

ORIGINAL

NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF:

THREE MILE ISLAND  
SPECIAL INTERVIEWS

DEPOSITION OF ORAN K. HENDERSON

Place - Harrisburg, Pennsylvania

Date - Thursday, 20 September 1979

Pages 1 - 86

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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In the Matter of:           :  
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THREE MILE ISLAND           :  
SPECIAL INTERVIEWS       :  
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INTERVIEW OF ORAN K. HENDERSON

Holiday Inn Town  
2nd and Chestnut Streets  
Harrisburg, Pennsylvania  
  
Thursday, 20 September 1979  
9:00 a.m.

APPEARANCES:

ROBERT CHIN, ESQ.  
MALCOLM L. ERNST  
FREDERICK HERR  
ROBERT SCHAMBERGER  
NRC Special Inquiry Group on TMI  
6935 Arlington Road  
Bethesda, Maryland

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WITNESS

EXAMINATION

Oran K. Henderson

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EXHIBIT

IDENTIFIED

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P R O C E E D I N G S

1  
2 Whereupon,

3 ORAN K. HENDERSON

4 was called as a witness and, having been first duly sworn,  
5 was examined and testified as follows:

6 MR. ERNST: State your full name and position for  
7 the record?

8 THE WITNESS: Oran K. Henderson, Director,  
9 Pennsylvania Emergency Management Agency, Commonwealth of  
10 Pennsylvania.

11 MR. CHIN: Colonel Henderson, I will show you a  
12 document, marked Exhibit 1, inviting your testimony this  
13 morning before the Nuclear Regulatory Agency Special  
14 Inquiry Group. Is this the document marked Exhibit 1?

15 THE WITNESS: Yes, I have that.

16 (Henderson Exhibit No. 1 identified.)

17 MR. CHIN: Do you understand the information  
18 contained in the letter concerning the inquiry and the  
19 fact that you may have an attorney present if you choose  
20 and that the information you provide today may eventually  
21 become public?

22 THE WITNESS: I do, and I do not elect to have  
23 an attorney present.

24 MR. CHIN: Thank you. I would like to note for  
25 the record that Colonel Henderson is not represented by

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counsel today.

Colonel, at any time during this interview you feel that you need a counsel or elect to have a counsel present, please advise me and we will adjourn this meeting so you can make the necessary arrangements. Is this procedure agreeable with you?

THE WITNESS: Yes.

MR. CHIN: Is this document, labeled Exhibit 2, with your name, Colonel Henderson, at the top, a resume you brought for this deposition?

THE WITNESS: That is correct. Except it doesn't have colonel at the top.

MR. CHIN: I see. It's marked Oran K. Henderson.  
(Henderson Exhibit No. 2 identified.)

MR. CHIN: Mr. Ernst?

EXAMINATION

BY MR. ERNST:

Q Colonel Henderson, what responsibility does PEMA have for assuring the existence of county and local plans and that such plans and staffing are adequate and plans capable of being implemented?

A PEMA, by law, has the responsibility to assist the counties within the Commonwealth of Pennsylvania to develop all risk/hazard plans. Under the PEMA Act, we have the authority to review these plans and to direct

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1 changes.

2 I would point out, however, that the PEMA Act is an  
3 act that came into being the 26th of November of 1978.  
4 Under our previous act, we did not have such authority.  
5 I would also point out that the staffing at the county  
6 level is the responsibility of the county elected officials  
7 and that the coordinator is directly responsible to the  
8 county commissioners and not to PEMA, except in a cooperative  
9 type of a manner.

10 Q As perhaps a point of clarification, when we  
11 are speaking of PEMA, as we did in the last minute or so,  
12 are you thinking of the element of PEMA of which you are  
13 director or the entirety of PEMA which includes the council?  
14 In other words, does your specific staff organization have  
15 the responsibility you described or the council as a whole?

16 A Well, I'm speaking of the agency necessarily,  
17 because I am the director of that agency. There is a council  
18 over the PEMA agency which is responsible for providing  
19 overall guidance and direction to the agency.

20 Q So your reply is with respect to your organization?

21 A Well, my reply as far as the authority, I'm  
22 referring to the act itself which directs each and every  
23 municipality within the Commonwealth of Pennsylvania  
24 to establish an emergency management organization, but it  
25 does not make any arrangements for the direct control of

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these subordinate agencies to either the council or the PEMA agency.

Q Your statement that PEMA reviews and may direct changes to emergency plans, that is your organization of which you are director?

A That is correct.

Q State law, as I guess you just pointed out, does require that each political subdivision establish an organization for civil defense and to develop plans in accordance with the state plan and program and to provide training. Were all local emergency coordinators within the 20-mile radius of TMI appointed at the time of TMI?

A All county emergency management coordinators, yes.

Q But not local?

A Not necessarily. We had -- I can't state the exact number of letters requesting appointment, something in the neighborhood of 80 to 100 throughout the Commonwealth in our hands or in process at the time of the TMI incident. So I am uncertain as to whether any of those were in the 20-mile area or not.

Q This 80 to 100 is the sum total of appointments or requests for appointments at that time?

A That is correct.

Q And is it correct that there are about 2200 such political subdivisions in the Commonwealth?

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1 A There's 2637 political subdivisions within the  
2 Commonwealth of Pennsylvania.

3 Q What local plans applicable to TMI were in effect  
4 at the time of TMI?

5 A The local plans were the county five-mile evacuation  
6 plans.

7 Q But no local plans -- I'm differentiating from the  
8 state, county, and local. There are no local plans?

9 A I understand that. As far as I am aware, there were  
10 no written local plans directly addressed to TMI.

11 Q There were county plans though?

12 A Correct.

13 Q And these were on file at PEMA, had been reviewed  
14 and commented upon by PEMA?

15 A They were on file at PEMA and reviewed. As to  
16 whether they had been commented upon or not, I rather doubt  
17 it. Under our old law, State Council Civil Defense Act of  
18 1951, there was no provision in that law for the state to  
19 compel any changes.

20 Q Who in your organization would be responsible for  
21 the review and comment of local plans -- of county plans?

22 A The person responsible for the filing of the plans  
23 and the maintenance of those plans is my operations  
24 section, headed by Dick Lamison L-a-m-i-s-o-n.

25 Q What was done during the TMI accident, that period

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of time of a week after the TMI accident, with regard to establishing adequate local plans?

A Immediately upon notification on the 23th of March that an incident had occurred at Three Mile Island, I did review the local -- the county plans that we had in our possession. We also requested the three affected counties at that particular time for them to also review their plans and to upgrade them as necessary.

On Friday, when the parameters for possible protective action were increased to ten miles, we immediately initiated action at our headquarters and at the county level to increase their planning out to a range of ten miles. When the information was given to us that it would be more prudent to have plans out to 20 miles, we then commenced a major revision, since none of the five-mile plans lent themselves to merely being extended out to 20 miles.

In all of the five-mile plans, each of the three affected counties could take care of their own people within their county boundaries. Generally, within the ten-mile area, they could, with some minor exceptions, the counties could do the same. However, when the protective action range had been increased to a distance of 20 miles, only two counties, Perry and Lebanon, were capable of housing any evacuees into their own counties. The other four counties would have needed extensive support from other counties for a total of

1 22 or 23 additional support counties to provide the kind of  
2 hosting facilities that would be required.

3 Q Is it fair to say then that the local planning  
4 for this was sort of done in conjunction with the preparation  
5 of the county plans at that time?

6 A Yes.

7 Q There were not discrete local plans being developed,  
8 they were under the auspices of a county plan?

9 A They were under the auspices of the county,  
10 and generally, the county emergency management coordinator  
11 and or the county commissioners brought in the local  
12 emergency management coordinators or the local elected  
13 officials from the various segments of the communities  
14 such as the chamber of commerce, the police, the fire  
15 representatives, and detailed the planning that was being  
16 done and the requirements that would be placed upon them.  
17 That is correct.

18 Q What is the current status of appointment of local  
19 coordinators?

20 A All local coordinators, from whom we have applica-  
21 tions from the elected officials for appointment, have been  
22 made with the exception of maybe 15 or 20 that might be  
23 in process through -- we have a procedure upon receipt of  
24 a request for appointment to process it through the  
25 Pennsylvania State Police for an agency background check

1 before we make recommendations to the governor for the  
2 appointment. So all local appointments have been made except  
3 for those that are in process.

4 Q When you say "all local" you mean the 2600?

5 A Well, I don't mean exactly the 2600. I mean more  
6 in the neighborhood of 2200, since we have approximately  
7 400 municipalities that because of their location or  
8 because of an agreement that they have entered into with  
9 either the county or another municipality, they do not,  
10 under our standards, require to have an independent  
11 coordinator.

12 Q So in essence, you have processed, since TMI,  
13 about 2100 appointments and recommendations to the governor?  
14 Thereabouts?

15 A No. That's our total. We experience about a ten  
16 percent turnover in local municipal directors each year,  
17 so we're talking about, say, 220 each year that we have to  
18 process for reappointment. At the time of TMI, approximately  
19 30 to 100 were in process and had not at that particular  
20 time been appointed.

21 Q Well, maybe we better go back on the record then.  
22 My first question was --

23 A I didn't realize we were off the record.

24 Q No, I mean go back in the record a little bit.  
25 I think I can resurrect my original question. My original

1 question was, how many local coordinators had been appointed  
2 at the time of TMI, and I thought you had responded that  
3 there were 80, 90, thereabouts, either appointed or in process.

4 A No. There are approximately 2200 local  
5 coordinators within the Commonwealth of Pennsylvania. These  
6 have all previously been appointed by former governors of the  
7 Commonwealth of Pennsylvania.

8 Q And you had 80 or so in process at the time for  
9 reappointment?

10 A 80 or so who were being replaced; that is correct.

11 Q I think that's an important clarification of the  
12 record. Thank you.

13 What legal or administrative measures were taken to  
14 insure that emergency planning at the county or local  
15 level was adequate and compatible to the state plan?  
16 I should say, had been taken, since you had no local plans  
17 at the time of TMI. We're interested in what measures  
18 have been taken to insure the development of adequate  
19 local plans since TMI?

20 A Well, under our organizational arrangement,  
21 the state is responsible for the county, the county is  
22 responsible for the local government. We do not, at the  
23 state level, work directly with local government in the  
24 development of plans. We assist the county government  
25 where they request that assistance in the development of

1 plans or the providing of training to local directors. But  
2 basically, by law, the training of local directors is the  
3 responsibility of the county coordinators.

4 We conduct, on a regular basis, training seminars  
5 designed to improve the professionalism of the county  
6 emergency management coordinator and his staff in the planning  
7 and to make them more effective managers for disasters.

8 This is an ongoing program.

9 Q But PEMA has no responsibility or authority for  
10 the review and comment on local plans?

11 A That is correct.

12 Q That is a county function?

13 A That is correct.

14 Q What funding for equipment and people is present  
15 for civil defense at the county and local levels?

16 A It varies at each county from zero monies in  
17 Green county to several hundred thousand dollars in other,  
18 in the more highly-populated counties.

19 At the local level, I know within the Commonwealth of  
20 only nine boroughs or townships that provide any funding  
21 for civil defense or emergency management.

22 Q And that includes predominantly state funding or  
23 predominantly federal?

24 A Predominantly local funding matched with some  
25 federal funding.

1 Q Do you have a so-called emergency operation center  
2 that's located in your headquarters?

3 A Yes.

4 Q What is the equipment and staffing at that center for  
5 a response like TMI?

6 A We have our own staff which numbers at our central  
7 headquarters here approximately 45 people. We have three  
8 area headquarters that also have underground protected  
9 facilities, and I have five personnel in each of those.

10 We also maintain a warehouse at Fort Indiantown Gap,  
11 and a radiological instrument shop at Fort Indiantown  
12 Gap. During periods of emergency, we have what we term  
13 "a response team mechanism" wherein each of the 15 or 16  
14 state agencies plus volunteer organizations such as the  
15 Mennonites and the American Red Cross send representatives  
16 to our emergency operations center.

17 We conduct quarterly training excercises with these  
18 response team members to keep them familiar with our  
19 operational procedures. They, in turn, have the authority  
20 from their respective secretaries to act for and on behalf  
21 of that secretary and to commit resources of that  
22 department in support of the state's response to the  
23 particular disaster or emergency.

24 We have approximately 100 telephone lines coming into  
25 our agency. We have another 100 telephone lines that are

1 in reserve, need only to hook a telephone on the end of them.  
2 We have a teletypewriter communications system, dedicated  
3 teletypewriter communications system, that ties together  
4 our office with our three area headquarters and with all 67  
5 counties. It is also tied into the Defense Civil Preparedness  
6 Agency at Olney, Maryland, and it is tied into the National  
7 Weather Service in Harrisburg.

8 We have a radio capability which we share with the  
9 Pennsylvania Game Commission that ties our headquarters  
10 with our three area headquarters. We have approximately  
11 110 to 115 portable radios available in our emergency  
12 operations center. We have an emergency communications  
13 van that has the capability of interfacing with all of the  
14 various communications means used by other agencies of the  
15 Commonwealth which we can crosspatch one to the other if  
16 the need arises.

17 Q These telephone lines, are any of them dedicated,  
18 or do they all go through a switchboard?

19 A Only eight lines go through the switchboard. The  
20 other lines bypass the switchboard. At the time of TMI,  
21 we installed six dedicated lines, one to each of the risk  
22 counties.

23 Q The 92 lines or whatever that do not go through a  
24 switchboard, where do they go?

25 A Each of our response teams' members, each state

1 agency has its own emergency telephone number. During  
2 periods of activation of our emergency operations center,  
3 the response team member from the state agency is required  
4 to flick a switch on his desk in his normal office, and the  
5 phone starts ringing then down in our EOC. This is  
6 one of the lines.

