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UNITED STATES OF AMERICA

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THE PRESIDENT'S COMMISSION

ON

THE ACCIDENT AT THREE MILE ISLAND

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(Oral deposition of THOMAS M. GERUSKY)

APPEARANCES:

POOR ORIGINAL

CHARLES A. HARVEY, ESQUIRE
2100 N Street N. W.
Washington, D. C. 20037

Associate Chief Counsel for
The President's Commission
on The Accident at Three
Mile Island

RUTH DICKER, ESQUIRE
2100 N Street N. W.
Washington, D. C. 20037

Associate Chief Counsel for
The President's Commission
on The Accident at Three
Mile Island

Taken at:

Room 101
Sheraton Motor Inn
West Shore
Harrisburg, PA

1:00 p.m.
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EXHIBITS

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Exhibit No. 1

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Exhibit No. 2

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POOR ORIGINAL

1913 022

P R O C E E D I N G S

THOMAS M. GERUSKY, sworn

(Exhibit No. 1 marked.)

(Exhibit No. 2 marked.)

BY MR. HARVEY:

Q Would you state your full name and your position for the record, please.

A Thomas M. Gerusky. I am Director of the Bureau of Radiation Protection, Department of Environmental Resources, Commonwealth of Pennsylvania.

Q Have you prepared a resume for submission into this deposition?

A Yes, I have.

Q We have marked that resume as Exhibit No. 1. Is this resume complete and accurate as of this date?

A Yes, as far as I know, it is.

Q Are there any changes or additions or deletions you would like to make to the resume?

A I reviewed it this morning, and it looks like it is okay.

Q I would like to go into the background, some background information, on the Department of Environmental Resources, and specifically, the Bureau of Radiation Protection within the Department.

What are the day-to-day duties of the Bureau of

1 Radiation Protection within the Department?

2 A We have a total staff of 25, with two vacancies at
3 the present time. A total staff of 25.

4 The majority of the activities are related to inspec-
5 tion, licensing and determining compliance with a big set of
6 regulations for all non-NRC licensed users of the radioactive
7 material and x-ray equipment in Pennsylvania.

8 We have field offices set up in Harrisburg, Reading
9 and Pittsburgh. People operate out of those offices doing
10 routine inspection programs.

11 There are over 9,000 registered users of radiation
12 sources in Pennsylvania. That takes up a major portion of our
13 time.

14 The second part of the program is ~~the~~ environmental
15 surveillance and emergency planning, laboratory activities,
16 and that is in the Division of Environmental Radiation.

17 The laboratory has four people, and the total number
18 of people in that division, I think, is seven or eight.

19 All the reactors in Pennsylvania are involved in --
20 we are involved with environmental monitoring around each of
21 the reactors and also the nuclear ^{fuels} processing plant in a couple
22 of locations in Pennsylvania and just general background radia-
23 tion monitoring.

24 Q So that division would be involved with NRC licensed
25 facilities?

1 A Right.

2 We also have a nuclear engineer on board who is
3 responsible for reviewing the technical aspects of reactors in
4 particular. We are all involved in every hearing that NRC has
5 had. Also, we are involved with non-NRC reactors ^{such as} ~~except~~
6 Shippingport and Shippingport light water breeder, which we
7 had a deep involvement in and suggested many changes to Admiral
8 Rickover as a result of Bill Dornsife's, our nuclear engineer,
9 review of the procedures to operate that plant for a short
10 period of time.

11 Q I take it that originally the Bureau of Radiation
12 Protection was a part of the Department of Health within the
13 Commonwealth of Pennsylvania.

14 Could you give us the background on how that split
15 off occurred?

16 A In 1970, I believe, the Department of Environmental
17 Resources was created under an Act of the General Assembly, at
18 the time when there was considerable concern about protecting
19 the environment.

20 Most of the protection programs were situated in the
21 Department of Health. They were all transferred to the new
22 agency. This new agency combined three departments, the Depart-
23 ment of Mines and Mineral Industry, the Department of Forest
24 and Waters and the regulatory portion of the Department of
25 Health.

1 We were in the Department of Health, I believe, as
2 an office of Radiation Protection at the time, because our
3 program had a significant relationship to the air-water programs,
4 and we were doing a lot of environmental monitoring activities.

5 It was felt that the whole program should be trans-
6 ferred to the new agency and keep the small staff we had
7 together, because there was a very serious need to have a staff
8 interact with one another and not have them compete from agency
9 to agency.

10 The whole program, even though it was related directly
11 to health, was transferred to the new department. That happened
12 not only in radiation protection, but it happened in sanitation.
13 The restaurant inspections were transferred. That is directly
14 related to health. It is environmental sanitation.

15 We kind of consider radiation -- there are personal
16 environments and general environments and industrial environments.
17 It is an environmental agent, and radiation naturally falls
18 under that category. It was a nice way of putting it anyway.

19 Q Would it be fair to say that the split from the
20 Department of Health and going into the new Department of
21 Environmental Resources was following the federal model?

22 A Yes. I don't think it would have ever happened if
23 EPA had not been created.

24 Q When the Bureau of Radiation Protection, or as it
25 was then an office, went into the Department of Health and was

1 involved in inspecting and regulating, let's say, a medical
2 radiation facility, was there any problem in the working
3 relationship between, let's say, the Health Department and the
4 Radiation Protection Office with respect to monitoring and
5 relating medical facilities?

6 A No, not that it caused a serious problem.

7 Whenever there was a problem with a hospital or a
8 physician, there is a tendency to back away because these --
9 at that time anyway, I am not sure it would be the same today,
10 there would be a different attitude today in the whole country,
11 but to back away and try to resolve it in a friendly manner
12 rather than to go and resolve it in a regulatory manner.

13 There is a pressure to be nice to the doctors because
14 there is a doctor who is our boss. When we ran into trouble
15 in certain instances, we got the problems resolved but it took
16 longer than it could have taken normally -- than it does take
17 now in this department.

18 I am not sure, but I think the staff now and then
19 felt that they could do their jobs without pressure from above.
20 We found out that we have been able to do it. We have very
21 little control placed over us by our supervisors. They believe
22 we are doing our job and unless they get any serious complaints,
23 they let us continue to do it and they haven't gotten any
24 serious complaints.

25 There was more control exercised over us in the Health

1 Department than there was in DER; mainly because we were affect-
2 ing the medical profession, being in the health and medical
3 profession.

4 Q Are you aware of a proposal that originated from the
5 Department of Health, and has apparently been forwarded to the
6 Governor to in effect remerge or reunite radiation protection
7 programs into the Department of Health?

8 A Yes, I believe it has already been approved as part
9 of their reorganization plan to have a Division of Radiological
10 Health.

11 Q How do you understand that would affect your operation?

12 A I think it would affect our operation significantly
13 if it went forward. We have a good program in the Department
14 of Environmental Resources. If only the health-related
15 activities went, it would do the same thing we wanted to stop
16 doing and that is to stop from occurring back in 1970. It
17 would split it up into two areas, and I don't think -- as long
18 as a government agency is carrying out the job and doing satis-
19 factorily, either the whole program goes or it all stays. I
20 am opposed to any split in the program. I do not think it would
21 be satisfactory in the Health Department under that system.

22 Again, working for a physician, back to the physician
23 problem of regulating M.D.'s.

24 Q When an NEC licensing facility is being proposed,
25 for example, licensing proceedings are occurring, what role

1 has the Bureau played, for example, in licensing of the TMI
2 facility?

3 A In every hearing -- I believe in every hearing, and
4 there may have been one hearing where we intervened in opposi-
5 tion to the plant, in most hearings we enter the hearing as a
6 state, under the Atomic Energy Act, and be provided with all
7 the information needed that everyone else gets.

8 We would not -- we would participate not as a party
9 but as a state with all the rights the parties have.

10 In the past this has varied from when I was involved
11 with this Peach Bottom I and lawyers from the Department were
12 the main spokesmen. In other cases where lawyers weren't
13 available and the hearings dragged on, we took over the respon-
14 sibility of representing the Commonwealth completely.

15 We have promised our bosses and the Governor that we
16 would participate in all hearings to insure that the proper
17 areas of concern are addressed and resolved before the licensing
18 board finishes its job, at ~~Three Mile~~ Island.

19 *AT TMI*
20 One, the Commonwealth brought up the subject of the
21 aircraft, a possible aircraft strike from the new International
22 Airport. It was, at that time, a military base, and very few
23 flights would be coming into the airport, and hopes of the
24 community at least, to make it a major international airport.

24 The question on whether the plant could survive a
25 plane crash was brought up and as a result the design of the

1 plant was changed to withstand a large aircraft.

2 There were hearings that were scheduled a week after
3 the TMI accident to determine whether the plant could withstand
4 an accident involving a larger aircraft than the 707, which I
5 believe was the one that was designed -- they were talking
6 about the larger aircraft coming in on a routine basis and
7 whether the plant could withstand that. The hearings had not
8 yet begun. An engineering evaluation was being done, and I
9 don't know what the results were.

