are onsite and in vicinity (51 IE, 4 SP, 3 PA, 25 NRR).		
6:30	Press release "no imminent danger of core melt; technical experts (Denton, et al.) on site".	Press Release No. 79-67
8:45	(Madden) acting as Administrative Officer reports the following: <ul style="list-style-type: none">- Trailer, manned by NRR (Denton) and the White House Communications Group is now behind the Observation Center and wired for use.- Additional Trailer by 2145 will be wired with 6 telephones.- Boyce Grier is downtown in Harrisburg at a Press Conference w/Stello, Denton, Governor Thornburgh.- Air National Guard Unit at Harrisburg Int. Airport available for assistance.	Reg I Log
<u>Saturday, March 31</u>		
<u>AM</u>		
1:25	Coordinating meeting held at Capital City Airport (EPA, DOE, PA Dept. of Environmental Resources, FDA, NRC).	SP Log
3:50	Telephone call from Bettis, Radiological Assistance Team at Command Post at Capital City Airport; analytical equipment in airport hangar.	SP Log
6:00	Oak Ridge man believes he can use the Loose Parts Monitoring to tell the size of the bubble in the vessel	Reg I Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Saturday, March 31</u>		
6:25 AM	Call from PA Civil Defense; status update.	SP Log
About 9:00	Public Affairs Center activated at site; limited operation until April 1.	
About 8:30	Trailer moves just outside plant gate; NRR operations center in full force.	SP Log
9:17	Call from HEW asking what their role would be if evacuation necessary, NRC says PA Civil Defense has lead; status update.	SP Log
9:25	Call from Council on Environmental Quality (CEQ); status report	SP Log
9:20	Call from NY Rad Health Bureau; status report.	SP Log
10:00	Call from Defense Civil Preparedness Agency; status report.	SP Log
12:00 PM	Conversations with FDA-Bureau of 12:30 Radiological Health re supplies of potassium iodine.	SP Log -
2:00	PA Rad Health Dept. agrees to refer all calls relating to health matters to NRC.	SP Log
3:26	Commission meets in Bethesda at Operations Center.	Cmrs. Tel. Log
4:25	Hendrie and Governor confer via telephone on status.	Cmrs. Tel. Log
5:00	NRC informed that Governor, WV had activated State Radiological Assistance Team.	SP Log
<u>Sunday, April 1</u>		
10:45 AM	NRC representative (Stello?) at facility informed that sabotage attempt would be made during the night. FBI, PA State Police and licensee notified.	PN-67G

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Sunday, (cont'd)</u>		
1:30 AM	SP calls DOE Command Center (they do not know where EPA people are); also calls PA Rad. Health; EPA lab is next door but no one is there.	SP Log
8:13	SP calls PA Rad Health (DOE will collect all data and transmit results to NRC). Meeting scheduled at 8:30 to set up coordination.	SP Log
9:36	Contact established by Lubenau/Vaden at PA Rad. Health offices.	SP Log
11:00	NRC Personnel on site (65 I&E; 27 NRR, 5 others).	Reg I Log
	NRC establishes 37 thermoluminescent dosimeter (TLD) stations at distances from 1 to 12 miles from plant.	PN-67H
	All utilities with an operating B&W reactor are sent an NRC Bulletin to: (1) provide information on TMI-2 incident, (2) require a prompt review of their plant conditions, (3) take action to prevent such an incident. NRC inspectors are being sent to each licensed B&W reactor to provide increased inspection coverage.	PN-67H
2:15 - 2:27 PM	President Carter is onsite in Unit 2 Control Room.	Reg I Log
8:40	NRC calls DOE/DOC to request cleanup of AUX Building... General Public Utilities requested help.	Gossick Notes
<u>Monday April 2</u>		
<u>AM</u>		
3:35	Hq requests licensee to send sample of containment air (2330 sample) to Bettis.	Reg I Log

<u>Date/Time</u>	<u>Activity</u>	<u>Source</u>
<u>Monday (cont'd)</u>		
5:50 AM	Phone link drops out/HQ will try to re-establish conference call.	Reg I Log
6:25	Phone link re-established.	Reg I Log
<u>PM</u>		
Midnight	Denton briefs Governor of PA.	Gossick notes