7 He also has, each agency also has a telephone line that  
8 functions through our switchboard. And he has a third  
9 telephone which is independent of the switchboard and  
10 independent of this emergency number that he always has  
11 direct access to for outside calls. That number is not  
12 published. The only number that is published is the  
13 number that goes through our switchboard, plus the agency  
14 emergency number.

15 Q Then all hundred of these lines go through an  
16 exchange, might not go through your switchboard, but go  
17 through an exchange?

18 A That's correct.

19 Q None of these are dedicated lines?

20 A That's correct, none of them are dedicated.

21 Q I understand.

22 A Now, also, I have a direct line to the governor's  
23 switchboard from my desk which is, in effect, a dedicated  
24 line. It is only used for emergency purposes. I also have  
25 a similar line to the lieutenant governor's office.



1           Additionally, we have the DCPAs or NAWAS, National  
2 Warning System telephone hookup, into our agency.

3           Q           What role does PEMA play in coordinating out-of-state  
4 responses such as DCPA and FDAA?

5           A           Well, we are the principal agency for interfacing  
6 Defense Civil Preparedness Agency; and in times of disaster,  
7 with the FDAA, under a presidential-declared disaster.  
8 I am also, by law, the state coordinating officer, so  
9 I would interface directly with the federal coordinating  
10 officer following a presidential declaration and the  
11 appointment of a federal coordinating officer.

12          Q           Then you or your office was the principal state  
13 coordinating group with these federal agencies during TMI?

14          A           That is correct.

15          Q           According to the state law, there is a provision  
16 that states that the council may delegate authority to the  
17 director in the areas of -- whatever authorities they choose  
18 to, in the area of fiscal planning, administrative, opera-  
19 tional and other duties. What authorities have been delegated  
20 to you as director of PEMA by the council?

21          A           I would disagree with your interpretation of the  
22 law. It is my recollection that the law states that the  
23 council will hire a director who will have the overall  
24 responsibility for the administration, fiscal planning,  
25 training, et cetera, of the agency.

1 (Pause.)

2 THE WITNESS: Well, after having reviewed that, I  
3 do agree with you that it appears that the council is  
4 charged in the act with assigning certain specific  
5 responsibilities. I have no record that would indicate  
6 that the council specifically charged me with anything  
7 except the total mission of the agency which I have assumed  
8 all along under the previous administration as well as this  
9 administration.

10 MR. ERNST: Off the record, please.

11 (Discussion off the record.)

12 MR. ERNST: Back on the record.

13 BY MR. ERNST:

14 Q After the TMI accident, when were Pennsylvania  
15 Emergency Management Council meetings held?

16 A We held the first and only council meeting  
17 on Friday afternoon, the 30th of March, at approximately  
18 1300 hours. As required by law, the chairman must call  
19 the council into session within 48 hours following a  
20 disaster.

21 Q How long did this council meeting last?

22 A Approximately 45 minutes.

23 Q And do you recollect what was discussed at the  
24 meeting, or what was decided?

25 A Basically, the lieutenant governor gave a

1 recap of his understanding of the incident at Three Mile  
2 Island. Each of the council members then gave a report  
3 of what their agency was involved in in relation to Three  
4 Mile Island. I then gave a recap of what I expected from  
5 each agency as far as their response team membership was  
6 concerned.

7 Q The lieutenant governor is the designated head  
8 of the council, chairman of the council?

9 A He is the chairman of the council, appointed by  
10 the governor in late January of 1979.

11 Q Were any charges of responsibility made by  
12 the lieutenant governor to any of the agencies including  
13 yourself?

14 A I cannot recall of any specific direction.

15 Q The state emergency plan appears to specify  
16 different radiological responsibilities for PEMA for  
17 nuclear bomb, fallout, or war, as opposed to nuclear power  
18 plant accidents. Why is this?

19 A Prior to the TMI incident, the responsibility for  
20 planning or response to a fixed nuclear incident was the  
21 responsibility of our bureau of radiation detection, DER,  
22 the Department of Environmental Resources. The  
23 Pennsylvania Emergency Management Agency and its predecessor  
24 organization, the State Council of Civil Defense, has,  
25 through the years, received approximately 50 percent of its

1 funding from the Defense Civil Preparedness Agency which  
2 is a Department of Defense agency. And as a consequence,  
3 the thrust of our earlier programs has always been  
4 enemy-attack related.

5 It was only in the, perhaps, late 60s or early 70s that  
6 we began taking an increased interest and role in natural  
7 disasters, although we had participated in the late 50s in  
8 the natural disaster scene. It was always an annual  
9 debate with the Defense Civil Preparedness Agency as to  
10 how far we could legally go utilizing DCPA funds to prepare  
11 ourselves for the natural man-made kinds of disasters.

12 Approximately two years ago, the director of the  
13 Defense Civil Preparedness Agency issued for the first time  
14 a policy statement which authorized the states to utilize  
15 Defense Civil Preparedness Agency funds for plans and programs  
16 associated with emergencies of a non-war nature.

17 Q Did you at that time then pick up responsibility  
18 for fixed facilities from DER or some -- let me go back.  
19 As I understand it, you had very little to do with fixed  
20 facilities before, then you picked up some responsibilities  
21 in communications and resources, areas like that. But  
22 DER still has a large responsibility in assessment of  
23 radiological hazard. Is that true? Did you pick up some  
24 responsibility for fixed facilities a couple of years ago, but  
25 clearly not all?

1           A           A couple of years ago, when we issued -- which  
2 would have been in August or September of 1977 -- our  
3 present state disaster and operations plan, we recognized a  
4 void in the response planning for fixed nuclear sites.  
5 At that time, DER was working and had been working on a  
6 statewide plan.

7           In the absence of an approved plan, we, PEMA, arbitrarily  
8 published Annex E as a stopgap measure to our operations  
9 plan, believing that eventually DER would come up with  
10 a total response packet. Simultaneously, we, perhaps  
11 recognizing something of a shortcoming in this area,  
12 entered into an agreement between myself and the  
13 secretary of the Department of Environmental Resources,  
14 outlining our responsibilities.

15           This agreement basically provided that DER would  
16 continue to be the lead agency in fixed site planning. It  
17 was only after the 28th of March that PEMA reassumed,  
18 with the council's concurrence, the responsibility for  
19 fixed nuclear site planning.

20           Q           Do you think the current arrangements are  
21 adequate operationally?

22           A           Are you speaking of the current arrangements  
23 between DER and ourselves?

24           Q           Under the 1977 emergency plan where there is  
25 responsibility in DER for assessment, radiological assessment,

1 and you are responsible, as I understand it, for  
2 communications and resources and other types of protective  
3 measures?

4 A Well, yes, the arrangement is satisfactory.  
5 I don't believe that either the Bureau of Radiation  
6 Protection nor the Pennsylvania Emergency Management Agency  
7 is adequately funded or staffed to do what now appears to  
8 be the job that needs to be done.

9 Q It seems that the public law of last year in  
10 the emergency planning area does not recognize a difference  
11 between radiological catastrophes from warfare as compared  
12 to fixed facilities. Is this true that PEMA could  
13 be construed to have the same responsibilities for both types  
14 of radiological occurrences under state law?

15 A Well, it is my translation of the law that we  
16 have total responsibility for all disaster response planning  
17 or for planning and response, whether it be from natural  
18 disasters, man-made disasters, and or enemy attack. We also  
19 have a provision in our law that we may not duplicate the  
20 functions or activities of any other state agency. Therefore,  
21 not only legally -- well, therefore, legally, we must  
22 function through other state agencies. And ours is a  
23 coordinating role.

24 Q So you are still maintaining the coordinating  
25 role under your agreement or memo of understanding with DER

1 on those shared responsibilities?

2 A Well, the memorandum of understanding is basically  
3 no longer -- although it is still, the instrument is still  
4 in effect. At our last council meeting, which -- it was  
5 either April or May; I can't recall the date of it --  
6 we informed the council of our proposed course action.  
7 And the council concurred in this action to reassume full  
8 responsibility for the response plan, for the planning  
9 for response to fixed nuclear sites.

10 So this, in effect, negates the agreement between myself and  
11 the secretary of DER.

12 Q This then will require a change in the state  
13 plan of 1977?

14 A Absolutely.

15 Q The State Disaster Operations Plan of 1977  
16 states that direction and control of state emergency  
17 operations will be exercised by the state director of  
18 civil defense, which is now PEMA. Also it states that  
19 centralized direction, control, and coordination of  
20 major emergency operations will be effected through the  
21 state emergency operations center.

22 It would appear that these words are somewhat different  
23 than the words that I've been hearing in the past that  
24 PEMA's function is mainly coordination. Could you explain  
25 a little more?

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A Under the philosophy of emergency management within the Commonwealth of Pennsylvania, each municipality is required to commit all available resources to the emergency and then to call upon the next higher level of government, which would be county, to augment those resources and to meet any unmet needs.

When the county resources have been exhausted, then the county comes to our area headquarters and our area headquarters then uses the resources of other counties and government agencies within that area. When those resources have been used or as many of them committed as can, then the area comes to state and the state applies the total resources of the state. And then, in turn, we go to the federal government for our further unmet needs.

Also, it is stated in law that when two or more municipalities or instruments of government are involved in a disaster, the next higher level assumes the coordination role; though a disaster applicable to one county would be generally handled within one county. Where it crosses county boundaries, it would be coordinated through one of my areas or of the state, and simultaneously.

And if it involved two or more areas, it would be coordinated by state. We basically have no resources except for a small engineering stockpile at Fort Indiantown Gap. We have a half a dozen stockpiles of



1 equipment throughout the Commonwealth such as sand bags,  
2 steel pipe, some pumps and generators. These are the  
3 only resources that are actually physically in the hands  
4 of the Pennsylvania Emergency Management Agency.

5 We coordinate, during periods of declared emergencies,  
6 whether it be state or federal, the application of all  
7 resources of the state government towards that disaster.

8 Does that address the --

9 Q Somewhat. I guess I was keying more on the  
10 words "direction" and "coordination" as separate words in  
11 the plan.

12 Who is in charge of a multicounty emergency response?  
13 Who says, Jump?

14 A Following a presidential-declared disaster, the  
15 governor has the authority to appoint a state coordinating  
16 officer. Under our law, the director of the Pennsylvania  
17 Emergency Management Agency is, by law, the state  
18 coordinating officer. The duties of the state coordinating  
19 officer are spelled out in the federal legislation as well  
20 as those of the federal coordinating officer.

21 And under the strict interpretation of the law, the  
22 federal coordinating officer has the full authority to  
23 commit all of the resources of the federal government, and  
24 the state coordinating officer has the authority to commit  
25 all of the resources of state government.

1           Now, in many disasters in which a declaration of  
2 disaster is not made either by the state or by federal  
3 government, the application of resources and the control and  
4 direction are more on a cooperative undertaking. But in  
5 times of declared disaster, I feel that I exercise the  
6 authority that the governor would give to me at that time.  
7 The governor remains ultimately responsible for the health,  
8 safety, and well-being of the citizens of the Commonwealth.

9           At the time of a disaster, any policy guidance or direction  
10 coming through the governor to me as the state coordinating  
11 officer, and at that point, I could direct and compel,  
12 to the degree of the authority given to me, the response  
13 of the state.

14           Q       Let me see if I can describe it, and then we will  
15 proceed. The council has authority to direct in the  
16 case of a declared emergency, and you feel that in that  
17 situation, the council or the governor would designate you  
18 as the acting agent for directing these activities?

19           A       By law, I am appointed as the state coordinating  
20 officer. I am also the adviser to the lieutenant governor  
21 on emergency matters. Now, it seems reasonable, it  
22 has in the past been the policy of previous governors that  
23 during an emergency, either the governor or the lieutenant  
24 governor go to the scene and remain there for a day or two.  
25 After a day or two, normally, they go on with the business

1 of government and leave myself there as the continuity with  
2 myself giving daily or hourly reports to the governor and  
3 the lieutenant governor on the progress that is being made.

4 Q Was a disaster emergency, as defined by public  
5 law, ever proclaimed by the governor with regard to TMI?

6 A No.

7 Q Did the lack of such action affect, in any  
8 substantial way, the operational responsibilities assigned  
9 to PEMA and to others by state law?

10 A I would say, no, except to the degree that we were,  
11 that when an emergency is declared by the governor or by  
12 the president, there are certain federal fundings that are  
13 made available and state fundings that are made available.  
14 And recognizing that there was no declared disaster, that  
15 the extraordinary expenses that we were incurring in overtime  
16 and so forth, we were, or I personally was eminently aware  
17 that I would probably be required to eat these expenses  
18 further down the road.

19 And I acted very cautiously in the incurring of any  
20 expenses. And that would have been the only limitation  
21 that I felt in this instant.

22 Q Would this have been a substantial impairment  
23 of response, the fiscal awareness?

24 A Being a relatively small agency, such as we are,  
25 with 75 percent of our total budget going for salaries, 15

1 percent of it going for fixed costs such as rentals,  
2 communications, it's ongoing, and having something in the  
3 neighborhood of two or three percent of our budget available  
4 to us for flexibility, if you will, this is always a concern  
5 of mine. And particularly, it is a concern when you start  
6 reaching the end of the fiscal year, which we were rapidly  
7 approaching.

8 But as far as the overtime and the expenses that we did  
9 incur, I know of nothing that I failed to do because of  
10 cost, although I was very cautious of those costs.

11 Q Are you aware of the Dauphin County Emergency  
12 Preparedness Plan, dated April 6, 1979, signed by Kevin Molloy  
13 and John Minnich M-i-n-n-i-c-h?

14 A Yes, I am aware of that plan.

15 Q Was this plan and or other county plans reviewed,  
16 commented on, or concurred in by PEMA and coordinated  
17 between counties by PEMA?

18 A To some degree, during the preparation of the  
19 plan following the Friday, 29th of March, I had representation  
20 in each of the six risk counties. And I had assistance  
21 from two additional personnel in four of the counties that  
22 were loaned to me by the Defense Civil Preparedness Agency.  
23 I also sent representatives of the state government,  
24 Department of Health, Department of State Police, and the  
25 Department of Transportation, to the counties during that

1 weekend -- Friday, Saturday, and Sunday -- to insure that  
2 the plans were coordinated.