10 Q So that the Bureau of Radiation Protection has played
11 a role in the licensing of nuclear facilities as the state's
12 representative at the hearings?

13 A In the majority of the cases, yes.

14 Q Raising concerns that the Bureau has identified in
15 the licensing process?

16 A Either that or answering questions that had been
17 raised by other people concerning our role in the process.

18 The majority of the time we have not testified, but
19 did cross-examine witnesses and made statements.

20 I do not think in any case that we came out either
21 for or against the facility except in the case of one plant in
22 New Jersey, on the New Jersey-Pennsylvania border; where,
23 because of its closeness to a high population center, we
24 opposed the construction.

25 NRC subsequently or AEC, I guess at the time, sub-

1 sequently suggested that the site be moved, and it is now in
2 southern New Jersey away from large population centers.

3 There is only one plant where we really went in, in
4 opposition and that was Newbold Island in New Jersey.

5 Q Has the Department played any role in the licensing
6 or the loading of TMI 2?

7 A Yes. We were involved in the hearing on TMI 2,
8 again, representing the state. We did not present testimony.
9 Testimony was presented by the Civil Defense people in Dauphin
10 County Civil Defense in those hearings. Our lawyer arranged
11 that testimony, but we, ourselves, did not participate as
12 witnesses in the hearing.

13 Q Is part of the work of your Bureau involved in
14 developing radiological protection plans and emergency nuclear
15 incident, an emergency preparedness plan, for NRC licensing
16 facilities?

17 A Yes.

18 Q In connection with Three Mile Island nuclear station,
19 has the Bureau come up with a plan relevant to that station?

20 A Yes.

21 Q I show you what has been marked as Deposition Exhibit
22 No. 2 and ask you if this is a copy of the plans relevant to
23 Three Mile Island that have been developed by your Bureau?

24 A Yes.

1913 031

25 Q Who is the person principally responsible for developing

1 these kinds of plans?

2 A Margaret Reilly, who is the Chief of our Division ^{of} ~~in~~
3 Environmental Radiation.

4 Q These plans, the package that I have marked as Exhibit
5 No. 2, really include three documents. First is a letter dated
6 June 18, 1979 to Bruce Lundin, L-U-N-D-I-N, of the Commission
7 staff signed by you transmitting the plans.

8 Second, a document entitled Three Mile Island Nuclear
9 Station Annex to the Pennsylvania Plan for the Implementation
10 of Protective Action Guides.

11 Third, a September 1977 document entitled Department
12 of Environmental Resources, Bureau of Radiological Health Plan
13 for a Nuclear Power Generating Station Incident.

14 Were these two plans developed by Margaret Reilly?

15 A Yes, they were.

16 Q Under your direction and control?

17 A Right.

18 Q Am I correct that the first plan, the Plan for the
19 Implementation of the Protective Action Guides, is an attempt
20 to develop a plan to implement guidelines promulgated by the
21 Environmental Protection Agency at the federal level?

22 A I believe it is the other one that includes the
23 guidelines.

24 Q That is the September 1977 plan?

25 A Yes.

1913 032

1 The specific site plans are for the site itself, I
2 believe. Protective action guides for melt ^{down} and so forth.

3 Q Referring to the 1977 Plan for Nuclear Power Generating
4 Station Incidents, could you describe generally what this Plan
5 is designed to do and the reason why it was put together?

6 A Well, it is a guidance for our program and other
7 individuals who may be involved in a reactor accident, which
8 shows -- which gives us procedures to follow and methods of
9 using the EPA protective action guides in a particular -- in
10 any accident.

11 One has to turn specifically to the site in question
12 to -- because of the uniqueness of each site, to determine what
13 actions are taken at that site. It gives procedures and it
14 gives us general guidelines on how to handle an accident at a
15 nuclear power plant. It fills us in on the kind of accidents
16 that can happen. What the actions that we can take or recommend
17 should be.

18 Q Could you describe briefly, what the EPA protective
19 action guidelines are?

20 A Off the top of my head, I would have to look them up
21 just to make sure.

22 Q What they are designed to do?

1913 033

23 A They are set up to prevent serious exposure to the
24 population where immediate action is required and to give
25 guides for action that can be taken at lower levels to reduce

1 exposure as a result of a major accident at a nuclear power
2 plant.

3 Q For example, would the guideline give a specific
4 level of exposure and then recommend an action that should be
5 taken?

6 A Yes. The action would depend upon the ^{severity} ~~seperity~~ of
7 the exposure.

8 Q Your plan here incorporated some of those protective
9 action guidelines?

10 A Right.

11 Q Turning to the Three Mile Island Annex to the Plan,
12 the Annex is designed to implement the larger plan to a specific
13 site?

14 A Right, and to try to evaluate the kinds of things
15 that are happening at that site to determine what kind of off-
16 site consequences there will be, because this is a PWR, it's
17 got some features that other reactors do not have and it has
18 some features -- it is lacking some features that other reactors
19 do have, and that has to be taken into consideration in the
20 problem.

21 We have tried in the plan, to evaluate the kinds of
22 accidents that could occur. So that we could see the sequence
23 that occurred and what kind of protective action would be
24 required.

25 Q Under the plans and under the scheme in the state

1 government as a whole, the Bureau of Radiation Protection --

2 A We just changed the title in the last year. That is
3 what is causing everybody problems. It is still in the telephone
4 book as Radiological Health.

5 Q The Bureau of Radiation Protection is responsible
6 for evaluating exposure of the population and then recommending
7 to other state agencies the appropriate action to be taken?

8 A Right.

9 Q If radiological exposure --

10 A As a matter of fact, we have a written agreement
11 with the Pennsylvania Emergency Management Agency as to the
12 responsibilities of both agencies. That spells out that we
13 assist them -- we provide them with guidance and recommendations,
14 but they are the ones who must take the action.

15 Q So that the Bureau is the agency which would recommend
16 a particular action to the Civil Defense or PEMA, which would
17 then implement that action?

18 A That's right.

19 We are their technical arm when it comes to general
20 radiation exposure, even through a weapons program because --
21 a weapon problem, because we have agreed with them that we
22 would assist them if there was a major attack on the United
23 States. We are involved with Civil Defense as their radiation
24 experts.

25 Q Prior to the Three Mile Island incident, was there

1 any provision made in any of these plans for the input or
2 recommendations or integration of federal agencies in a peace-
3 time nuclear emergency?

4 A Yes. The telephone numbers and -- there is available
5 to the states, federal interagency assistance. That, in our
6 area, comes from the Department of Energy either at Brookhaven
7 National Laboratory or at other Department of Energy locations
8 in the state where they have emergency response teams.

9 The Brookhaven emergency response numbers were
10 included in the plans. The Department of Energy was incorporated
11 into the plan.

12 We have a written agreement with the Brookhaven
13 office of the Department of Energy to assist us in handling
14 any accidents in Pennsylvania.

15 Q Their principal function would be environmental
16 monitoring and evaluation of data?

17 A Right.

18 Q They would not be recommending protective actions to
19 PEMA or other state agencies?

20 A No, only at our request.

21 Q Was there any provision in any of the plans for the
22 recommendation by federal agencies for protective action to
23 state agencies?

24 A No, and in particular, the NRC.

25 Q There was no provision for NRC?

1 A There was no provision for NRC.

2 Q Turning to the question of environmental monitoring
3 by the Bureau, prior to the Three Mile Island incident, could
4 you describe, just generally, what the monitoring program was
5 by the Bureau, or let's say the Three Mile Island station?

6 A It was a small operation designed mainly as a check
7 on the monitoring program of the utility, which was by NRC
8 regulation much more detailed than ours.

9 We had one air sampling station located at the
10 observation building, which included a charcoal filter so
11 iodine could be sampled. We had, I believe, four Thermolumi-
12 nescent Dosimeters in locations that were the same as the
13 utility locations, north, south, east and west of the plant.
14 Five, including one at the observation center.

15 Samples of water, milk, the nearest cow, was sampled.
16 Again, the same locations as the utility. We weren't splitting
17 samples on those. On some samples where fish or wildlife
18 samples were taken, they would be split with the utility and
19 our analysis would be done separately.

20 In most cases, there were separate analyses, but in
21 most cases they were not split samples. They were indeed
22 samples collected by our own people. River water samples
23 were collected. That is about it. River, air, food samples,
24 milk and radiation.

25 Q As far as the air monitoring program was concerned,

1 is it fair to say you were generally -- it was a program to
2 check on the data collected by the utility itself?

3 A Yes. The whole program was designed for that purpose.

4 We wanted to expand it to do our own thing. In
5 effect, the program was designed as a check on the utility's
6 program.

7 If the utility did not find something in a sample
8 where we were at the same location, there would be a way to
9 verify.