3 Now, this was before the plans were reduced to writing.  
4 This was in the planning development phase.

5 Q To carry that one step further though, the plan  
6 that is now in writing, was that concurred in by PEMA?

7 A No, that plan has not been approved by PEMA.

8 Q Do you know, based on review, whether it is  
9 consistent with the state plan and other county plans?

10 A I know of no major problem areas except --  
11 and I'm not sure if that one has been resolved -- the use  
12 of the 11/15 bypass. However, we are in the present  
13 stage of issuing our own state plan which is a draft update  
14 of Annex E which clarifies these route assignments.

15 Q Who in your organization was responsible for  
16 working with the county plans, updating and perhaps the  
17 review of the Dauphin County plan that I mentioned before?

18 A Well, I had two people down at Dauphin County  
19 from my own office during the TMI incident. I had a  
20 Ben Towsey T-o-w-s-e-y and a Jack Glouner, who were there,  
21 not reviewing the plan, but carrying the state guidance to the  
22 counties for the development of the plan and rolling up  
23 their sleeves and pitching in to assist the county in the  
24 development of a 20-mile evacuation plan.

25 As far as a formal review as required under our law, no

1 such formal review has been conducted as of this time. And  
2 the reason for that is that our guidance to the counties,  
3 as disseminated through our Annex E, is inadequate.

4 Q Did someone in your organization coordinate the  
5 overall update of county plans? Was this an operational  
6 assignment --

7 A Going on at the present time?

8 Q At the time of TMI, the first week, say, the  
9 first few days to a week of TMI?

10 A Yes. I asked my person in charge of the  
11 crisis relocation planning to be my coordinating agent  
12 to assist the affected counties in their planning sequence.

13 Q Who was this?

14 A Charles Crowe C-r-o-w-e. And he's continuing with  
15 this mission at the present time.

16 Q In your opinion, do you view a plan such as  
17 that Dauphin County plan as being an ad hoc plan applicable  
18 to the circumstances that existed at TMI, or do you  
19 consider it to be the kind of plan, detailed plan that  
20 has a continuing function in emergency planning? Is it  
21 a living document?

22 A No. I do not consider that any of the plans  
23 developed in the haste of the moment of the TMI incident  
24 would meet my requirements for the plan that I conceive.  
25 But at the same time, I have had enough experience within

1 the Commonwealth of Pennsylvania in treating with other  
2 kinds of disasters to recognize that the details of a plan  
3 do not necessarily represent the actions that the counties  
4 and municipalities take at the time of a disaster. The  
5 planning has a very important place in getting people to  
6 think of the problems and trying to resolve issues of the  
7 problems, but when it comes down to the actual disaster,  
8 that the county commissioners and elected officials roll  
9 up their sleeves and do the job.

10 Q It appears that some form of what you might  
11 call a command center was established in the governor's  
12 office during TMI. Are you aware of this, or is  
13 this how you would describe it?

14 A Well, I don't know that I would describe it  
15 as a command center. But certainly, the governor assumed  
16 his full obligation as the single authority for  
17 the TMI incident and exercised his powers from his office;  
18 that is correct.

19 Q What was -- who were the principal advisers to the  
20 governor during this time of crisis?

21 A Harold Denton and Lieutenant Governor Scranton.

22 Q Are you aware of any other groups that were asked  
23 by the governor or his immediate advisers to assess the  
24 adequacy of state or local emergency plans and or the  
25 actual state for emergency readiness?

1           A           The lieutenant governor asked the federal represen-  
2           tative, Bob Adamcik, to independently view the county plans  
3           and to provide him an assessment of the adequacy of those  
4           plans. I also understand, indirectly, that the governor  
5           established an ad hoc committee, headed by Mr. Wilburn,  
6           Secretary Wilburn, to review some aspect of emergency  
7           planning; but I am uncertain as to exactly what that  
8           mission was.

9           Q           Dr. Wilburn didn't work with you directly?

10          A           I met Mr. Wilburn about noon on Saturday, the 31st  
11          of March, and he had been in the office for a couple hours  
12          before I arrived in the office and had been talking to my  
13          deputy. At that time, I did not understand that he was  
14          making any kind of an assessment. A day or two later,  
15          just outside the governor's office, Dr. Wilburn and  
16          a John Pearce from the lieutenant governor's office, and  
17          the governor's plans -- I'm not certain of the exact title,  
18          but the person in charge of his planning office, state  
19          planning; I can't think of his name, asked me to stop by  
20          an office there.

21                    And I spent approximately 15 or 20 minutes with them  
22          describing how the counties would utilize the school buses.  
23          And at that time, I became aware that there was such an  
24          ad hoc committee making some review of something, but I  
25          am uncertain even today as to what their mission might have



1           been.

2           Q           Are you aware of any recommended changes or comments  
3 or something by any of the other groups that were taking a  
4 concurrent look at emergency plans?

5           A           No.

6           Q           Did Mr. Adamcik, to your knowledge, make any  
7 suggested changes or discuss emergency planning with you  
8 personally?

9           A           No. It is my understanding that Mr. Adamcik  
10 relied on John McConnell, from the Defense Civil Preparedness  
11 Agency, to visit some of the counties and to review the  
12 adequacy of those plans. And it is my understanding that  
13 their report to the lieutenant governor was generally that  
14 they considered the plans adequate.

15          Q           This is a review of the, you might say, a pragmatic  
16 review of an operational readiness rather than a  
17 paper review of plans?

18          A           That's correct, because there was very little  
19 in writing at the time they were conducting these reviews.

20          Q           Are you aware that the White House was also asked  
21 to review the status or adequacy of emergency plans?

22          A           Through the Kemeny Commission?

23          Q           No, the White House?

24          A           No, I am not aware of that.

25          Q           Who was your principal official contact in the

1 governor's office during this week's period?

2 A The governor.

3 Q There are a number of meetings that took place  
4 after about Friday, March 30th. Denton was in town, briefed  
5 the governor quite frequently. There were scheduled  
6 governor's news conferences and, I guess, meetings with  
7 the lieutenant governor and a large number of meetings of  
8 this nature. Were you or a representative of PEMA, your  
9 staff, present at most or all of these types of meetings?

10 A On Friday, yes; on Saturday, yes; on Sunday, yes;  
11 either myself or my deputy was present each time Denton  
12 reported to the governor. The following week sometime,  
13 I stopped going to the meetings or sending any  
14 representation to the meetings.

15 Q Were you also present then at the subsequent  
16 press briefings held by the governor? This is after the  
17 governor's meetings on Friday, Saturday, Sunday?

18 A I did on Friday and Saturday, but it got to be  
19 too time-consuming. And usually, then after the  
20 Denton/governor meeting, I would bug out and return to my  
21 office.

22 Q Were you present in a meeting at the governor's  
23 office on Sunday, April 1st, at roughly 4:00 or 4:30 in  
24 the afternoon, where there was a briefing that included  
25 Adamcik regarding an evacuation radius of potassium iodide

1 and the general preparedness?

2 A Yes.

3 Q And was this the meeting that the governor asked  
4 Mr. Adamcik to take a look at the existing status of the  
5 plans and preparedness?

6 A No. He had been asked prior to this time.

7 Q In emergency preparedness, how much does PEMA  
8 rely on the national guard?

9 A My own philosophy, that we rely on the national  
10 guard only as a supplemental organization, that we are  
11 very cautious in plans relating to the national guard,  
12 because we recognize that the national guard is not always  
13 going to be available.

14 Q Who then would you principally rely upon to  
15 provide the necessary response services?

16 A We rely upon, or course, the volunteer organizations,  
17 the fire departments, ambulance departments, police  
18 departments, the state police, and any other resource  
19 available to us. And the national guard then are  
20 supplemental to all else or to these. And when these  
21 resources can no longer do the job, then we have provisions  
22 for a national guard.

23 Q There apparently were newspaper stories or at  
24 least a story implying that the guard might not be ordered  
25 into areas of dangerous levels of radiation and statements

1 that the guard did not have suitable low-level dosimeters.  
2 Therefore, guardsmen might decide not to go into questionable  
3 or, perhaps, dangerous areas.

4 A We had no plans for sending anybody into areas of  
5 high-level radiation. As far as dosimeters were concerned,  
6 we had adequate dosimeters. We had 7,500 available to us  
7 which we requested from DCPA on Friday and were delivered  
8 on Friday. We did not issue all of these out. We had  
9 plans to -- some were issued to the guard in storage but  
10 not actually to the individual guardsman.

11 Q When you say you would not send people into  
12 high levels of radiation, would you be more specific as  
13 to what you mean by high level of radiation?

14 A Well, I'm using the term that you used. You  
15 brought it up first. If it is such a high level that we  
16 must evacuate people from that area, then once the people  
17 are evacuated, I certainly wouldn't send a security force  
18 into that area that is receiving a high level of  
19 radiation. Now, I base the recommendations or I  
20 receive my recommendations as far as what is a safe level  
21 and what isn't a safe level on the advice given to me by  
22 our Bureau of Radiation Protection, based on the incident  
23 at the time.

24 Any plans of ours to establish a security line outside  
25 the evacuated area would certainly be far enough from the area

1 to be in what we would hope to be a low level of radiation.

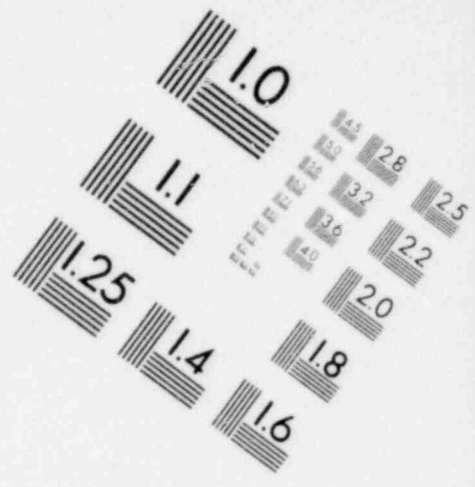
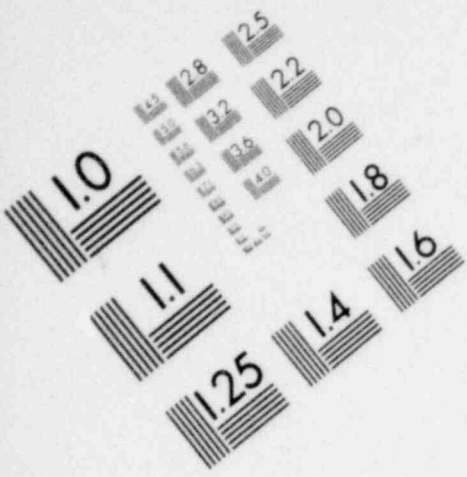
2 Q Well, speaking less of a security force than I  
3 was the force necessary to evacuate, and the thrust of the  
4 question was, what levels of radiation would you anticipate  
5 that emergency response forces would go in and assist the  
6 evacuation as opposed to deciding to stay out and let  
7 the people fend for themselves?

8 A None of our plans, either at the county level or  
9 at the state level, charge the national guard with the  
10 actual conduct of the evacuation. This is the responsibility  
11 of county and local government. The Pennsylvania State  
12 Police and the Pennsylvania National Guard have a supporting  
13 role to assist, by means of transportation, helicopter,  
14 and ground means, trucks, to evacuate any of the people that  
15 the local government cannot take care of.

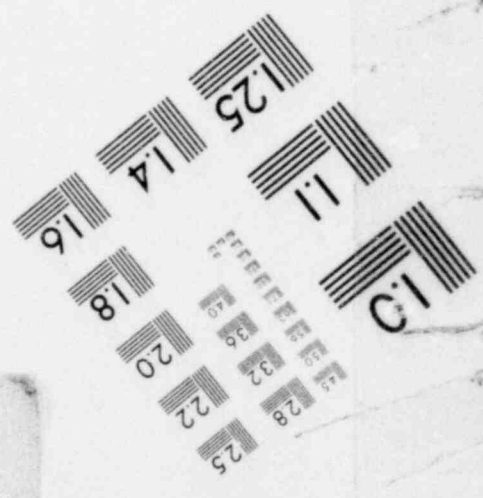
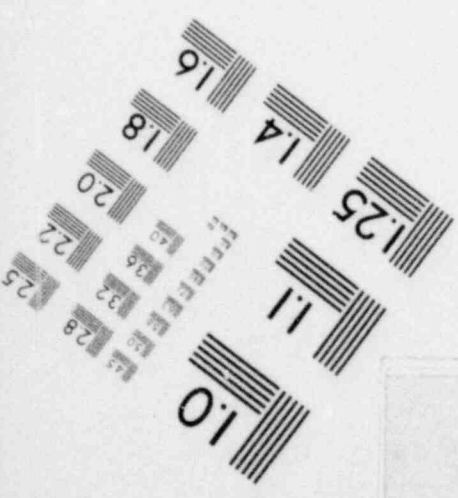
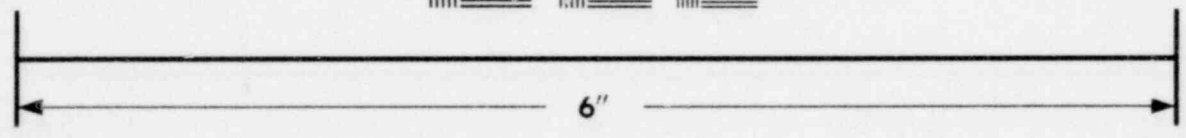
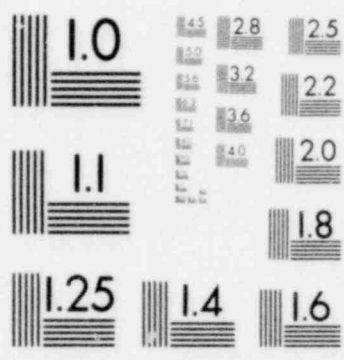
16 So our plan does not provide that at the time of an  
17 incident we send thousands of policemen or national guard  
18 down into the area to execute the evacuation. The evacuation  
19 is executed by local government. And where the local  
20 government needs help, then we would dispatch national guard  
21 or state police to augment the local government efforts.

22 Q In the case of the plans developed specifically for  
23 the TMI accident, what reliance was being placed on the  
24 national guard?

25 A We had arranged that the national guard would have



**IMAGE EVALUATION  
TEST TARGET (MT-3)**



1 one battalion in support of each of five counties and a  
2 backup battalion prepared to assist each of the five counties,  
3 with Cumberland and Perry County being handled by one  
4 battalion. Perry County has a very small segment in it.

5 But the actual warning of the citizens and the initial  
6 evacuations were still a responsibility of county and  
7 local government. The national guard, for the most part,  
8 would be used in its security role and by providing  
9 transportation to assist in the evacuation.

10 Q What guideline or criteria exists that would say  
11 radiation levels have exceeded this amount in terms of  
12 hour-per-hour; therefore, guardsmen or state police even  
13 will not go into that area and assist the locals in their  
14 evacuation?

15 A Well, except for the five roentgens per hour  
16 that is listed in our appendix to Annex E, that is the  
17 only guidance that we have. We are dependent entirely  
18 upon the Bureau of Radiation Protection guidance to us  
19 at the time as to whether it is safe to go into the area or  
20 would not be safe to go into the area.

21 Q Would you anticipate that this guidance would be  
22 similar for a fixed facility emergency compared to atomic  
23 warfare?

24 A I don't believe I understand the relationship.

25 Q Well, I would anticipate, in the case of a

1 nonfixed facility accident or occurrence, that these same  
2 guardsmen or state police would be called upon to perform  
3 some kind of emergency function and would be operating  
4 under some guideline with regard to exposure.

5 A Well, under an enemy-attack scenario, we have no  
6 guardsmen. The guardsmen have a federal mission, and our  
7 plans would not provide for the utilization of the guardsmen  
8 unless there are guardsmen or federal troops that might be  
9 assigned to the state. But for the most part, these people  
10 would have an independent role of support, but they would  
11 be under the direction and authority of the -- I don't  
12 recall the name of the, what the federal government calls  
13 the commander designated to command all reserve national  
14 guard, federalized guard forces in the Commonwealth of  
15 Pennsylvania -- but they would be under the direct authority  
16 of the second army commander at Fort Meade, Maryland.  
17 That's an enemy-attack scenario.

18 Of course, the Pennsylvania State Police, however, would  
19 be available to us as forces to be used.

20 Q What would be your guidance to the Pennsylvania  
21 State Police in a situation like that as far as life-saving  
22 or emergency response doses that they should be willing to  
23 accept?

24 A Well, I don't think that we -- I would not plan,  
25 from my level, to put out a set standard. I think that if



1 there were an area, say, near the fixed nuclear site that  
2 had not been evacuated for any number of reasons, let's  
3 take an island, Brunner Island, the word hadn't gotten to  
4 Brunner Island, I think that at the time we could make an  
5 evaluation as to how long it would take emergency forces  
6 to go in, a helicopter rush in in a matter of minutes,  
7 this would give me no concern regardless of what the radiation  
8 level might be.

9 It was my understanding that the article that you made  
10 reference to was the suggestion that once we had evacuated  
11 the area that we were going to send in the national guardsmen  
12 and have the national guardsmen post every street corner and  
13 actually secure that area. Our scheme of things is that  
14 whatever area we evacuate, we assume that we have an adequate  
15 safety cushion so that this ten-mile area or five-mile  
16 area or whatever it is, that would be a restricted zone.  
17 No one would be in that area accept for emergency personnel,  
18 whether they be our forces or whether they be from the  
19 telephone company or some other who were actually briefed,  
20 trained, equipped, and dressed to go into the area to make  
21 the repair or do what needs to be done at the time and then  
22 immediately brought out again; but that the guardsmen, the  
23 state police and everybody would be outside of this restricted  
24 area.

25 Q I have two more questions here, and then we'll take

1 a break.

2 How much of your support -- this is people and equipment --  
3 for evacuation out to ten miles and further out to 20  
4 miles, would have had to be obtained through Adamcik and  
5 the FDAA, other federal sources?

6 A I can't tell you how much of the total or what  
7 percentage of the total, but we evaluated what we would  
8 need in the risk area to conduct the evacuation. And then  
9 we determined what we would need additionally in the  
10 host area.

11 We then assigned all of the state resources available to  
12 us against this, and we came up with an unmet need in the  
13 way of ambulances, for example, of some 400. We came up  
14 with an unmet need of approximately 200 doctors and 200  
15 nurses. There were some other unmet needs that I am not  
16 aware of or I can't recall at this particular time. The  
17 big one was really the ambulances, based on the number of  
18 hospital patients that we had in the area, the number of  
19 immobile personnel in our institutions.

20 And Adamcik or FDAA -- I guess they were FDAA at the time  
21 -- identified for us from whence these resources would come.

22 Q Who is responsible for the very sick or recently  
23 operated-upon or patients that it would be very difficult  
24 to move? Who basically is responsible for their health and  
25 safety in this multicounty response?

1           A           Well, the facility in which they reside or in which  
2 they are located had the basic responsibility, and this  
3 makes for a very tough decision for the governor to order  
4 or compel an evacuation or even to issue an advisory for  
5 an evacuation. Because there, unfortunately, are many people  
6 who are extremely ill, who maybe the movement may mean  
7 their death.

8           Q           So this would weigh heavily upon any decision to  
9 evacuate?

10          A           Absolutely.

11          Q           How about other factors that might weigh heavily  
12 upon a decision to evacuate?

13          A           Well, there's, of course, the first decision is  
14 that nobody wants to evacuate, period. And this is  
15 always a decision that is not entered into lightly. I  
16 think there were, in the TMI incident, there were a number  
17 of unknowns -- particularly, as to if an evacuation were to  
18 be executed, really how far, what was the distance we're  
19 talking about; whether we're talking about a five-mile,  
20 ten-mile, or 20-mile. And of course, the further out you  
21 go, is that the extent or is it going to go to 30 and now  
22 to 40 and perhaps 50.

23                   The question of the unknown as to how long will these  
24 people have to remain out of the area. I think these  
25 kinds -- and do we have the resources and can we do it in a

1 timely manner. When schools are in session, we don't  
2 have the buses immediately available to us because the  
3 buses' first priority would be to move the school children.

4 We depend quite heavily on volunteer forces. Are those  
5 volunteer forces, particularly those with'in the risk area,  
6 are they going to be available to us, or are they going to  
7 have to pick up their families and get them outside of  
8 the area.

9 So I think when you start talking about whether you  
10 should or shouldn't evacuate, you've got to make --  
11 unfortunately, in these kinds of cases -- a sort of a snap  
12 decision. But at the same time, you have to analyze the  
13 problem and determine that do we, in fact, have the  
14 adequacy of resources with which to successfully conduct the  
15 operation.

16 If you can't, maybe it's better that you just not  
17 evacuate and have the people take cover or what else you  
18 can.

19 Now, as the waters come up in a flash flood, nobody  
20 questions it. They can see the water rise; they know they  
21 better get up the hill or they are going to be drowned.  
22 Similarly, in a hazardous materials spill, although you may  
23 not see the gases escaping, you can at least see the incident  
24 itself; you can see that the rail cars are turned over or  
25 you can see that the two trucks have come together. And

1 although you may not see the gases, you can visualize that,  
2 Hey, here's a problem. So you can move out and move out  
3 relatively smartly.

4 In the TMI kind of a thing where you don't see the  
5 radiation, you neither can feel it nor touch it, sense it  
6 by any other means, there is a different kind of reaction  
7 on the part of the general public.

8 Q Getting back to the resource problem, is it a  
9 true statement that you needed little or no outside help  
10 for a five-mile evacuation from the standpoint of federal  
11 help?

12 A Correct.

13 Q What was the extent of federal assistance  
14 provided to your office -- sort of a chronology?

15 A Initially, DCPA provided me eight personnel,  
16 who had some planning experience, which I assigned two  
17 each to four counties. They followed this up by providing  
18 me six CDNARS, radios to hook together my six risk counties  
19 and my headquarters. They provided me 19 people, one for  
20 each of the host areas or support areas, to review the host  
21 area plans and to provide the host areas any assistance that  
22 they needed.

23 All of these people were briefed at my headquarters and  
24 then sent out to the host areas to take a look at how the  
25 host area was set up and to provide any advice and assistance

1 to the host area that they could and then to report back into  
2 our headquarters.

3 That was the direct support that was provided to us.

4 Of course, Adamcik had, I can't recall now how many  
5 federal agencies, but from the post office department to  
6 the IRS representatives who were available to us and with  
7 whom we met at 11:00 o'clock every morning. I  
8 had a representative attend these Adamcik meetings. And  
9 each of the federal agencies gave a report to Adamcik on  
10 their preparedness to support the state if we should be  
11 required. And that, in turn, got back to me.

12 Q You had mentioned previously that there is a direct  
13 teletype to each county?

14 A Yes.

15 Q And now you mentioned there is some sort of a  
16 signal system set up, I assume that's a radio?

17 A Yes, the CDNARS, Civil Defense National Regional  
18 something, I'm not sure of the exact title.

19 Q So that was two methods of communications with  
20 the county that -- this radio system was established when?

21 A I had a hot line.

22 Q You had a hot line to each county?

23 A At the time of the incident, I had commercial  
24 telephone, and I had the teletypewriter. By Saturday  
25 morning, I had a hot line. By Saturday night or Sunday

1 morning, I had a CDNARS radio.

2 Q This teletype, can you send out simultaneous  
3 messages to each county, or does each one require a  
4 separate message? If you wanted to send out evacuate  
5 messages to six counties, would that take six discrete  
6 operations or one simultaneous?

7 A One simultaneous, or I could send it to all  
8 67 counties simultaneously, or I can designate the counties  
9 I want it to go to.

10 Q These federal resources that were supplied, under  
11 whose direction were they? Did they then come under your  
12 direction after being supplied, or did they still receive  
13 their orders from Adamcik, or who?

14 A They were provided at my request. They were  
15 indirectly under my operational control, except that  
16 John McConnell, they were directly responsible to  
17 John McConnell. And John McConnell to me for their perform-  
18 ance.

19 Now, McConnell set up a small staff in my office as a sort  
20 of liason with me and to coordinate the movement of these  
21 people and their initial briefings and their debriefings.  
22 My people briefed them. Their people, DCPA conducted their  
23 debrief, along with my people.

24 Q Did that prove to be an effective way to control and  
25 to disseminate information and interact in a communicative

1 sort of way? Was it operationally good?

2 A Very good; although I had confidence in the  
3 counties, particularly, I'm talking about the host counties,  
4 what would have been the support counties and their ability  
5 to do it. I was at that time devoting so much attention to  
6 the 20-mile evacuation plan, that these extra pair of  
7 eyes and the knowledge that somebody had been on the scene  
8 and that the county management coordinators had gotten their  
9 staffs together and that the county commissioners were  
10 together and they were, in fact, prepared to take care  
11 of whether it was 40,000 or 60,000 people, was extremely  
12 helpful to me.

13 Q How many people did evacuate? Do you have any  
14 good numbers on this? Has there been any survey made?

15 A The best records that we have been able to fathom,  
16 somewhere between 80,000 and 100,000. However, the figure  
17 that I'm basing this on is primarily an Elizabethtown  
18 College survey that was conducted during the first week  
19 by knocking on doors. However, it did not differentiate  
20 between those people who actually left and those people  
21 who leave every weekend to go to the Poconos.

22 So how many of those people that this is their normal  
23 weekend movement and how many evacuated just because of  
24 Three Mile Island, I think that's suspect.

25 Q So you're sole source of this 80,000 to 120,000 is



1 a survey made by a college on a weekend?

2 A Well, it is validated by the Elizabethtown State  
3 College that started the survey on Sunday, immediately  
4 following the incident, and continued it through the  
5 following Sunday. I had a similar report from two or three  
6 of my county civil defense directors on their estimates,  
7 and the Elizabethtown State College survey verified the  
8 oral reports that I received from my personnel.

9 However, on Friday following the incident, I had the  
10 Pennsylvania State Police conduct a survey of all major  
11 routes leading in and out of this general area, and they  
12 reported no abnormal traffic patterns except an absence  
13 of vehicles at the shopping centers.

14 Q On which day was this?

15 A This was Friday following the release.

16 Q The 30th?

17 A Yes.

18 MR. ERNST: I would like to recess for a few  
19 minutes.

20 (Recess.)

21 BY MR. ERNST:

22 Q According to an NRC telephone log on April 1st,  
23 you stated that you would need a four-hour advance notice  
24 for evacuation since the national guard and state police  
25 were on a white alert, which apparently was a four-hour

1 alert status. Considering the alert status, how long would  
2 it have taken for a controlled evacuation to begin?

3 A The 30th, Friday, the 30th of March, we  
4 were in a position at that time, in a ready alert, to have  
5 executed a controlled evacuation with very little lead time,  
6 because all of our forces had been put into a ready condition.  
7 I'm not speaking here of national guard and state police,  
8 because at this time, they were not involved in our, not into  
9 our response mechanism. The controlled evacuation did not  
10 hinge on them.

11 On Monday when the schools started going back into session  
12 and the national guard went back to work and the national  
13 guard and the state police at this time have designated  
14 traffic control points, it would have taken longer.  
15 Now, I had been attempting to secure from Bob Adamcik and  
16 the NRC the kind of a scenario that they visualized  
17 could occur and asking them for the lead times associated  
18 with these scenarios. I'm still waiting for that.