10 We got stung in a monitoring program prior to this
11 at Shippingport where hearings were held by a special Governor's
12 investigating committee because of allegations made by Dr.
13 Ernest Sternglass, that people were dying around the Shipping-
14 port plant.

15 We did not have an environmental monitoring program
16 in existence around Shippingport because it was a Department
17 of Energy facility, a naval reactor facility.

18 Our program was not available to verify the program
19 of the Shippingport contractor. Some of the numbers that were
20 reported by the contractor were high. There was no way to tell
21 whether they were real or not.

22 It took months to determine whether or not there
23 indeed were exposures around the Shippingport area and whether
24 there were any effects. In effect, the committee said there
25 wasn't enough data for them to tell whether there was a problem

1 or there wasn't a problem, but they strongly recommended that
2 the state increase its environmental monitoring program so
3 that we could determine whether there were indeed releases
4 from plants, and so that we could check on their program and
5 we could do our own program. All we have been able to do is
6 to check on their program.

7 We do have funding from NRC to provide them with the
8 data from our monitoring programs. That funding requires us
9 to do certain minimum things. We are carrying out the minimum
10 program required by NRC at each of those locations.

11 Q Prior to the Three Mile Island incident, you were
12 carrying out this minimum NRC checking fail-safe program. Had
13 you applied to the Legislature for a more comprehensive program?

14 A Yes.

15 Four years ago, I believe, we testified -- I testified
16 before the House Mine and Energy Management Committee and
17 recommended that our environmental monitoring -- any emergency
18 response programs be increased. That they are tied together
19 and that the present -- the ones we presently have were almost
20 useless for emergency response or for determining emergency
21 levels, radiation levels in the environment as the result of
22 an accident.

23 As a result of that, legislation was written to fund
24 an additional environmental monitoring program and an emergency
25 response program.

1913 039

1 The legislation was introduced later in the session,
2 four years ago. Then there are two-year sessions. It was re-
3 introduced in the session in the last two years, and it passed
4 the House and it didn't pass the Senate. There was \$300,000
5 under appropriations -- \$300,000 that was added to the legis-
6 lation.

7 This year it was reintroduced right at the beginning
8 of the session and it just passed a couple of weeks ago.

9 The Governor, apparently, has signed it. I haven't
10 got a copy of it.

11 We had a telephone call from a reporter who told us
12 the Governor signed it, but I don't know whether he signed it
13 or not.

14 It doesn't make any difference, because the money,
15 the funding for the House Bill was transferred to the General
16 Fund budget, which was passed, and we did get the \$300,000 in
17 the General Fund budget; specifically, to upgrade our environ-
18 mental surveillance and emergency monitoring program.

19 We have a commitment from the Governor to keep the
20 funding at that level, maybe \$350,000 next year, to do it in a
21 two-step phase. It is awful hard to build up a program to
22 double the size or triple the size of your program in a very
23 short period of time.

24 We have the money now, and we still haven't been
25 able to start spending any of it, with rebudgeting and everything

1 else. By the time we get things going, it will be September.

2 Q The funding for that monitoring program came after
3 the Three Mile Island incident?

4 A Yes. The funding was proposed prior to it, and it
5 was the same amount of money.

6 Q The Bill that had originally proposed it had died
7 without funding prior to Three Mile Island?

8 A No, had died with funding.

9 Q Had died with funding?

10 A Yes. There was always \$300,000 in appropriations
11 in every version of the Bill until the last version when they
12 took \$300,000 out and put it in the budget. Then they passed
13 it after they passed the budget bill.

14 Q So the Bill died before the Three Mile Island accident
15 and then was proposed --

16 A It was reintroduced before Three Mile Island. After
17 Three Mile Island it was taken out -- the funding was taken out
18 and put in a budget.

19 Q As far as the pre-Three Mile Island accident monitoring
20 program is concerned, do you have a document that reflects
21 what that monitoring program was?

22 A Yes. I can deliver it to you tomorrow.

23 MR. HARVEY: We will use that as Exhibit 3, and we
24 will introduce it into the deposition at a later time.

25 BY MR. HARVEY:

1913 041

1 Q Just to summarize the state of the monitoring program
2 at the time of the Three Mile Island incident, is it fair to
3 say that the Bureau and the state, as a whole, was not equipped
4 to monitor a nuclear incident of the proportions of Three Mile
5 Island?

6 A We are not equipped to monitor the incident as well
7 as it should have been monitored. There is a difference
8 between being able to monitor completely and getting enough
9 information to make an evaluation.

10 When, in this particular case, it was determined that
11 there were no radio iodines of any consequence being released
12 from the plant, our monitoring program, our individual monitoring
13 program using survey equipment in the field was acceptable as
14 a means of determining levels off site.

15 We did not have the portable air sampling equipment
16 that we would have liked to have had, which would have included
17 the iodine monitoring. In this case, we had to rely upon the
18 utility air monitoring setup to determine whether or not there
19 was indeed radioactive iodine.

20 In reactor accidents, the first thing you think of
21 is exposure from radio iodines because that is the most important
22 isotope that could be released from a biological point of view,
23 immediately anyway.

24 We were very concerned about iodine concentration.
25 We couldn't sample it except at one location, and the wind

1 wasn't blowing that way. We did have problems until the
2 utility was able to do it.

3 When DOE came in and EPA and everybody else later,
4 there was adequate capability.

5 Q As far as the state's capability was concerned,
6 without the participation of federal agencies, is it fair to
7 say --

8 A We would have been in trouble, yes, without the
9 participation of the Department of Energy, in particular. I
10 don't think -- although they came in and we were able to use
11 them, the EPA involvement was nowhere near as important to us
12 immediately as DOE, in this phase of the accident.

13 We still got a good couple of years to go before we
14 are out of the woods. The EPA role has become of major
15 importance and DOE is almost out of the picture.

16 Q Did DOE come into the picture at your request?

17 A Yes. We did request them, but I think when that
18 request came out they decided they needed more than the team
19 from Brookhaven and wham, everybody came. They had hundreds
20 of people up here from all their major facilities around the
21 country. They did a heck of a job.

22 As Maggie would say, they were the grunts, the
23 people who knew what a reactor was, knew what the problems
24 were and knew how to go out and get the samples and analyze
25 them and get the results in a hurry.

1913 043

1 We had complete faith in what they were doing. Joe
2 Deal, the person who was in charge of the operation, did a
3 magnificent job.

4 Q One further question on the monitoring related
5 subject.

6 On Thursday, there was a discharge of waste water
7 from the plant into the Susquehanna River that apparently was,
8 to some extent, contained radioactive material.

9 Could you give us the background of that incident?

10 A I believe a telephone call came into our desk on
11 Thursday morning, on the midnight shift, midnight to 8:00 o'clock,
12 and I believe it was that morning, saying that the plant had
13 to release some of its industrial waste that contained quantities
14 of Xenon dissolved in the water. Those quantities were below
15 the allowable concentration that was proposed for the technical
16 specs for Three Mile Island.

17 They had already submitted an application or a request
18 to the Nuclear Regulatory Commission for release of water con-
19 taining dissolved noble gases.

20 In nobody's regulation is there a mention of gases
21 dissolved in water. There is no maximum permissible concentra-
22 tion listed for noble gases dissolved in water.

23 Margaret Reilly received the first call on that.
24 She did not see a problem provided that NRC agreed that this
25 was -- that NRC had made the statement that yes, this indeed

1 was going to be their maximum permissible concentration and
2 they were below it, and it just hadn't occurred yet. She saw
3 no reason not to release the water so the water started being
4 released.

5 From that point on, it got kind of hazy. All I know
6 is that somebody else got information that water was being
7 released and it was contaminated. It got to the Lt. Governor's
8 office, the Governor's office, our water quality people and a
9 lot of people got involved, and it was stopped by NRC at our
10 request, I believe, in one of two ways.

11 Then we were involved, and particularly, Margaret
12 was involved in a discussion over a period of the next few
13 hours to determine whether or not -- I don't know, maybe I
14 was involved with that, too. There were so many of us involved.
15 We were having the milk problem at the same time.

16 I was probably involved with that. I remember being
17 in the secretary's office discussing it. We agreed that the
18 releases could continue, because the concentrations were indeed
19 below the allowable concentration.

20 Downstream users were upset. They were notified.
21 Maryland was notified. Everybody started doing river sampling
22 at that point.

23 We didn't believe it was a big deal. It just turned
24 out to be. I guess we were reacting from a technical point of
25 view, and we were not considering the public relations aspects

1 of the problem.

2 We learned quickly that the public relations aspects
3 of the problem were probably more important than the technical
4 aspect.

5 Q At that point in time?

6 A Yes, in an accident situation.

7 Q So is it fair to say that the discharge into the
8 water had been, if not approved, at least made after consulta-
9 tion with Margaret Reilly?

10 A Yes.

11 Q And that the contents of the discharge were within
12 the proposed or below the proposed technical specifications?

13 A From my knowledge, yes.

14 Q That the decision to stop the discharge, at least
15 for a period of time, was based --

16 A I think it was more to verify. I don't think that --
17 I have a feeling, and I am not positive because it is something
18 I did not try to recreate, because things started happening
19 again.

20 I have a feeling that they did not realize that we
21 had given approval to do that prior to, and the word came back
22 that they were discharging and it was contaminated, and then
23 it was stopped. Apparently, there was a lack of communications
24 either between us and our water quality people or, I think,
25 probably, NRC people on site, with the NRC people on site,

1 because they also were aware of what was going on early -- in
2 that early call.

3 Q Is it fair to say that the discharge into the
4 Susquehanna on Thursday was not the result of a management
5 error or a misunderstanding by the utility?

6 A No.

7 They had to discharge the water, from what I recall
8 the situation was, because if they didn't, it would have over-
9 flowed on the ground, this routine industrial waste water.
10 Their tanks were full, and they had to discharge. They were
11 going to be using more water.

12 It was not normally radioactive. One of the problems
13 with the discharge was, it would go into the discharge pipe at
14 a point below their routine monitor so that it could not be
15 included in the monitoring program.

16 Samples had to be collected and analyzed as it left
17 the pipe going into the river.

18 I guess we had guys with scuba diving outfits go
19 down, and all kinds of things, going down and checking locations
20 where the discharges were occurring.

21 Q What I would like to establish is that the discharge
22 on Thursday was not the result of an error on the part of the
23 management, it was an intentional discharge?

24 A Yes. They believed they had our approval to go ahead
25 and discharge. I was under the assumption that that is all

1 they needed at the time, was our approval.

2 Q When the discharge was ultimately resumed, do you
3 recall what period of time when it was resumed?

4 A For how long a period of time it lasted?

5 Q If I understand correctly, there was an initial dis-
6 charge, it was stopped, there was an evaluative period and
7 then it was resumed.

8 Do you recall the period of time when it was resumed?

9 A You mean how long it took between the time -- no, I
10 don't recall.

11 Q Thursday night?

12 A I don't remember. I think we kept getting notifica-
13 tions that it was going to be delayed, that the discharge had
14 not started yet. They hadn't finished the evaluation or
15 something.

16 My guess would have been Thursday night, early
17 Friday morning when the discharge started.

18 It is in our logs. You have copies of those, I
19 think. We sent copies down, and I think they made copies of
20 that particular log (indicating).

21 Q Is it fair to say that by Thursday night, let's say
22 8:00 or 9:00 o'clock, it was known by the state authorities
23 that this discharge would be resumed?

24 A Yes.

25 Q I would like to turn to just a very brief sequence

1 of events of the accident. Particularly focus on your involve-
2 ment in the decision to evacuate people from the area.

3 As I understand it correctly, you said before here
4 today, that the state plan as a whole is that the Bureau of
5 Radiological Protection, Radiation Protection, recommends to
6 the state Civil Defense, PEMA, protective action based upon
7 its radiological monitoring program and its assessment of what
8 the potential exposure could be if the releases continued at
9 the rate they were or at a later rate.

10 A The EPA guidelines are based upon the potential
11 exposure of the population, not on the real exposure of the
12 population. You try to prevent an exposure from occurring in
13 excess of these numbers. In other words, keeping the exposure
14 below those guides; action to be taken if you think the
15 exposure will get to that point.

16 Action can be taken at any time if you think that
17 over the long-term course of the accident that it would indeed
18 cause exposure to the public at those levels.

19 (Please turn to the next page.)
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1 Q So that just to take a hypothetical, if you have
2 an emission that reads at 1 R/hr, and it looks as though it
3 may continue over a period of several hours, you would
4 recommend action before it got to 5 R/hrs?

5 A Sure -- well, a 5 rem total.

6 Q A 5 rem total?

7 A Yes. We would evaluate what would be happening in
8 the future, the number of hours, and say, "This is too much
9 exposure for the population. Let's move them before they
10 get to this point."

11 Q The process would be the bureau recommending to
12 the state Civil Defense --

13 A Evacuation of people within a certain area who
14 would receive -- who could receive a potential exposure
15 within the EPA guide.

16 Q On Wednesday, I take it that you first became aware
17 of the Three Mile Island accident through Margaret Reilly.

18 A Right.

19 Q Would you describe briefly what she said?

20 A Yes.

21 She informed me that Three Mile Island had contacted
22 Civil Defense and that Civil Defense had contacted our duty
23 officer who was Bill Dornsife. Bill had called Margaret.
24 There was a problem at the plant and suggested that I get in
25 to the office as quickly as possible and establish an open

1 line with the control room.

2 I said, "Okay." I finished my coffee and jumped
3 in the car and drove downtown, and I opened up a line. She
4 called me at about 7:05 -- between 7:05 and 7:10, and I was
5 in the office at about 7:25 and opened up the line at that
6 point.

7 Q Would you describe generally what your activities
8 were on Wednesday, the kinds of things you were doing?

9 A We were trying to evaluate what was going on at
10 the plant. We put them on the open line, we put them on a
11 speaker phone, so we had constant contact.

12 We were trying to determine what was going on.
13 What the potential for a release to the environment was and
14 trying to determine if anything had been released.

15 The information we had from the plant was that
16 nothing had been released to their knowledge.

17 However, at the time we called they were in a
18 ^{site}~~slight~~ emergency, which, under their emergency plan,
19 indicates that there are no serious off-site consequences
20 and that there are problems on the site, and I believe a
21 site evacuation was taking place.

22 Then they declared a general emergency. A general
23 emergency includes a potential for off-site releases.

24 This was sometime past 7:35, I am not exactly sure
25 what time, but while we were on that first phone call, they

1 went from a site emergency to a general emergency. Sometime
2 after that point, and I don't know how long a period of time,
3 but in looking at different logs since and our recollections
4 of it, that between 7:00 and a quarter of 8:00 that morning
5 an evaluation was done by the Health-Physics staff at the
6 site of the potential exposure of people off-site based upon
7 a dome monitor reading in the containment building of 9
8 900 R/hr; by calculating the exposure to the nearest popula-
9 tion using wind speed, direction, weather conditions, and
10 the nearest population center.

11 It was calculated and given to us that the dose
12 rate directly west of the plant across the river would be
13 10 R/hr from noble gases. That is the information we got
14 over the telephone. That information may not be accurate.
15 We did not cross-check that at a later date because it was
16 quickly determined that indeed there were no exposures.

17 This could have been iodine exposure, thyroid
18 exposure instead of noble gas exposure. It would have
19 caused evacuation to occur in any case.

20 We then called PEMA and informed them that there
21 was a potential for an exposure, a serious exposure, across
22 the river in York County and recommend that they be prepared
23 to evacuate people from Yorkhaven, I believe, on up to
24 Goldsboro where the wind was blowing at the time.

25 The Civil Defense said they would notify York and

1 Dauphin County. Dauphin County wasn't involved in the
2 evacuation.

3 We then requested verification across the river.
4 We thought that the state police helicopter was there -- at
5 least a helicopter was there that could get across the river
6 to verify. Because fifteen minutes later we were told
7 indeed they were across and there was no radiation and that
8 still there was no radioactivity on-site of any consequence.
9 They couldn't measure anything on-site.

10 We called Civil Defense back and told them that no,
11 there wasn't a potential for exposure.

12 From that point on, we were then trying to inform
13 people up and down the chain of command and get our forces
14 together to plan what we were going to do if a release did
15 occur. We tried to evaluate what was happening at the plant.
16 The information we had was that the plant was shut down and
17 that it was, in effect, under control. We learned subsequently
18 that it wasn't under control.

19 Actually, between the time of the 7:30 call and
20 about 8:30 was when the core was uncovered, and that is
21 something we did not know.

22 Q So that as of Wednesday morning the ^{plan} ~~plant~~ had
23 worked as it was intended to do?

24 A It worked beautifully.

25 Q You had taken a reading from the dome monitor from

1 the utility, calculated the off-site dose --

2 A Right.

3 Q -- found the dose to be in excess of permissible
4 limits, recommended to PEMA that they put people on alert to
5 evacuate downwind of the plume or at least to calculate the
6 plume, PEMA did that --

7 A The reason we said alert and to evacuate was that
8 this was based upon a two tenths of a per cent per day leak
9 rate from the containment. That requires some overpressure
10 in the containment building.

11 The question was: What is the pressure in the
12 containment building? They said almost normal. There should
13 have been no leak rate from the containment. We just didn't
14 want to take any chances that an instrument was wrong, that
15 their pressure instrumentation was wrong and that there was
16 indeed a buildup of pressure in the containment and there
17 was a release. It was a precautionary survey. There should
18 never have been 10 R/hr. We knew that, but, you know, at this
19 point you are not taking any chances.

20 If there were pressure, we would have said
21 evacuate. If there had been pressure in the containment
22 building, we would have said evacuate.