19 I think that on Monday, my forces certainly -- speaking  
20 here of the -- see I think what you've got to recognize is  
21 in Friday, Saturday, and Sunday, fireman, ambulance personnel  
22 were either in the fire houses or the ambulance houses.  
23 The county staff were in full operation, and many of these  
24 were volunteers. But on Sunday evening and Monday, the  
25 atmosphere as a whole began to change where there was not that

1 immediate response capability. So our time is necessarily,  
2 advance lead time is necessarily greater.

3 I do not recall using the term four hours as a lead  
4 time.

5 Q I gather then you think that within the first three  
6 or four days or at least once, people became sensitized to  
7 the problem that your response could have been to start an  
8 evacuation, could have been almost immediately. But then  
9 Sunday night and thereafter, it would have taken longer.  
10 So I guess the question still is, about how long do you  
11 think it would have taken before one could have started  
12 a controlled evacuation, starting Sunday night or  
13 Monday or Tuesday?

14 A Well, whether you want to call it controlled or  
15 uncontrolled -- and I think this is a very fine line --  
16 once you put out the word that you're going to execute an  
17 evacuation, people are going to start evacuating immediately.  
18 Now, all of our traffic analyses indicated that it would take  
19 a minimum of three hours for all vehicular traffic, private  
20 vehicle traffic, to have cleared the outer rim of the  
21 five-mile area. And it would have required seven hours to  
22 have cleared the rim or the outer radius of a ten-mile area.  
23 And it would have required ten hours to have cleared the  
24 20-mile area.

25 Now, this is merely based on our knowledge of the number of

1 registered vehicles that are in their particular communities.  
2 And based on our best traffic analyses of the routes. that  
3 we would have both the major routes and the feeder routes  
4 leading out of these areas, these times that I gave did not  
5 include the time to evacuate hospitals, institutions, and  
6 other human care facilities. And I still don't know how  
7 long it would take to evacuate a hospital, for example.  
8 So much depends on what is the availability of ambulances  
9 and ambulance crews and doctors and nurses that may have  
10 to accompany certain patients.

11 My estimate is that if we were to blow the siren today  
12 and the word got out over the EBS system or some other  
13 fashion that we needed to evacuate that there would be  
14 some evacuation started within a matter of minutes.

15 Q This is the second time you've mentioned the  
16 simulation of traffic. Could you give me a thumbnail  
17 description of the process of how one simulates the traffic  
18 flow?

19 A We determined the density of population within  
20 each of these areas. We determined that an average family,  
21 we would have three personnel per vehicle. We assumed that  
22 the vehicles would travel in a controlled evacuation at an  
23 average speed of 30 miles per hour. And based on this  
24 kind of an assessment, how long it would take from the  
25 furthest point within the center for these vehicles

1 traveling at this density through a given point and  
2 arrived then at approximately three hours.

3 On one side of it, it might be two hours. On another  
4 side; two hours and fifteen minutes. But the longest time  
5 it would have taken, which would have been the Strelton-  
6 Highspire area coming in this general direction up on the  
7 turnpike, was the longest one which required three hours.

8 Q So typically then might the three people per car,  
9 30 miles an hour for safety's consideration and conversatism,  
10 three car lengths apart per car, and then how long does it  
11 take to get the people out?

12 A Well, the traffic control group in PennDot has  
13 the formula for the number of vehicles per mile, and they  
14 very rapidly extrapolate that out.

15 Q This wasn't a computer kind of calculation or  
16 a road bottleneck kind of a calculation? It didn't  
17 take a situation like that in mind, just assumed that  
18 everybody --

19 A Well, it assumed that all of the routes were open.  
20 It did not provide for a major accident where traffic  
21 was held up for 30 minutes, yes.

22 Q In his testimony to the President's Commission,  
23 which I believe you were present also, Mr. Molloy  
24 stated that his estimate would be that in good weather, he  
25 would need six hours to complete an evacuation. And the

1 assumption -- in my mind, anyway, in listening to the  
2 testimony -- is that this is from the time completely  
3 unprepared, like on Wednesday morning, from the time of 6  
4 notification to the time an evacuation would be completed.

5 Do you have any judgments on the time to complete a  
6 five-mile evacuation from TMI starting from essentially  
7 scratch?

8 A I think his judgment is probably -- he would have  
9 the larger number of people of the three counties involved.  
10 I would generally go along with something in that area.

11 Q I believe I read in the record -- I must confess,  
12 I forget the source exactly -- but somewhere that five of  
13 the six surrounding counties had dedicated phone lines to  
14 PEMA installed by Sunday. This appears to differ slightly  
15 with, I think you had said by Saturday all six were installed.

16 A It is my best recollection that they were all in by  
17 Saturday. Perry or Lebanon counties, which were two of  
18 the exterior counties that had a very small play, it is  
19 possible that theirs did not get in until Sunday, but I  
20 would have to check with my communications officer.

21 Q It's not necessarily an inconsistent bit of  
22 information, because all ours said was by Sunday which  
23 could be consistent with your statement.

24 How long did it take to recognize the need for dedicated  
25 lines, and how long did it take once the need was

1 established to physically install them?

2 A Well, it didn't take long after the public  
3 announcement when all of our commercial wire lines began  
4 experiencing about a 30-minute hiatus, to know that we  
5 needed them. We asked for them almost immediately thereafter.  
6 The first one was in within four hours, and the others as  
7 rapidly thereafter as possible.

8 Q But the order for all six was placed at the same  
9 time essentially?

10 A No. The order for four of them was placed  
11 at that time, because at that time we still were talking  
12 about four counties at ten miles. And so this leads me  
13 to believe that perhaps someone who said, maybe on Sunday  
14 for the other two counties or for other counties, might  
15 be right. I am not certain when we added those other two  
16 counties to the dedicated system.

17 Bell Telephone System here in Harrisburg has a  
18 provision that each time we have an emergency they send  
19 a representative to our EOC and he functions out of our EOC.  
20 And when we have a need or a requirement, our requirement  
21 takes priority over all others. So they can react very  
22 rapidly. Also the fact that we have 100 extra pairs of  
23 line in our EOC facilitates any such arrangement.

24 Q It is our understanding that this dedicated line  
25 was removed from Lebanon County about three weeks later.

1 Were they also removed from the other counties?

2 A We put in the stop order at approximately the  
3 same time for all six of them.

4 Q Why would they be removed?

5 A Well, it's economy, the cost.

6 Q What is the cost, do you know?

7 A I don't know.

8 Q During the response there were a number of  
9 instances where physical lack of communications --  
10 since I guess walkie-talkies had to be provided to BRP for  
11 even office communications and, of course, these lines had  
12 to be installed to the counties and several other problems  
13 were communications-oriented. Is PEMA responsible for  
14 all communications, all physical communications in an  
15 emergency response, or does each bureau or department have  
16 a basic responsibility to identify a problem and then  
17 either solve it themselves or talk to PEMA about it?

18 A Well, basically, they have a responsibility  
19 to identify any shortfalls and to notify the office of  
20 telecommunications and have the office of telecommunications  
21 take care of the problem for them. We in PEMA do  
22 maintain approximately 100 mobile or portable radios. We  
23 did loan out to the federal agencies and to other state  
24 agencies 84 or 85 of these portables during the incident.  
25 I think we've got them all back now.



1           2           How was your coordination function hampered by  
2 not having a person either on or with your staff that was  
3 knowledgeable about radiation matters? And I'm speaking  
4 now of fixed facility radiation matters.

5           A           Well, it was very seriously hampered because  
6 all of the training exercises that we conduct, the Bureau  
7 of Rad Protection has always been co-located with us in  
8 our simulation exercises. And all of our plans were based  
9 upon having somebody immediately available to us who would  
10 be aware of the technical problems at the facility or under  
11 nuclear attack conditions that would be immediately available  
12 to advise us and make recommendations to us.

13           The absence of someone such as in this case really  
14 meant we were flying blind quite a bit of the time.

15           Q           When did you recognize that you were flying  
16 blind from a radiological operational standpoint, and what  
17 actions were taken to try and alleviate the situation?

18           A           Well, almost immediately, I would say by  
19 Friday, prior to that time there was no problem in maintaining  
20 telephone communications with the Bureau of Rad Protection  
21 and kept informed. Sometime Friday, I directed my  
22 operations officer to start putting out an hourly situation  
23 report to my counties. And sometime Friday night, in  
24 reviewing those, I was struck by the occurrence of no change,  
25 no change, no change, no change running through those

1 hourly reports which surfaced to me that we weren't  
2 providing the counties a hell of a lot of information.

3 So I called the Bureau of Rad Protection to get an update,  
4 and the only person I could get was a person that was in  
5 their lab and actually knew very little about what was going  
6 on at Three Mile Island except for the number of samples  
7 that were coming in. I spoke to Tom or Maggie about  
8 this, and they told me that they were committed with  
9 personnel down at the island, were maintaining liason  
10 with the Department of Energy down at the Capital City  
11 Airport and that they just absolutely had nobody that  
12 they could provide to us. However, they would provide  
13 us, on an hourly basis, information that we could pass  
14 on to our counties.

15 However, the situation did not improve.

16 Q Did you send a representative of PEMA over to  
17 their office to try and facilitate communications?

18 A No.

19 Q Who controls roads? Who can designate one-  
20 way traffic for local, state, and federal, turnpike roads?  
21 Who has the power to block roads and order one-way traffic,  
22 things of this nature?

23 A The Department of Transportation is the state  
24 agency. However, it does not control the turnpike; you  
25 mentioned the turnpike.

1 Q Yes.

2 A The turnpike is a separate entity. Although we  
3 had close daily contact with Mr. Wilson of the turnpike,  
4 and he assured us of their support and that they were willing  
5 to do anything we wanted done. And when we indicated that  
6 we wanted at least three lanes of the turnpike heading  
7 east and three lanes of the turnpike headed west, one-way  
8 traffic, they were agreeable to us.

9 The Department of Transportation was also willing and  
10 assisted us in designating those major routes and assigning  
11 them to the counties for their evacuations based on  
12 three-lane traffic, on three lanes going in one direction or  
13 four-lane traffic routes.

14 Q I guess what triggered this particular question  
15 is I recollect a sequence of events where I think somebody  
16 from your office -- I don't know whether it was Mr. Lamison  
17 or who -- called up Mr. Molloy and asked that 441 be  
18 closed. And then Molloy called the state police and the  
19 state police said no, based on their information, it didn't  
20 need to be closed. We're sort of concerned wondering  
21 who actually does or does not control roads. It sounds  
22 like the Department of Transportation wasn't even in on that  
23 particular change.

24 A Yes. Well, this was a request given to Mr. Lamison  
25 by plant personnel at TMI. They requested that 441, whatever

1 number it was in the facility of the plant be closed.

2 I don't believe that Lamison called the county and told them  
3 to close it. I think he was calling to verify, is it  
4 closed or what is your assessment, does it need to be  
5 closed.

6 I have heard, in testimony, Kevin Molloy make a similar  
7 statement that he made a decision that it didn't need to  
8 be closed, so he didn't close it or didn't have it closed.

9 Q Do you have any function regarding the criteria  
10 for taking various protective actions such as take cover,  
11 evacuation, use of potassium iodide, food interdiction,  
12 things of that nature? I understand that BRP is responsible  
13 for making a technical evaluation about whether to  
14 recommend certain actions, but then assuming they recommend  
15 a certain action, what function does PEMA play in carrying  
16 that out?

17 Let's take, for example, the food interdiction or taking  
18 the cows off the pasture. I gather that could impact either  
19 Department of Health or Department of Agriculture. Does  
20 PEMA have any role to play in that kind of an interchange?

21 A We have a responsibility and it is so cited in  
22 our current plan, current draft plan which is to replace  
23 Annex E, that DER continues to be the lead agency. And they  
24 will insure the coordination between health and Department of  
25 Agriculture in preplanning for this and the use of the

1 county agents for the education of the farmers and the  
2 public in this area.

3 Our primary role would be one of dissemination based on  
4 the recommendations and advice from the Bureau of Rad  
5 Protection, to disseminate it to the counties for  
6 implementation.

7 Q But basically for essentially all of your protec-  
8 tive action, orders or recommendations, BRP in  
9 combination sometimes, I guess, with agriculture and  
10 Department of Health, would be the responsible agencies for  
11 making that kind of recommendation?

12 A Correct.

13 Q On March 29th, about midafternoon, I guess,  
14 2:00 to 3:00 p.m. time frame, the governor requested  
15 Mr. Miller and Herbein to come to his offices and brief  
16 him -- or I guess it was the lieutenant governor who  
17 requested that they come to his office to brief him regarding  
18 the status of the plant. Were you or your representative,  
19 either one present at that meeting?

20 A No. I had met with the lieutenant governor  
21 and the governor just prior to that.

22 Q I think the basic subject of this meeting was the  
23 steam releases and status of the plant, things of that  
24 nature.

25 A No, I was not present at that meeting.

1 Q Are you aware of the meeting? Do you know who  
2 might have been there?

3 A No, I do not.

4 Q Do you know who in your organization, on Friday  
5 morning, called Carl Abraham regarding the 1200 mr per hour  
6 reading and requested advice about evacuation?

7 A Who is Carl Abraham?

8 Q He is in the regional office --

9 MR. HERR: NRC regional office, public information,  
10 NRC Region 1.

11 THE WITNESS: The answer is, no, I am unaware of  
12 any call going out of my office to NRC. Calls coming in  
13 from NRC, but I have no recollection about any of our  
14 people calling NRC at that time.

15 BY MR. ERNST:

16 Q Were you aware that Met Ed made two phone calls  
17 to PEMA regarding the 1200 mr per hour reading?

18 A Yes.

19 Q One was from Floyd to Kuehn?

20 A Yes.

21 Q And do you know who made and received the other  
22 call?

23 A The other call was received by Jim Cassidy  
24 C-a-s-s-i-d-y. And the calls were received simultaneously.  
25 Who the party was on the other end from TMI, I do not know.