23 Q But in this instance it was a precautionary measure
24 to place them on alert until you could verify the actual
25 off-site dose?

1 A Right. We didn't believe it to be there, and we
2 just didn't want to take any chances.

3 Q So the plan ultimately was working?

4 A It was working very well.

5 I think it worked well to that point. Really, the
6 plan is only supposed to work until about that point.

7 As Maggie said, there are emergencies -- each
8 emergency has its own characteristics, and the plan is based
9 for a general type of an emergency; and all at once this did
10 not follow the emergency that one had anticipated.

11 Since there was no release of any consequence, at
12 that point to pull back and you say, "Well, the plan was
13 good, communications are still there. The communications
14 portion of the plan continued, and our communications with
15 Civil Defense continued."

16 Q As of Wednesday, for the remainder of the day, it
17 was primarily a wait-and-see monitoring?

18 A No. A quarter till 10:00, approximately, we
19 received a call from the plant saying they were detecting
20 increased radiation levels off-site.

21 We sent our people out and verified that there were
22 indeed increased levels off-site, and right around the site
23 in particular. Then we requested assistance from DOE. They
24 came in, in early afternoon, and there was still releases
25 occurring; and releases occurred through the next three days

1 at relatively low levels. At that time there were some
2 beaubs.

3 During the time frame, the readings we were getting
4 from the utility over the phone, every reading that they
5 made they would, at times, come in and go through the whole
6 ~~history~~ ^{history} of readings and give all the information to us.

7 Most of the problems were on-site, the high
8 readings were on-site. Every once in awhile one could find
9 a reading off-site that was 15 mr/hr at 3:00 o'clock in the
10 morning but it was gone the next day.

11 Q Say, as of Wednesday afternoon, the plan had worked
12 pretty much as it was supposed to, the readings were coming
13 in from the utility when you recognized that you needed some
14 monitoring capability, DOE came in and was on-site in the
15 afternoon?

16 A Everything was working fine.

17 Q Is that true of Wednesday evening as well?

18 A Yes.

19 We continued to work under the plan throughout the
20 accident. Although, we started to strain from it depending
21 upon circumstances.

22 We basically worked under the plan for the whole
23 two weeks that we were in a state of readiness.

24 Twenty-four hours a day for two weeks people on
25 twelve on, twelve off. We had some on constantly with the

1 phone with the utility. We had someone set up at a desk
2 gathering together all the information and putting it into a
3 log book. We were referring all telephone calls from the
4 press to the proper press people.

5 Q Who were the proper press people, generally
6 speaking?

7 A It was either our press office for the department
8 or the Governor's press office, the Governor's press
9 secretary.

10 We learned, as I said before, from the 1976 Chinese
11 fallout episode, that we couldn't get data and talk to the
12 press at the same time. That may have been a mistake. I
13 don't know. There was still a need for someone technically
14 competent to be explaining what these numbers meant, what was
15 going on at the plant. We tried to do that at the press
16 conferences, but I am not sure that was often enough during
17 the early days.

18 Q What would you have done in retrospect if you were
19 to do it again?

20 A I think I would have made one of our people,
21 hopefully -- I don't know where we would find that person at
22 the time, but somebody available to keep the press informed
23 of what our readings were and of all the information that we
24 had, somehow in a press office, some place -- maybe even in
25 our building.

1 He could explain to them what these numbers meant.
2 What a millirem is, what a reactor was, maybe the whole
3 process because they didn't really find out what was going on,
4 they didn't understand the mechanics of nuclear power until
5 Saturday or Sunday when the massive group came in from all
6 over the country and the world to cover this, and then they
7 were still having problems.

8 Q Were you finding there was just a technological
9 vocabulary gap?

10 A Right, that was the gap. People did not understand
11 what we were talking about. Why isn't noble gas a problem?
12 You have to sit down and talk to them and explain it. You
13 could breathe it in, and you can breathe it right back out
14 again; and it is not going to be an internal exposure problem.

15 It was probably our fault for not recommending
16 stronger that we have a technical person there to explain
17 the technical aspects of it only.

18 I think that maybe just available at all times,
19 and even the Governor's press office would be a perfect
20 place, where they were all gathered anyway, but just be
21 there and have the data relayed to them so everyone could be
22 aware of what was going on.

23 Q Is it fair to say that during the incident,
24 particularly Wednesday and Thursday and those first couple of
25 days, there was no resource person like that for the press?

1 A Right, there was none.

2 We would have a technical person at each of the
3 press conferences explaining the technical details of what
4 was going on. That was the one time only, and then we left.
5 No one stayed around to fill in the cracks.

6 There were lots of questions. Most of the time
7 questions didn't follow in sequence and because different
8 reporters who were asking different questions, and there may
9 be a question you really wanted to expand upon, you never had
10 a chance for clarification purposes.

11 When the press conference was over, we all left
12 and went back to work until the next press conference was
13 called.

14 Q What kind of problems do you think this communica-
15 tion gap created?

16 A I don't know. The public was really upset, but
17 they were not getting information. People around the plant
18 were upset that they were not getting information concerning
19 what the exposure was and what was happening at the plant.

20 Things were happening at the plant so rapidly, and
21 we didn't really have all the facts, I guess.

22 Still, to give out the information we had would be
23 better than no information. The problems occurred on press
24 statements from out-of-state, mainly.

25 Q Do you have any idea where that information was

1 coming from?

2 A Most of it was coming from NRC headquarters.
3 Somebody from NRC headquarters would say that the accident
4 was very serious and that there was potential for a meltdown,
5 and that is all that they would say.

6 They didn't say that there would be a time frame
7 between the knowledge that we have a meltdown and a serious
8 accident, a serious release of radioactive material to the
9 air.

10 I have a feeling -- it was just so new to everybody.
11 We were learning. It was a process of learning, and no one
12 had gone through this before, at least during a time like
13 today, where people are very concerned. We are very concerned
14 about nuclear power.

15 There were people coming in causing us problems and
16 making statements for the press.

17 Q Like who?

18 A Like Dr. Sternglass flying in with a Geiger counter
19 and saying he found levels ten times higher than we were
20 reporting or a hundred times higher.

21 Statements on Monday, I believe, by Dr. K. Z. Morgan
22 saying we weren't doing the proper kind of monitoring to one
23 of the Senate committees.

24 Q Are you saying in effect that these were people who
25 were not even involved, who knew nothing of the accident,

1 except what they read in the newspaper --

2 A And were making profound statements concerning that
3 we were doing it wrong.

4 Q Did you ever hear any discussion in the Governor's
5 office or among the press secretaries of people in state
6 government concerning any attempt to keep people like Dr.
7 Sternglass or others from coming in and making what they
8 considered to be inflammatory statements?

9 A No.

10 We just knew they would be coming. There is
11 nothing you can do to stop it. I don't think you should.
12 It is a free -- I think we should have responded to them,
13 which is something we didn't.

14 Q Was there any discussion of how to respond to them
15 or whether to respond to them?

16 A No.

17 As a matter of fact, most of us didn't know that
18 they had said something until you heard about it later.

19 I didn't read the newspapers for 3 weeks. Then I
20 found out why everybody was scared. I didn't have time to
21 read the newspapers.

22 Q Getting back to our chronology here, as of
23 Wednesday night things appeared to be stabilizing and DOE is
24 on the scene doing --

25 A NRC is on the scene.

1 Q Region One?

2 A Right. Two of their people came up and briefed
3 the Lieutenant Governor and went to a press conference and
4 explained what was going on. They did the same thing the
5 next night. In most cases, it looked like the problems were
6 resolved and no more serious problems would occur and that
7 things would slowly come back to normal.

8 Q Did that seem to be the case as you moved into
9 Thursday?

10 A Yes.

11 Q Outside of the early Wednesday morning evacuation
12 alert transmitted to PEMA by the Bureau of Radiation
13 Protection, outside of that alert recommendation, when did
14 you first hear of an evacuation recommendation from any
15 source?

16 A That would have been Friday morning, a call from
17 Civil Defense or from PEMA to us saying they had just
18 received a call from Doc Collins at NRC recommending evacua-
19 tion downstream, downwind ten miles. They wanted to know if
20 we would verify that. "Were there any problems at the plant
21 that would cause that?" We said, "No, and we will get back
22 to you."

23 Q Prior to that Friday morning conversation, had you
24 had any conversations with any other state officials con-
25 cerning evacuation?

1913 062

1 A There had been discussions with the Secretary of
2 Health concerning the possible need to evacuate pregnant
3 women from the area.

4 Q What period of time are we talking about?

5 A I don't know. Those three days are all one big
6 day. I don't recall when the Secretary of Health first
7 became involved. That was one of the first things he
8 recommended.

9 Q That was certainly before the Doc Collins call
10 on Friday morning?

11 A Yes.

12 Q Why don't you tell us how that recommendation came
13 to you?

14 A I think it was just -- possibly in the discussion
15 in the Governor's office, but I am not sure.

16 Q If I can try to jog your memory at all, do you
17 recall a conference call, a telephone conference call, with
18 the Secretary of Health?