1 Q On the morning of March 30th, there were several  
2 counties that were called rather promptly regarding the  
3 possibility of an evacuation. As I recall, Dauphin County  
4 was called and I think by yourself and an indication made  
5 that there may be an order of minutes or a short time frame  
6 in order to evacuate. Do you know which counties were  
7 called and who called them, general time frame, what  
8 information was given to the other five, the other however  
9 many counties were involved at that time?

10 A At about 9:30, I called at least Dauphin, Lancaster,  
11 and York. Now, it is my recollection that I spoke personally  
12 to Kevin Molloy in Dauphin County, but that the  
13 emergency management coordinators at Lancaster and York  
14 were not immediately available and I spoke to my own  
15 representative that I had there in there EOC and related  
16 to them, the information basically was that I had  
17 recommended to the governor a five-mile evacuation and that  
18 I felt, based upon the information then available, that  
19 there was about a 90 percent chance that we would probably  
20 conduct at sometime that day a precautionary evacuation.

21 Q To your knowledge, was this information also  
22 transmitted to other counties by other people in your staff,  
23 or was it just those three counties?

24 A Just these three counties, because, again, remember  
25 that suddenly at this same time, a fourth county becomes

1 involved which would have been Cumberland County. But  
2 we're still talking about ten miles. I'm talking about  
3 five miles. I had no intentions at that time of  
4 recommending nor did I recommend a ten-mile evacuation.  
5 Although that was the advice from NRC.

6 We had no plans for a ten-mile evacuation. We did have  
7 plans for a five-mile evacuation.

8 Q Did you personally recommend evacuation to the  
9 governor based on your own analysis and judgment regarding  
10 the need for evacuation, or did you make a recommendation  
11 to the governor which was based essentially on Collins'  
12 phone call.

13 A It was based on two. It was based on Collins's  
14 telephone call to me and it was based on lack of any  
15 information from Bureau of Rad Protection. And I qualified  
16 my recommendation to the governor that I had not yet  
17 heard from Bureau of Rad Protection upon whom I depend  
18 for my recommendation. But that with essentially what  
19 I had in the hand then, that there was a 1200 millirem  
20 release going on and that the source had not been determined  
21 and it was a continuing emission, that it would be prudent on  
22 our part to conduct a five-mile precautionary evacuation.

23 Q Does that mean that your recommendation to the  
24 governor was based on your evaluation of the information  
25 you had at hand, you were personally recommending to the



1 governor, as an officer of the state, to evacuate?

2 A I think there were -- whether they should have been  
3 considered in my own evaluation to the degree that I did  
4 consider them -- but one, the call from at least identified  
5 to me as Floyd; I have no personal knowledge that it was  
6 Floyd. It was a very highly emotional kind of report  
7 indicating that Three Mile Island was getting ready to  
8 evacuate itself, all noncritical personnel, that it had its  
9 own buses standing by for this evacuation, strongly  
10 recommending to us that we get prepared for an immediate  
11 evacuation.

12 Then Collins's call to me that said or verified the  
13 information that I had already received from Three Mile  
14 Island, extending this distance now to ten miles. And  
15 then his subsequent call to me, five or ten minutes later,  
16 telling me that he wanted me to understand that this was  
17 not only his recommendation but that this was also the  
18 recommendation -- and I have testified that he said  
19 commissioners', but after hearing him testify, I suspect  
20 that he is more accurate in saying that it has the support  
21 of the senior staff members of my agency.

22 So I had the call from Three Mile Island. I had the  
23 call from Collins, and then backed up immediately by another  
24 call letting me know the seriousness with which NRC was  
25 treating the incident. And I had not yet had a report

1 back -- and this was over a half an hour from the time that  
2 we had submitted the information -- from the Bureau of  
3 Rad Protection, a report from them saying, Hey, there's  
4 nothing to it.

5 Q At noon on March 30th, PEMA sent a telegram to  
6 all affected counties lifting the stay-indoors advisory.  
7 However, also at about noon, the governor held a press  
8 conference at which time he said the advisory remained  
9 in effect. At the 10:00 p.m. news conference on Friday,  
10 the governor lifted this advisory effective at midnight.  
11 What was the basis for PEMA, in essence, lifting the  
12 advisory with this telegram at noon?

13 A I think there is something in error there. Just  
14 before 10:00, noon on the 30th of March, the governor  
15 issued an advisory for all personnel within the five-mile  
16 area or within the ten-mile area to remain undercover until  
17 noon. At about 11:50 that morning or perhaps a few  
18 minutes before that, my deputy, who I had sent to the  
19 governor's office, called me and told me the governor was  
20 going to make a press release at 12:00 noon lifting the  
21 advisory on the take-cover and reintroducing an advisory  
22 that all pregnant women and preschool-age children be  
23 evacuated from the five-mile area. So this is what we  
24 put out on our teletypewriter a little before the governor  
25 made the announcement that he was, in fact, lifting the

1 advisory.

2 The governor did lift that advisory at 12:00 noon, not  
3 12:00 midnight, 12:00 noon, for people to stay under cover.

4 Q During various meetings with the governor or  
5 contacts with the governor's office -- and this is sort of  
6 a temporal kind of question, I guess -- what did you  
7 report on the state of readiness and preparations for  
8 various evacuation scenarios? What was your bottom line  
9 to the governor as time went on?

10 A From the first meeting I had with the governor  
11 on Wednesday noon, following a press conference with the  
12 lieutenant governor, I reported to the governor that we  
13 were prepared to execute a five-mile evacuation or to have  
14 the personnel take cover. I continued, in all of my  
15 meetings with the governor -- I met with him again that  
16 night and gave him a map of our evacuation plan for the  
17 five-mile area.

18 The only change, as I recall, that I alluded to at that  
19 time that under the present weather conditions, that we,  
20 PEMA, were no longer contemplating a quadrant kind of an  
21 evacuation; that the unstability, lack of stability of the  
22 weather conditions, that any precautionary evacuation, that  
23 we better do it on a 360, 360 degrees.

24 I continued to assure the governor and the lieutenant  
25 governor that we were prepared to execute the five-mile

1 evacuation. I told the governor on Friday morning,  
2 based upon the recommendation of NRC, that we were not in  
3 a posture to execute a ten-mile evacuation and that unless  
4 there was an overriding reason to extend the range to ten  
5 miles, I would not recommend it. I would recommend that we  
6 stick with the five-mile evacuation and have people within  
7 five to ten remain undercover.

8 Sometime on Saturday, I talked to all of my county  
9 personnel by Saturday night, and at that time I was  
10 assuring the governor that we could execute a 20-mile  
11 evacuation.

12 On Sunday, I brought all of my county emergency management  
13 coordinators into the office, and we again went over the  
14 plan and the guidance that we had provided. And all of  
15 them were assuring me that we could execute a 20-mile  
16 evacuation.

17 MR. CHIN: May I show Colonel Henderson a  
18 document, Exhibit 3, with the title "NRC Procedures for  
19 Decision to Recommend Evacuation." It is a seven-page  
20 document.

21 (Henderson Exhibit No. 3 identified.)

22 BY MR. ERNST:

23 Q When were you first aware that this NRC document  
24 existed which was given to the governor by Chairman Hendrie  
25 on Sunday, this document which analyzed possible future

1 accident scenarios, consequences, evacuation distances, and  
2 lead times?

3 A On or about the 21st of June, 1979.

4 Q Is that the time that you got a copy, or were just  
5 made aware?

6 A This was the first time that I was aware that such  
7 a document existed. In a meeting with Mr. Gerusky, on or  
8 about the 21st of June, I again made reference to a  
9 request that I had made to --

10 THE WITNESS: Off the record a second.

11 (Discussion off the record.)

12 THE WITNESS: I made a request on Saturday or  
13 Sunday, the 31st of March or the 1st of April, of Boyce  
14 Grier, that we vitally needed a scenario of potential  
15 incidents that could occur and the time elements as affected  
16 evacuation for that kind of a scenario.

17 I had also made requests to the Bureau of Rad Protection  
18 and to whom I am uncertain at this time.

19 At this meeting on the 21st of, on or about the 21st of  
20 June, Mr. Gerusky asked me if I was aware that NRC had  
21 published such a document. And he consequently promised  
22 to send me a copy. Some two days later, perhaps the 23rd  
23 of June, and this is not my copy so the stamp on the back  
24 shows the exact date it arrived in my emergency operations  
25 center, but it was on or about the 23rd of June that I

1 saw this document for the first time.

2 BY MR. ERNST:

3 Q To your knowledge, did anyone on your staff receive  
4 such a document?

5 A No one on my staff received such a document. I have  
6 made inquiry.

7 Q Have you examined this document --

8 A I have.

9 Q -- since June?

10 A I have.

11 Q Do you find the document to be difficult or  
12 reasonably easy to understand?

13 A It is.

14 Q Which.

15 A It is very easy to understand, and it would  
16 have provided me the kind of information that I could  
17 have put out to my county civil defense directors, the  
18 kind of information we were all needing as far as our  
19 state of readiness to execute any kind of protective actions.

20 Q What was your line of communications with NRC;  
21 principally, to whom did you communicate within the NRC  
22 organization on a rather routine basis?

23 A No one. Our line of communications is primarily  
24 with our Bureau of Rad Protection who, in turn, is in  
25 communication with the plant and with NRC.

1           Now, I had infrequent telephone calls from personnel  
2 at the operations center in Bethesda, Maryland, several  
3 different people. And on an occasion or two during the  
4 incident, I may have called them. But it was primarily  
5 someone from the operations office of Bethesda, Maryland  
6 calling me asking for information regarding how long it  
7 would take us to evacuate.

8           I forget some of the other questions that would have  
9 come up at that time.

10           Q           Would there have been any value to have more  
11 routine communications with NRC or, perhaps, even to have  
12 an NRC person assigned to your office?

13           A           Under the circumstances of Three Mile Island  
14 where we did not have an individual from Bureau of Rad  
15 Protection, yes, it would have been helpful. But if we  
16 had had the Bureau of Rad Protection co-located with us  
17 as all of our scenarios in the past had planned, we would  
18 not have needed NRC. They would have made those  
19 contacts for us.

20           Q           I would like to go back to a line of questioning  
21 earlier this morning. You had mentioned that you or your  
22 staff attended most, if not all of the governor's meetings  
23 and press conferences, certainly through Sunday or Monday  
24 or that kind of a time frame. But I recall personally,  
25 either in our conversations in Harrisburg several months

1 ago when I came up with Hal Gaut, or maybe it was in your  
2 testimony previously, that there was a communications  
3 problem. That some of the times, you did not know when the  
4 governor was making a press release or what was being  
5 contained in it and had relied to some extent on listening  
6 to the radio or something to keep up -- or maybe I'm  
7 confused in my own mind. I would like to straighten it  
8 out in my own mind.

9 A Well, I think you answered it -- through Sunday,  
10 approximately, I was present at, I believe, almost every time  
11 Denton met with the governor or any other representatives  
12 except you pointed out the ones that I was unaware of, the  
13 couple individuals meeting with the lieutenant governor.  
14 After Sunday, I was unaware when such meetings were being  
15 held and was not always aware of the times of the press  
16 conferences. And the information to me became somewhat  
17 difficult to obtain.

18 Q But through Sunday, you were fully aware of  
19 not only when the press conferences were being held, but also  
20 what the governor was going to say?

21 A Correct. There was a -- starting on perhaps  
22 Saturday, the governor's office was becoming very crowded  
23 with straphangers and with personnel that were there when  
24 the governor entertained Mr. Denton. At the first meeting  
25 on Saturday night with Mr. Denton, there was an effort made by



1 the governor to move a lot of people out of the office.  
2 However, I was asked to remain, and I was invited to come  
3 back on Sunday for subsequent meetings. I suspect that  
4 the governor was using the lieutenant governor as my point  
5 of contact for subsequent meetings and, therefore, did not  
6 feel that I was needed to attend these subsequent meetings  
7 with Mr. Denton.

8 Q It also seems to me that I recall that the counties  
9 were complaining or upset that they did not get information  
10 through the normal chain of communications and had to,  
11 in essence, rely on radio and television broadcasts of  
12 the governor's press conferences.

13 A This is correct. Most of our counties were very  
14 upset that we were not providing them what they considered  
15 to be requisite information concerning what was going on  
16 down at TMI, that they were having to rely upon the news  
17 media for incidents that were occurring or possibilities  
18 that might occur.

19 Q PEMA, however, was fully informed of the Denton  
20 briefings and what the governor was going to say. Why  
21 couldn't PEMA have established those normal communications  
22 simultaneously with the governor's briefing?

23 A Well, we were through Sunday, and we did a fairly  
24 good job through Sunday. We were under the same, operating  
25 under the same difficulties that many other state agencies

1 were operating under.

2 Friday and Saturday, particularly, we just had thousands  
3 and thousands of calls coming into the EOC where it was  
4 taking an inordinate amount of my operational people's  
5 time to answer news media inquiries and public inquiries.

6 On about Sunday, the governor established a rumor  
7 control center; and starting with that, very quickly,  
8 many of the calls that were coming into our office were  
9 diverted to the rumor control center. As a consequence,  
10 my people began having a little more time. But we  
11 recognized that there was a communications deficiency.  
12 We addressed this to the governor's press office to try and  
13 resolve the problem. I discussed it with the lieutenant  
14 governor. The lieutenant governor assured me that we  
15 would be informed of any information we needed to know.

16 Q Could you briefly describe the training that your  
17 office gives to themselves internally and also to the  
18 other state offices and perhaps the county and local  
19 coordinators with regard to emergency response? Or if  
20 you have such a document that describes the training that  
21 we could have, there may be a simpler way for us to  
22 understand it.

23 A I'll have a member of my staff who may be coming  
24 over later in the day bring a copy of the type of a  
25 training schedule that we outlined for the year over to you.