19 A Yes. There was one on Thursday evening, I think,
20 that he had received a call from the director of NIOSH
21 recommending evacuation of small children and pregnant women
22 as a precautionary measure because we didn't know what was
23 going on at the plant.

1913 063

24 He wanted us to give him an indication of whether
25 we agreed or disagreed. I don't remember who else was on

1 that conference call. We said, "No, there was no reason
2 to evacuate pregnant women and small children."

3 Q Do you recall whether any broader evacuation was
4 proposed during the call?

5 A No, I don't. It is probably in our logs, but I
6 don't remember it.

7 Q Do you recall how the Secretary presented this
8 proposal, what he was saying?

9 A No. Only, I believe, that he got the call from
10 the director of NIOSH.

11 Q Dr. Robbins?

12 A Robbins.

13 Robbins, I think, I said he evacuated people at
14 Fort Saint Vrain when there was an accident in Colorado.
15 That he would recommend the same thing happening here.

16 That the exposures were low, but they could be very
17 serious, and he would recommend evacuation.

18 Q Is it your sense that Dr. MacLeod, in that conver-
19 sation, was transmitting the recommendation of someone else,
20 or was he transmitting his own recommendation?

21 A I got the feeling somehow during the first three
22 days that Dr. MacLeod was indeed concerned about especially
23 the fetus in pregnant women. The ultrasensitivity of the
24 fetus to radiation exposure and especially radioiodine.

25 He felt that an evacuation, as a precautionary

1 measure would be something that could be recommended and
2 should be recommended.

3 I got the impression, and I don't remember what
4 conversation it was, but I know I met in the Secretary of
5 Health's office, I believe it was Saturday morning, but I
6 am not positive, and I suggested to the Secretary of Health
7 that he -- that since he didn't have expertise in his own
8 department and he felt he needed that expertise, that he
9 contact Neal Wald, who was a member of our Advisory Committee
10 and was knowledgeable in the field, to give him advice con-
11 cerning radiation protection, especially since Dr. Wald was
12 chairman of one of the schools -- one of the programs in the
13 School of Public Health, and Dr. MacLeod just came from a
14 program in this School of Public Health. They were pretty
15 well associated in the School of Public Health -- the
16 Graduate School of Public Health Programs in Pittsburgh.

17 Q So you suggested to Dr. MacLeod that he bring in
18 Dr. Wald to consult on radiation health problems?

19 A Right. He wanted someone besides us to discuss
20 the medical aspects of this and that Dr. Wald would be the
21 person to contact.

22 Q Did you make that suggestion because you were in
23 disagreement with Dr. MacLeod's recommendation concerning
24 the evacuation of pregnant women and children?

25 A Probably, but I don't remember.

1913 065

1 I know I was concerned about the statement because
2 I didn't agree with it based upon the exposures that were
3 occurring at the time. I thought it was premature, and I
4 didn't agree that the fetus was that susceptible to radiation,
5 as susceptible as he thought it was.

6 Q As of that Thursday telephone conversation, Dr.
7 MacLeod was transmitting the recommendation that he had
8 received from Dr. Robbins and in effect transmitting his own
9 recommendations as well?

10 A I am not positive. I don't recall. I would have
11 to look it up in our logs, if it is in there. I am not even
12 sure it is in there.

13 Q But the result of the conversation was that no
14 recommendation was made?

15 A Right.

16 Q Was Col. Henderson involved in that conversation,
17 as you recall?

18 A I don't remember. I believe he probably was, but
19 I don't remember.

20 Q As of Thursday, no recommendation concerning
21 evacuation of any kind was made?

22 A Right.

23 Q Was there any --

24 A Except for what Dr. Sternglass recommended when he
25 got off the plane.

1913 066

1 Q But within the state government itself, this con-
2 ference call resulted in no official recommendation?

3 A Right.

4 Dr. MacLeod, in the meetings in the Governor's
5 office, seemed to always bring up the subject of pregnant
6 women and small children and the need to evacuate them, but
7 only under discussion. No general discussion, just his
8 concerns that maybe we should do this, but it was not a
9 consensus.

10 Q When would those discussions have taken place? Do
11 you recall when the first discussion in the Governor's office
12 took place?

13 A It had to be Thursday, but I am not positive. I
14 don't think we met with the Governor. I think we went to
15 the Governor's mansion on Thursday evening -- Wednesday
16 evening.

17 Q Wednesday evening?

18 A Yes. We briefed him on what was happening with the
19 NRC people.

20 Q Was there any discussion of evacuation at that
21 time?

22 A It may have been brought up. The NRC people and I
23 would have said, "No." It may have been brought up.

24 Q Do you recall who was at that meeting at the time?

25 A Chick Gallina from NRC, and I don't know -- a

1 nuclear engineer, and I don't know his name.

2 Q Anyone else from the state?

3 A I am not sure Dr. MacLeod was at that meeting.

4 Q Were there meetings on Thursday, as you recall?

5 A There were meetings, I believe, in the Governor's
6 office on Thursday. I may have even been in the Governor's
7 office on Wednesday. In any case, I was in the Governor's
8 office on Thursday.

9 Early during the day, a press conference was held,
10 and then in the evening a press conference was held; and in
11 each case there would have been a meeting prior to that press
12 conference.

13 Q Do you recall who attended the meeting in the
14 morning?

15 A No.

16 Q Do you recall whether Dr. MacLeod may have been
17 there?

18 A I believe that Dr. MacLeod was in Pittsburgh when
19 the incident occurred and came in to Harrisburg and got
20 involved in the discussions probably late Wednesday or early
21 Thursday.

22 Q Do you recall what recommendations he was making?

23 A Nothing except for his comment that he was concerned
24 about the pregnant women and children.

25 Q Was he recommending an evacuation at that point?

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A I didn't take it as a recommendation.

(Please turn to the next page.)

1 Q Was he raising the possibility?

2 A He was raising the question and I said I didn't
3 think it was necessary and maybe we ought to, you know --
4 the person who is better qualified to talk about this than
5 me and radiation effects is Neil Wald. If you want
6 someone who is beyond me, we can bring Wald in. I believe
7 he was in on Friday and Saturday and Sunday, because I met
8 with him a couple of times and met with the Secretary of
9 Health on Saturday, and Wald.

10 Q So that on Thursday, at least, there appear to
11 have been at least one meeting where the Secretary of Health
12 was there with you, perhaps others, and raising the possibility
13 that perhaps pregnant women should be evacuated and causing
14 you to recommend Dr. Wald as an expert on radiation health
15 effects?

16 A Yes.

17 Q Is it your sense that that meeting occurred
18 before or after the conference call in which Dr. MacLeod
19 transmitted Dr. Robbins' recommendation?

20 A Robbins was in all awful early. I have a feeling
21 it came after that, but I got the impression that Dr.
22 MacLeod had made a statement concerning at least the sensi-
23 tivity of the fetus prior to the Robbins call. I am not
24 positive. As I said, those days are all one big day to me.
25 It is very difficult to recreate without looking at our

1 logs, and they are almost useless for those first three days.

2 Q As of Friday --

3 A I expect the Governor's office has a list of
4 the people who were in all the meetings and a pretty good
5 summary of what was happening in each meeting because
6 somebody was taking ^{rapid} ~~rapid~~ notes.

7 Q Were those discussions on Wednesday and Thursday
8 the only times, outside of the 10 ^{mile} ~~hour~~ calculation that you
9 recall evacuation just being proposed or raised as a
10 possibility?

11 A It was never raised except when it was brought up
12 by Dr. MacLeod either from his sources or from Robbins?

13 Q That now brings us to Friday, which started with
14 a call from the NRC.

15 A Yes. Bill said he saw a transcript of it this
16 morning. I didn't hear that conversation. They were in the
17 other part of the building, but I heard about it after they
18 came back and realized it was as nasty as it was from what
19 Bill tells me.

20 Q Is it safe to say that on Friday morning, at
21 least as far as you were aware, that the radiation levels
22 off site were not much different from the preceding day?

23 A They may have been a factor or two or three higher.
24 We knew a venting was going on. We knew that levels were
25 detected off site, that the helicopter was up there tracking

1 the plume as it had been doing.

2 In talking with the plant and talking with NRC and
3 our people and DOE people, there didn't seem to be anything
4 that would have caused us to panic. It is just a monitor?
5 and the big question was: If these levels are going to
6 continue then we may have to do something. If we are going
7 to be releasing off site 20 m^r/hr for considerable periods
8 of time, it is rapidly going to get to a stage and we should
9 do something.