1 But basically, we conduct a two-day training conference  
2 each quarter in each of our three areas. The training is  
3 in-depth on a topic of interest at the time. Over the past,  
4 flash flooding has been a very serious problem within the  
5 Commonwealth of Pennsylvania. We've given an inordinate  
6 amount of time to flash flooding.

7 We have in the Commonwealth of Pennsylvania, several  
8 hundred unsafe dams, and we have given training in the  
9 preparation of plans for down-dam safety.

10 Chemical spills have been a serious problem throughout  
11 the nation, and one of our conferences was a two-day  
12 conference on chemical spills and the response mechanisms  
13 and how counties should be prepared.

14 We give training conferences on the training of  
15 mass care managers, and just a whole host of subjects on  
16 a quarterly basis. Now, we do it twice in each area.  
17 Our areas split the Commonwealth from north and south,  
18 and the eastern area, central area, and the western area.  
19 In order to insure maximum attendance, we select the  
20 location in southwestern Pennsylvania for those ten counties  
21 in that area. We might put that conference on on a  
22 Monday and Tuesday, and then we move up to the northwestern  
23 counties for Thursday and Friday or sometimes it's a  
24 subsequent week.

25 We conduct an annual three-day seminar with all of our

1 county emergency management coordinators, and we just concluded  
2 one yesterday, Monday through Wednesday. In those seminars,  
3 we cover a host of subjects very briefly, with the view that  
4 the on-site training, well, the area-type training that  
5 we conduct will be a more in-depth treatment.

6 At the same time, we publish bulletins and memoranda  
7 on subjects that we consider to be of interest to the  
8 emergency management community on a continuing basis, and  
9 update those on a regular, at least annually.

10 We maintain a film library of over 1200 prints of  
11 some 110 to 115 subjects in our business which we loan out  
12 on a regular basis and is seen by over 600,000 - 700,000  
13 people annually.

14 Additionally, other kinds of information, perhaps not in  
15 -- well, additionally, the Defense Civil Preparedness  
16 Agency conducts certain training for us. We then have  
17 special training that we conduct such as radio monitor  
18 training. This is both by home-study course and by eight  
19 hours of classroom instruction. We train the radio  
20 monitor instructors, train people in each county who are  
21 capable of providing instruction to other people in the  
22 county on radio instruments.

23 I think generally that's --

24 Q This training is to the county people and your  
25 people; as I understand, you don't provide training to the

1 local coordinators. That is a county responsibility?

2 A Correct.

3 Q Does Met Ed provide any training exercises or  
4 training courses or whatever to state or local emergency  
5 response people?

6 A No.

7 Q Have they ever performed any tests of plans or  
8 things of that nature?

9 A Their annual communications checks which usually  
10 come more often than annually.

11 Q And you have participated in those?

12 A We participate in those.

13 Q Before March 28th, were you aware of any  
14 problem in the emergency response area in whatever relations  
15 you might have had with TMI? I realize, I guess most of  
16 the contact was with BRP. I'm not aware of how much  
17 communication PEMA may have had with Met Ed.

18 A Not any real problems. We meet on about an annual  
19 basis with the Pennsylvania Electric Association which has  
20 representation from the various power industries. While  
21 Unit 2 was being built or just prior to its being completed,  
22 Met Ed did invite me down or TMI personnel invited me  
23 down, and I did tour the facilities. They took care of  
24 us for a day there.

25 We have had meetings with their folks in our office, my

1 people, when Met Ed were involved in the public hearings  
2 during the licensing process. But there was no other formal  
3 kind of arrangements between PEMA and Met Ed.

4 Q So your people did testify at the licensing  
5 hearings on the adequacy of the state plan?

6 A Yes.

7 Q And testified that in their view, the state plan  
8 at that time was adequate?

9 A Yes.

10 Q Have you identified with regard to the state  
11 plan that would seem to indicate that maybe your  
12 judgment should be revised, that the state plan at that time  
13 was not adequate?

14 A Well, if I understand what I have been told in  
15 the past, that for Three Mile Island, we were required  
16 to have a protective action plan out to a range -- which had  
17 been identified to us as a low-population zone -- of 3,000  
18 meters. I think our plan was adequate. It was adequate  
19 up to the five miles, barely.

20 For ten mile or twenty mile, no, our plan is not  
21 adequate nor did it ever address that. I have a conflict  
22 with myself at the present time whether we need a separate  
23 fixed nuclear site plan rather than including that as an  
24 annex in our operation plan. I am uncertain at the present  
25 time. I am moving down the line as if the plan can be an

1 annex.

2 Our plan does not provide to either the counties or the  
3 support counties -- and this was an area that we really  
4 didn't give much thought to, the host areas, our support  
5 counties. At the time, we conceived each county taking  
6 care, as far as mass care facilities, of its own people.  
7 Now, this certainly is a shortfall.

8 In our administrative directive 720.1 where we assign  
9 responsibilities to all state agencies having emergency  
10 responsibilities, their responsibilities are all-encompassing  
11 and treat disasters as a single subject. They do not  
12 spell out, except in the case of DER and perhaps in the case  
13 of health, the word "radiological" or "radiation" I don't  
14 believe is used.

15 We've, for example, given the Department of Transportation  
16 an overall mission of being prepared to assign highways  
17 to -- and I'm using this only as an example, this is not  
18 the one I'm trying to think of -- but it's not specifically  
19 slated towards a fixed nuclear facility, perhaps which is  
20 in error.

21 A couple of years ago, I sat down with my plans officer,  
22 and we went down a listing of eight plans that would take  
23 care of most of the emergencies with which were concerned  
24 and the activities of that plans office. And the eighth  
25 priority item that I assigned was the preparation for plans

1 for fixed nuclear sites.

2 Now, that priority is no longer current. This has --  
3 I won't say it has the first priority, but it is pretty  
4 close up to the top at the present time. But there was  
5 a general feeling, not only with myself and my staff, but  
6 certainly throughout the community that nuclear power  
7 plants were completely safe and that really preparing any kind  
8 of a plan was merely a paper exercise to meet the requirements  
9 of NRC during the licensing process. And very little  
10 attention was given to what meat might be in the plan.

11 This is not true on our flash flood plans, because we  
12 recognize that we have flash floods on a regular basis  
13 in Pennsylvania, and more attention is given to that.  
14 Our chemical spills, more attention is given to that, more  
15 detail. So that kind of detail was completely lacking on  
16 our fixed nuclear site emergency response plan.

17 Q Should the NRC approve state plans before  
18 licensing a plant?

19 A I think somebody should, whether it's NRC or not.  
20 I have mixed emotions about a regulatory agency, as I  
21 understand NRC to be. In reading, certainly in reading the  
22 principal 70 checklist items that NRC has come out with,  
23 I think they are pretty broad and general which leads me  
24 to believe, rightly or wrongly, I don't know, that I don't  
25 believe that NRC, as I understand and know the people that I



1 know from NRC, really have an appreciation of time/distance  
2 factors and problems associated at local government levels  
3 for evacuations.

4 I personally think that DCPA or FEMA probably have a  
5 better understanding and appreciation and that there might  
6 be some duplication in this area.

7 Q Should states be required to have a state-approved  
8 plan or some federally-approved plan before licensing?

9 A It couldn't hurt. Again, I'm certain that --  
10 or for my money, a plan is merely a piece of paper. In  
11 many counties within the Commonwealth of Pennsylvania --  
12 and I suspect this is true throughout the United States --  
13 states draft a plan and send it to the counties for  
14 guidance as far as making their own plans for any kind  
15 of an emergency.

16 It's not unusual for us here in the Commonwealth of  
17 Pennsylvania to prepare a plan which we call "Lincoln  
18 County" because there is no Lincoln County in the Commonwealth  
19 of Pennsylvania. We write a full-blown plan for a down-dam  
20 safety evacuation. It is not unusual to get back from one  
21 of our counties a copy of their plan, signed by their  
22 county commissioners, and to see Lincoln County still in  
23 the plan.

24 So a plan that is prepared by a plans office or a single  
25 entity within that agency, unless there are also requirements

1 that the plan be tested and that the plan be regularly  
2 exercised, it's not worth the paper it's written on.

3 You can take, if you would like, Met Ed or the other  
4 nuclear power plants would probably provide us a professional  
5 planner or two and we could send them around to our  
6 counties, and they could write up the most beautiful plan  
7 that would meet every one of the NRC criteria. But when  
8 it came to the day of execution, there wouldn't be an  
9 elected official or very few people in the emergency  
10 management organization have any idea of what's inside the  
11 plan.

12 So I think they should have a plan, but the plan should  
13 be a plan that everybody is involved in, that's going to  
14 participate in it are required to participate in the planning,  
15 that the local police departments, local fire deparements,  
16 local medical services, the chamber of commerce or whoever  
17 else has a part to play in that plan, Red Cross and so forth,  
18 should be required to provide their input into that plan.  
19 And then that plan should be reviewed at subsequent  
20 headquarters and exercised on a regular basis.

21 Q I have a personal observation I would like for  
22 you to comment on. In the past, NRC clearly did not  
23 require an approved state plan to issue a license, with the  
24 judgment that the state was the one responsible for  
25 protection of the health and safety of its citizenry off-site

1 and perhaps should not be a federal function, at least for  
2 the NRC. Now there is some talk about requiring a  
3 state-approved plan.

4 And yet what I read in the state plan as it exists and  
5 hear you testify that the responsibility and authority for  
6 emergency response starts with the local level and works  
7 upward, what would be your observation as to the usefulness,  
8 in the protection of health and safety of the public, of  
9 a state-approved plan, if indeed, one has to go down to  
10 the local level to assure that they are ready to do something?

11 A It could or could not be worthless. I could  
12 prepare you the most beautiful state plan that I assure  
13 you NRC would approve, but if that plan isn't disseminated  
14 and the subordinate county and local municipal plans  
15 prepared that dovetail and take the guidance in the state  
16 plan, you still don't have anything. It's the local  
17 government and the county government that are going to  
18 have the capability to execute any evacuation, if evacuation  
19 were necessary.

20 Q Did you routinely have communications with  
21 Met Ed during the TMI emergency response? And if not, should  
22 you have had more, would that have been helpful?

23 A Not under our procedures. One of the areas that  
24 I omitted earlier, we have a dedicated NAWAS line to Met  
25 Ed. This telephone was never used once. The telephone is

1 in their operations, in the control site at Met Ed.

2 Now, we had no reason for calling, because we're entirely  
3 dependent upon the Bureau of Rad Protection. Now, the only  
4 reason that NAWAS line was put in there, at Met Ed's expense  
5 -- about \$30 or \$60 a month -- and how we were able to  
6 justify it through the Defense Civil Preparedness Agency  
7 was that in times of emergency, Bureau of Rad Protection  
8 functioned out of our emergency operations center.

9 Q So you would anticipate that there would be a  
10 use for that line under the current thinking?

11 A Well, under the previous thinking and under the  
12 current thinking, but under the actual practice of TMI, no.

13 Q We were sent, on August 2nd, I guess you signed  
14 to Miss Jill Geiger, a document which advertises the  
15 PEMA log which is a typewritten, about an inch-thick  
16 document. It's a typewritten chronology of PEMA actions.

17 I was wondering if you first recollect such a document,  
18 remember sending that document, what the nature of the  
19 document was?

20 A It appears that my deputy sent it. I see my  
21 name is there, but he signed it. I am aware of this document,  
22 yes.

23 Q Would you describe the origin of that log, upon  
24 what is it based, and the thrust of the question is, is it  
25 an exact copy of a handwritten log or perhaps are the times

1 correct, but the typed description of the call and  
2 everything perhaps expanded from existing notes? Or  
3 might it be just a concensus or recollection of events,  
4 not really based on substantive or handwritten notes taken  
5 at the time of calls?

6 A Under our emergency operations center procedures,  
7 every action desk in PEMA -- that's my own staff plus all  
8 of the state agencies -- are provided mimeographed forms  
9 which are message receipt and transmittal forms. Each  
10 telephone call and each radio message or other oral  
11 message being relayed is supposed to be reduced to writing  
12 at the time of the event.

13 These message forms are then sent to a typist who  
14 we call our journal clerk, our law clerk, action log clerk.  
15 That person takes these messages and puts them in a  
16 sequential order, time sequential order. At the conclusion  
17 of each day, that person types them on this action log  
18 and shows the actions that were taken on that particular  
19 message which the originator has blocks to fill in.

20 I believe that the time sequence shown are relatively  
21 accurately, recognizing that in an organization such as  
22 ours, some people use the wall clock, others use their  
23 wristwatches, some people, when they make out the message  
24 in haste, may forget to put the time down and come back and  
25 reconstitute the time -- so for other than minor changes.

1           Now, the log, once the log is typed, it is sent to my  
2 operations officer, Dick Lamison. What we want the log  
3 to show is merely a cryptic statement of the problem or of  
4 the call. For the most part, our message backup, which we  
5 maintain in a handwritten page taken down by the originator,  
6 provides us the backup.

7           Now, in order to keep this log relatively brief,  
8 Mr. Lamison will frequently, on the first draft, knock  
9 out a lot of the goobledigook or will insert, from the  
10 original message, something to make the statement a little  
11 more meaningful.

12           So from that aspect, this has been policed from the  
13 original log. But for the most part, we do have backup a  
14 message form of one fashion or another.

15           Q           Then this log would accurately and adequately  
16 reflect the events -- within the inaccuracies of time that  
17 you have mentioned -- and your agency's response?

18           A           To the best of my knowledge, yes.

19           MR. ERNST: That is the end of my list of  
20 questions. You have testified many times before, and you have  
21 had some lessons learned, I think, in the President's  
22 Commission in which you went on record.

23           On reflection, do you have anything else you would like  
24 to add to everything that's gone before or anything that  
25 might help us in our inquiry at this time?

1 THE WITNESS: No, I don't believe there is anything  
2 that I can contribute to what has already been said.

3 MR. ERNST: Outstanding questions?

4 MR. HERR: I've got one small question. You  
5 mentioned on Friday morning, you talked to Kevin Molloy  
6 about the pending order to evacuate that you thought was  
7 coming and that you talked to your representatives in  
8 Lancaster and York Counties. Could you identify who  
9 from PEMA you spoke to in Lancaster and York Counties that  
10 morning?

11 THE WITNESS: I'm only guessing, but I surmise  
12 that it probably was Bob Stimmel in York County, and  
13 Bob Hetz in Lancaster.

14 MR. HERR: Thank you.

15 MR. CHIN: I have no questions.

16 MR. ERNST: In conclusion, let me say that  
17 this is an ongoing investigation, and although I have  
18 concluded the questions that I had for you today, it is  
19 possible we might need to ask you some residual questions  
20 at some later time. We will, however, make every effort  
21 to avoid having to do so.

22 I will now recess this deposition rather than terminate  
23 it, and wish to thank you very much for your time and  
24 efforts spent in being with us today.

25 THE WITNESS: You're quite welcome.

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(Whereupon, at 12:10 p.m., the taking of the  
deposition was concluded.)

Oran K. Henderson





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

September 4, 1979

In Reply Refer to:  
NFTM 790904-05

Col. Oran K. Henderson, Director  
Pa. Emergency Management Agency  
Room B-151  
Transportation & Safety Bldg.  
P. O. Box 3321  
Harrisburg, Pa. 17105

Dear Col. Henderson:

I am writing to confirm that your deposition under oath in connection with the accident at Three Mile Island is scheduled for September 20, 1979 at 9:00 a.m., in a meeting room at the Holiday Inn Town motel, 2nd and Chestnut Streets, Harrisburg, Pa. Please bring with you a copy of your resume and any documents in your possession or control regarding TMI-2, the accident or precursor events which you have reason to believe may not be in official NRC files, including any diary or personal working file.

The deposition will be conducted by members of the NRC's Special Inquiry Group on Three Mile Island. This Group is being directed independently of the NRC by the law firm of Rogovin, Stern and Huge. It includes both NRC personnel who have been detailed to the Special Inquiry Staff, and outside staff and attorneys. Through a delegation of authority from the NRC under Section 161(c) of the Atomic Energy Act of 1954, as amended, the Special Inquiry Group has a broad mandate to inquire into the causes of the accident at Three Mile Island, to identify major problem areas and to make recommendations for change. At the conclusion of its investigation, the Group will issue a detailed public report setting forth its findings and recommendations.

Unless you have been served with a subpoena, your participation in the deposition is voluntary and there will be no effect on you if you decline to answer some or all of the questions asked you. However, the Special Inquiry has been given the power to subpoena witnesses to appear and testify under oath, or to appear and produce documents, or both, at any designated place. Any person deposed may have an attorney present or any other person he wishes accompany him at the deposition as his representative.

You should realize that while we will try to respect any requests for confidentiality in connection with the publication of our report, we can make no guarantees. Names of witnesses and the information they provide may eventually become public, inasmuch as the entire record of the Special Inquiry Group's investigation will be made available to the NRC for whatever uses it may deem

appropriate. In time, this information may be made available to the public voluntarily, or become available to the public through the Freedom of Information Act. Moreover, other departments and agencies of government may request access to this information pursuant to the Privacy Act of 1974. The information may also be made available in whole or in part to committees or subcommittees of the U.S. Congress.

If you have testified previously with respect to the Three Mile Island accident, it would be useful if you could review any transcripts of your previous statement(s) prior to the deposition.

Thank you for your cooperation.

Sincerely,

*Mitchell Rogovin*

Mitchell Rogovin, Director  
NRC/TMI Special Inquiry Group

## BIOGRAPHICAL SKETCH

ORAN K. HENDERSON

The Colonel who was born on August 25, 1920, is a native of Indianapolis, Indiana.

Colonel Henderson enlisted in the Indiana National Guard in April 1939. His initial assignment was as a machine gunner with Company D, 151st Infantry Regiment. His active duty began when his unit was called into Federal service on January 17, 1941. After completing Infantry School OCS in early January 1943, he was commissioned a Second Lieutenant.

After receiving his commission, Colonel Henderson was assigned first to Camp Roberts, California, and then to Fort Lewis, Washington. At Fort Lewis, he served with the 71st Infantry Regiment as Rifle Platoon Leader, Battalion Personnel Officer, and Battalion Training Officer. When his unit was deployed to the European Theater of Operations in August 1944, he was assigned as a Rifle Platoon Leader. He was seriously wounded in action on November 13, 1944, and was returned to duty in a limited status in February 1945. Upon his request, he was reassigned to the 71st Infantry Regiment as Weapons Platoon Leader until his unit was returned to the United States in August 1945 to prepare for deployment to the Pacific.

In September 1945, the Colonel was assigned as Regimental Adjutant and continued in that capacity until his unit was inactivated in December 1945. In January 1946, he was assigned to Headquarters, Second U.S. Army, Memphis, Tennessee, as Post Exchange Officer. He was separated from the service in September 1946 in the grade of Captain and awarded a 60 percent disability due to wounds received in action.

At Colonel Henderson's request, he returned to active duty on October 31, 1946. He served initially as Supply Officer and Billeting Officer with Headquarters, Second U.S. Army, at Fort Meade, Maryland. From March 1947 to June 1950, he was assigned as Aide-de-Camp to the Deputy and Army Commander.

From July 1950 through January 1951, he attended the Associate Advanced Course Infantry School and the Airborne School. The Colonel served from February 1951 through July 1952 in Korea as Commanding Officer, Company C, 38th Infantry Regiment, as Regimental Adjutant and as Aide-de-Camp to General James Van Fleet.

When the Colonel returned to the United States in July 1952, he was assigned to the 82nd Airborne Division where he was a Battalion Executive Officer, later an Executive Officer of the (G3) Training Section, and subsequently, as Battalion Commander. During this assignment, he attended the Associate Course, Command and General Staff College at Fort Leavenworth, Kansas. He left the 82nd Airborne Division in July 1955 for assignment with the 11th Airborne Division. When the 11th was assigned to Germany, his assignments were Battalion Executive Officer, Battalion Commander, Regimental Training Officer, and Commander of Troop C, 17th Cavalry. He was Troop Commander of the 17th Cavalry in Lebanon during the period June 1958 through October 1958.

Colonel Oran K. Henderson

Colonel Henderson graduated from the Armed Forces Staff College in June 1959. He was then assigned to the Office of the Chief, Research and Development, in the Pentagon. In January 1962, he participated in the Boot Strap Program and received his degree from the University of Maryland in June 1962. From August 1962 through July 1963, he was a student at the Naval War College in Newport, Rhode Island. While attending the War College, he participated in the Master's Degree Completion Program with George Washington University.

When Colonel Henderson graduated from the Naval College, he was assigned to the U.S. Military Assistance Command, Vietnam, for duty with the Joint Research and Test Activity. He completed his Vietnam tour in July 1964. In August 1964, he was assigned as Brigade Executive Officer, 25th Infantry Division, Schofield Barracks, Hawaii. He was promoted to Colonel in early November 1965 and was then reassigned to the Training Office, Headquarters, U.S. Army Pacific. On July 1, 1966, the Colonel was assigned as Commanding Officer, 11th Infantry Brigade, Schofield Barracks.

The Brigade was sent to Vietnam in December 1967. He served repeatedly in assignments as Commander and Deputy Commander of the 11th Infantry until October 3, 1968. During this Vietnam tour he was wounded.

He then returned to Schofield Barracks for assignment to the (G3) Training Office of Headquarters, U.S. Army Hawaii. From July 1969 to June 1971, he served with the faculty of the Armed Forces Staff College in Norfolk, Virginia.

From June 1971 until February 1973, the Colonel served at First U.S. Army Headquarters, Fort George G. Meade, Maryland, as Assistant Deputy Chief of Staff for Operations and Training. During this assignment, the Colonel was tried and acquitted of charges growing out of the My Lai incident. In February 1973, he assumed Command Fort Indiantown Gap and remained in this capacity until his retirement on 1 August 1974.

Colonel Henderson's awards and decorations include the third award of the Combat Infantry Badge, five Silver Stars, five Bronze Stars (two for valor), four Purple Hearts, the Legion of Merit, w/ 1 OLC, Joint Services Commendation Medal, Army Commendation Medal (with Cluster), Pa. Distinguished Service Medal, Vietnamese Cross of Gallantry, and the Vietnamese Medal of Merit (Knight Fifth Class), and numerous service awards.

In early September 1974, Colonel Henderson was appointed Deputy Director for the Pennsylvania Bicentennial Commission. He continued in this position until appointed Director, State Council of Civil Defense on 19 August 1976.

Goove to Jessica Tuckman - W.H. 1, 1971 (2)

confirm receipt at site with GASSICK or Case

NRC PROCEDURES FOR DECISION TO RECOMMEND EVACUATION

Who Decides

1. Combination of consequences and times require immediate initiation of evacuation: Senior NRC Official on site recommends to Governor.
2. Unplanned event with substantial risk takes place or is imminent or situation judged excessively risky but there is time for consultation. Senior NRC Official notifies Governor and NRC HQ. Chairman makes recommendation to Governor after consulting with Commissioners if possible.
3. Planned event involving significant additional risk. Chairman and Commissioners makes recommendation.

Chmn. Hendrie  
H. Denton  
Van (Site)

7905300211

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## Unplanned Events

EVENT	EXPECTED PLANT RESPONSE	RELEASE AND TIME	WARNING TIME	EVACUATION SCENARIO
1. Loss of vital function or unplanned leaks.	Restore function within 1 hour	No significant change		Possible pre-cautionary evac 2 mi; stay inside 5 mi
<u>Examples</u> Reactor Coolant Pump Trip; Loss of offsite power; Loss of feed-water;	Switch to Alternate Function involving Primary Coolant in Auxiliary Building	Small leak less than 1 gal/hour		possible pre-cautionary evac 2 mi; stay inside 5 mi
Depressurization to go on RHR;	Serious possibility of failure to restore a vital function	Large leak 50 gal/min	2 hour	Evac 2 miles Stay Inside 5 miles
Leak in Auxiliary Building	See 2			

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*- conservative*

These tables include a number of assumptions about activity and weather, chosen realistically. In an actual release, the rate and weather should be evaluated as they are at the time, and the decision based on those values.

(2)

EVENT	EXPECTED PLANT RESPONSE	RELEASE AND TIME	WARNING TIME	EVACUATION SCENARIO
2. Sequence leading to Core Melt	Maintain Containment Integrity (likely) with Containment Cooling	Design Containment Leak Rate	4 hour	Precautionary Evac 2 mi all around and 5 mi, 90° sector stay inside 10 mi
	Containment expected to Breach	Significant release of core fission products	24 hour (time for containment failure)	Evac 5 mi all around and 10 mile, 90° sector, stay inside 15 mi
3. Hydrogen flame or explosion possible inside reactor vessel	Mixture in flammable range			Precautionary 2 mi (?) + 5
	Explosion; major damage Core Melt See 2			
4. Evacuate or Lose Control Room	Loss of Control Treat like major release			Precautionary (3) Evac 5 mi all around and 10 mi 90° sector, stay inside 15 miles

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EVENT	EXPECTED PLANT RESPONSE	RELEASE AND TIME	WARNING TIME	EVACUATION SCENARIO
Planned Manuever	Probability of losing vital function	See releases under loss of vital function	Timing of manuever can be set to provide as much time as necessary	Precautionary evacuation 2 miles, stay inside 5 miles PLUS See outcomes under loss of vital function.

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Action Guidelines

- a. Notify evacuation authorities two hours in advance (if possible) to standby for a possible evacuation.
- b. Projected doses of 1 rem whole body or 5 rems thyroid stay inside.
- c. Projected doses of 5 rems whole body or 25 rems thyroid mandatory evacuation of all persons.

Assumes general warning already that some form of evacuation may become necessary.

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### Weather

The table is based on a realistic prediction of the weather for the next few days, based on the April 1 forecast which would result in high doses at a given distance. At the approach to decision time for evacuation, the appropriate meteorological condition will be factored into the dose estimates to determine the evacuation time, sectors, and distances for the evacuation.

NRC is predicting the dispersion characteristics of the region for the currently measured meteorology as the incident progresses. Rain could lead to higher local radioactivity levels.

### Heat Generation

The reactor core is now quite cool compared to the conventional design-basis calculations.

1. The reactor is new, so no fuel has more than 3 months equivalent operation, compared to 1-2 years average for other plants.
2. The neutron chain reaction has been shut down for over 4 days.

It should also be noted that the concrete basemat of this plant is unusually thick.

As a result of the above differences, calculations for this plant at this time predict that the core will not melt its way through the containment.

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EVENT 1 SPRAYS & COOLERS OPERATIVE

TIME=0 SLOW STOP CORE & WATER START HEAT UP  
live water start

Time=100 min Core starts to UNCOVER

Time=150 min Core begins to MELT

Time=200 min Molten core is in lower head of reactor vessel, pressure is 2500 psia

Time=210 min Reactor vessel fails, containment pressure goes to 25 psia

Time=210 min Hydrogen burns, containment pressure goes to 67 psia  
Steam explosion possibility - minor consequence

CONTAINMENT SURVIVES (Failure assumed 130 psia)

Time=10 hours Molten core has melted about 1 meter into basemat

Time=days Major problem - handle hydrogen, oxygen - maintain containment integrity

- CAUTION:
- Keep sprays running
  - Keep water many feet molten debris
  - WITHOUT RECOMBINERS Hydrogen continues to build up

BASEMAT SURVIVES

Event 1 Conclusion: This event should not produce major releases

Event 2 - Sprays and Coolers Failed Before Flow Stops

Time=0 to Time=210 min Same as Event 1 - containment pressure is 25 psia

Time=810 min Containment pressure is 70 psia

Time=1 day Containment fails due to steam (mostly) overpressure - about 135 psia

CONTAINMENT FAILS

Event 2 Conclusion: This event leads to major releases.

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