10 If levels did not start to go down we were concerned.
11 Levels started to go down immediately. The high reading
12 off site was maybe 35 at one spot, I don't remember. NRC
13 got a reading off site of in the range of 20 to 30, I think,
14 in one spot. They couldn't find it again and when we were
15 down there the levels were 10 to 20 and you would drive back
16 up to the area and you couldn't find it. I drove down
17 Saturday morning and just driving around the area with a GM
18 in the car you could drive through a spot where the GM
19 would go crazy. A few seconds later there would be nothing
20 then you go down three or four miles and the GM would go
21 wild and then there was nothing. It was weird.

22 On Friday we were just getting detectable radiation
23 levels in Harrisburg.

24 Q Did the levels appear to be decreasing?

25 A Yes. As a matter of fact, as our guys were heading

1 for the plant, they weren't going up as fast as we had
2 anticipated them to go up. When they did get down there,
3 the levels were lower than what NRC had earlier. NRC was
4 reading the same thing we were.

5 Q Did you receive, on Friday morning or prior to
6 that time, notice that there was going to be a significant
7 detecting or radioactive material?

8 A No.

9 I thought I had seen in the logs a notification that
10 someone had received during the night that there would be
11 a venting occurring the next day. I have gone through the
12 logs and I can't find it. I don't think we were notified.

13 Q As you moved into Friday morning the levels were
14 not much different from the day before and it appeared to
15 be decreasing and it appeared to be going down?

16 A Right. And then all at once they went up.

17 Q Well, you got a call from PEMA concerning an NRC
18 recommendation for evacuation from Harold Collins -- a
19 recommendation by Harold Collins. Did you receive any notice
20 of a significant radioactive emission before that call?

21 A I don't recall. There was discussion about the
22 1400 mr/hr reading. I don't remember if it was before or
23 after.

24 Q Why don't you describe the call that was received
25 by the Bureau from PEMA.

1913 073

1 A PEMA notified us that Collins had called
2 recommending evacuation 10 miles down wind because of a
3 release which was occurring at the plant at the time.

4 We said we know of no such release occurring of any
5 consequence. We knew there was a venting occurring but we
6 didn't believe it was of serious consequence.

7 I then got on the line with the plant and Margaret and
8 Bill went to call Collins to find out why the recommendation
9 was made and also why the recommendation was made to Civil
10 Defense and not to us.

11 The information I got back from the open line was that
12 there wasn't anything going on at the plant of any consequence.
13 There was a release, it was uncontrolled because there was
14 a venting occurring from storage tanks and that the pressure
15 had built up and the valve had popped and until the pressure
16 went back down the valve wouldn't reseal.

17 Q With whom were you speaking at the plant?

18 A I believe it was Galina. We told him the recommen-
19 dation had come in from Collins and he didn't believe that
20 it came in and he was going to check to see what was going
21 on, too. He tried to get back through to Washington.

22 Q Was it your sense that he was surprised?

23 A He was very surprised that a recommendation would
24 come from Washington. 1913 074

25 Q It was his sense that there was no need for an

1 evacuation?

2 A Right. He said, "They didn't get it from us. I
3 don't know where they got it. We don't think there is a
4 need for evacuation."

5 Q What did he say he was going to do as a result
6 of your telling him --

7 A He was going to try and contact Washington and
8 try to stop it, the concern down in Washington.

9 At that point we still had enough information from our
10 people, from DOE people, from the helicopter from NRC, that
11 there wasn't anything significant off site. Bill went to
12 Civil Defense and I went to the Governor's office.

13 Randy Welch, the Deputy Secretary of Health, was with us
14 in the office when the call came in. I believe he talked
15 to Collins, too, or he was one of the first to get a hold
16 of Collins because we were pretty tied up.

17 Q Could you summarize just your sense of what you
18 have learned was the conversation between Bill Dornsife and
19 Maggie Reilly with Collins?

20 A Collins in effect refused to give them information
21 as to why the recommendation had been made, the basis for the
22 recommendation. Also, why the call was made directly to
23 PEMA instead of to us.

24 Then he said he was doing it under orders. One of them
25 said, "Who made the recommendation?" His response was, they

1913 075

1 are telling me after he made the call was, that Dr. Hendrie
2 over there -- "Did Dr. Hendrie make a recommendation?"

3 "Well, there are other people over there. Dr. ^{Watson} ~~Madison~~
4 is over there and so forth."

5 He never did say. He just said, "I was told to make a
6 call. I didn't do it on my own, this is what I did and this
7 is our recommendation."

8 Apparently, he then called Civil Defense back after we
9 contacted them to say that it wasn't -- the recommendation
10 came from on high and it wasn't his recommendation. We
11 didn't know that for weeks later.

12 Q At the time --

13 A Also, in the call that we had received from
14 Civil Defense, the only indication that we had -- the only
15 indication of anything happening at that point, that there
16 was a need for any kind of extra effort, was that Collins
17 had called. We were not told by Civil Defense that people
18 from the plant had called saying that there were problem at
19 the plant. They were planning on evacuating the site. We
20 weren't informed of that call.

21 Q So you weren't aware of calls from the plant
22 coming into PEMA?

23 A Right, prior to the Collins call. 1913 076

24 Q At the time that Bill Dornsife and Maggie Reilly
25 were calling Collins, you were calling Galina at the plant?

1 A Right.

2 Q The substance of your call was that he was sur-
3 prised that any evacuation recommendation was coming out of
4 Bethesda?

5 A Right, because there wasn't any indication of a
6 need for it.

7 Q At that point, after those two calls were com-
8 pleted, you went to the Governor's office and Bill Dornsife
9 went with you --

10 A -- and Randy Welch.

11 Q Randy Welch is --

12 A The Deputy Secretary of Health.

13 Q What happened when you got to the Governor's
14 office?

15 A We walked in, stated that we had tried to get
16 back to Civil Defense and to them by telephone and we
17 couldn't. That a call had come in from Collins recommending
18 evacuation and that our indications are that there is no
19 need for evacuation and we would recommend against it.

20 Q Who was at this meeting?

21 A I believe it was just Randy and myself and the
22 Governor's top staff. It would have been the Governor,
23 J. Waldman.

24 Q Paul Critchlow?

1913 077

25 A Paul Critchlow. Paul was in and out of many

1 meetings. Probably the Lt. Governor and the Lt. Governor's
2 aide Mark Knauss, K-N-A-U-S-S, or K-N-O-U-S-E.

3 Q So that you got to the Governor's office and there
4 was an assembly in which the Governor was present, Jay
5 Waldman --

6 A There was a few people present compared to the
7 normal numbers of people who were there.

8 My boss, the Secretary of Environmental Resources ^{Wagon} ~~from~~
9 Pittsburgh, the Deputy, Pete ^{Duncan} ~~Dunkin~~, the Deputy Secretary
10 may have been with us at the time.

11 Q But the important personnel were you, Randy Welch
12 from the Department of Health, the Governor himself, the
13 Lt. Governor. The four of you were in the office at the
14 same time and you were informing the Governor of the Collins'
15 call?

16 A Yes.

17 Q What was the reaction?

18 A That they had already, I believe, had contacted
19 Hendrie and Hendrie had stated he didn't know who Collins
20 was and that they had made a mistake and that there was no
21 need to evacuate.

22 Q Were they saying at that point that they were
23 issuing or had issued an order or an advisory for people
24 to take cover?

25 A I don't remember that advisory. That is something

1913 078

1 I possibly was involved in but I don't remember it at all.

2 Maybe because of the battles we had later and the
3 comments and calls -- the calls back to Hendrie, the calls
4 from Hendrie, the concern about the bubble, all the rest of
5 the stuff I forgot.

6 I walked back to my office about one o'clock in the
7 afternoon and there was nobody around in the street and I
8 couldn't figure out why no one was around in the street. I
9 walked in the office and said, "Gee, it is a nice day.
10 Didn't you all go out and enjoy it? This is beautiful
11 weather." They said, "No, they wouldn't let us out of the
12 building. We are supposed to take cover." I said, "What?"

13 That is, I believe, the first time that I knew there
14 was a take-cover measure.

15 I recall hearing on the radio before I went to the
16 Governor's office a statement by the Dauphin County Civil
17 Defense Director that if evacuation is required this is what
18 you should do. I said, "Gees, it is out already."

19 Things happened awful fast after that first call. It
20 may not have been -- things may have happened before that call
21 from Collins. That may just have been the icing on the cake
22 to Civil Defense because of the two previous calls we had
23 gotten from the plant.

24 Q So from the time you got to the Governor's
25 office the Governor --

1 A I believe things had already taken place including
2 a call to Hendrie.

3 Q There had been a call to Hendrie by the time
4 you got to the Governor's office and had already been asked
5 who Harold Collins was?

6 A Right.

7 Q At that point the subject of the evacuation
8 and recommendation came up or was the subject --

9 A I don't recall if we were involved in the first
10 call. I believe there was a subsequent call that was made
11 to Hendrie where they wanted to talk about some general
12 things.

13 A About sending -- the President had decided to send up
14 Denton and so forth. That conversation -- at that point,
15 Randy, who was carrying a message from the Secretary of
16 Health saying he would recommend that small children and
17 infants and pregnant women be evacuated -- that was stated
18 while the conversation was going on with Hendrie. Hendrie
19 was asked the question, Would he recommend -- let's
20 proceed -- I hope you got that on tape, because I
21 don't remember which one I was in. I think there was only
22 one I was involved with.

23 Q When you got to the Governor's office it was your
24 sense that they had already been in contact with Chairman
25 Hendrie about the Collins recommendation?

1913 080

1 A Right.

2 Q What was the substance of the meeting prior to
3 the Hendrie call at which you were present?

4 A At that point it was a discussion of what really
5 was going on down there and trying to get information about
6 what was happening at the plant.

7 In the middle of that a siren went off in downtown
8 Harrisburg and that caused about a half hour discussion of
9 why the siren went off, and who was responsible for that.

10 The telephone lines were all tied up. There was a lot
11 of panic. There was a discussion, how can we calm the
12 people down and tell them that things are all right? This
13 had obviously gotten out of hand. Then the contact -- I am
14 not sure whether it was a call from the President or the
15 Governor made a call to the President, I wasn't involved with
16 that conversation either.

17 Q You are jumping ahead of me a little bit.

18 A I don't know when it occurred.

19 Q If I can focus on the discussion at the time that
20 you were in the office and the siren went off and the
21 question arose of how to calm the people down; what kind
22 of proposals were being made?

23 A To go to a press conference and to explain what
24 had happened at the plant and that the levels were decreasing
25 and that there was no need for anybody to evacuate.

1 Q That was proposed as a possible press conference
2 to calm people down?

3 A Right. Hendrie was on the phone. I think Hendrie
4 called a second time.

5 Q Just before the point that he called, had there
6 been any discussion in your presence at this meeting about
7 evacuation? For example, was Mr. Welch making any recommenda-
8 tion or was your opinion solicited?

9 A I am not sure if Randy did make the recommendation.
10 My recommendation was that it wasn't necessary. If he did --
11 well, I am not positive if he did.

12 Q But you recommended to the Governor before
13 Chairman Hendrie came on the phone that there be no evacuation?

14 A Yes. No evacuation was necessary. And then the
15 subject came up about pregnant women and small children and
16 I said, "No, no evacuation is necessary," and then it died.

17 Q Who raised the question of pregnant women?

18 A It was again raised during the call with Hendrie.

19 I think the Governor raised it with Hendrie saying the
20 Secretary of Health had recommended this and what is your
21 opinion.

22 Q That was during the call at which you were present?

23 A Yes.

24 Q Just prior to that call coming in, was there any
25 discussion about evacuation? In other words, was your --

1 when you arrived at the Governor's office, did he solicit
2 your opinion concerning evacuation?

3 A I said evacuation was not necessary, of anyone.

4 Q At that point and prior to the Hendrie call,
5 did anyone raise the possibility of evacuating or issuing
6 an advisory concerning pregnant women and young children?

7 A Did anybody raise the question?

8 Q Yes, sir.

9 A No, not as far as I was aware.

10 Q So that when the siren went off the discussion
11 was centered around the possibility of holding a press
12 conference saying that there is no reason to be alarmed, no
13 evacuation is necessary?

14 A Right.

15 Q At that point Chairman Hendrie calls?

16 A I think Hendrie called. Somebody said he was on
17 the phone -- one of the secretaries came in and said that
18 Hendrie was on the phone.

19 Q Was it over a speaker phone?

20 A Yes.

21 Q Why don't you summarize what happened.

22 A He apologized for the error that they had made in
23 recommending evacuation.

24 The Governor made a statement like, "You said it, I didn't,"
25 something like that.

1 Hendrie said, "Governor, we really don't know what is
2 going on." At that point, although we know it is bad,
3 our communications are almost nonexistent. There are
4 problems. The plant is not under control and it is not
5 performing the way we expect it should.

6 In my discussions with the President, he said it was
7 agreed to send the top level guy, someone maybe with some
8 military background, I don't remember, to go up there to
9 direct the activities at the plant site.

10 Q With whose discussions with the President?

11 A Hendrie's discussions with the President.

12 Q So that Hendrie was saying that he had already
13 spoken to the President and he had agreed to send the top
14 level person to the site?

15 A Right, and that Harold Denton would be that
16 person. He would be leaving to go to the site to get
17 briefed and then report to the Governor later in the day.

18 They were going to send up a mass communication system
19 because the communication system was really bad. That
20 there would be a direct line to the Governor's office from
21 the White House and the Chairman.

22 Q Is it yoursense that Governor Thornburgh, at that
23 point, had already talked to the President?

24 A Yes. I was not involved in the calls to the
25 President.

1 A call, I think, may have come in later that day from
2 Jack Watson saying that things were done, but I didn't hear
3 the conversation.

4 Q Chairman Hendrie was saying that Harold Denton
5 was going to come to the site. What else did he say?

6 A And that he would be up as soon as possible.

7 Then they discussed the situation at the plant and then
8 the question came up that the Secretary of Health had
9 recommended that pregnant women and infants be evacuated
10 from the immediate vicinity of the plant.

11 Q Who first raised --

12 A I think the Governor said that to Hendrie and
13 Hendrie's response, I think, was, "If my wife were pregnant
14 and I had small children in the area, I would get them out
15 because we don't know what is going to happen." He said,
16 "I go along with you on that, Governor, and I think there
17 ought to be an evacuation." The Governor said, "What are
18 you talking about in distancewise?" He said, "Two or three
19 miles."

20 At that point it got down that two or three miles
21 is ridiculous. There was a discussion of how far out we
22 were going to go and what the logistics of such an evacua-
23 tion -- it was just a recommendation, it was not a call for
24 evacuation.

25 He said, "If I were you, Governor, I would recommend

1 that. I would concur on that." I just put up my hands and
2 said there is nothing we can do. If something goes wrong
3 at the plant now I see no reason to evacuate, but if some-
4 thing goes wrong at the plant and pregnant women and small
5 children are still there and we didn't evacuate we are in
6 trouble, so we have to go along with that recommendation,
7 although I don't agree with it.

8 Q When the issue of the evacuation of pregnant
9 women and small children came up during the Thornburgh-
10 Hendrie conversation at which you were present, who raised
11 that issue?

12 A I believe that the Governor raised the issued with
13 Chairman Hendrie.

14 Q Had Randy Welch made any recommendation in your
15 presence?

16 A Yes.

17 Q What did he say?

18 A Earlier to that call, he relayed the information
19 from the Secretary of Health. The Secretary of Health
20 recommended evacuation of pregnant women and small children
21 from the vicinity of the plant based upon the exposure that
22 were occurring.

23 Q Based upon the exposures? 1913 086

24 A The exposures that were occurring.

25 The recommendation that Hendrie made was based upon his

1 lack of knowledge as to what was going to happen at the
2 plant in the future. That was the one where I said, "We
3 can't disagree with him."

4 Q When Mr. Welch raised the recommendation of the
5 Secretary, was it a recommendation?

6 A Yes.

7 Q How was it phrased?

8 A I don't recall. "The Secretary of Health wants
9 you to know that he feels that there ought to be an evacua-
10 tion of pregnant women and small children based upon these
11 exposures because of the sensitivity of the fetus."

12 Q It was based on recorded exposures off site?

13 A The levels that were occurring off site, yes.

14 Q Was Dr. Robbins' name brought up at all?

15 A Not at that point. Although, we knew apparently
16 he was coming into Pennsylvania to discuss -- I don't know,
17 I think he was coming in to Pennsylvania to discuss occupa-
18 tional exposure, but I am not exactly sure what he was coming
19 in for.

20 Q Did anyone mention him during those discussions?

21 A Not as far as I know.

22 Q What did the Governor say when Mr. Welch brought
23 up the Secretary's recommendation?

24 A He just repeated what the Secretary had said.

25 Q Did he put any particular radius on the evacuation

1913 087

1 recommendation?

2 A No, not as far as I know.

3 I think it was in close proximity to the plant. I
4 don't think five miles or three miles or anything like that
5 was discussed.

6 Q How was the five mile figure reached?

7 A Well, I think in the continuing discussion with
8 Hendrie, I believe, he was asked how far out and he said,
9 "Oh, a mile to two." The Governor said, "Well, that is going
10 to be difficult because the exposures aren't that different
11 two or three miles away."

12 I probably said five miles because that seemed like
13 that was our area of concern at that point. We had a plan
14 out to five miles and we could handle it.

15 I said, "I think it could be handled up to five miles, "
16 and that is the way it was decided.

17 Beyond five miles the exposures weren't that significant
18 anyway. Even in worse case accidents in areas that we were
19 thinking of, the exposures beyond five miles, were not that
20 significant.

21 Q How was the line drawn between preschool children
22 or younger children?

23 A It was decided that you couldn't talk about
24 infants, you know, what's the difference between a one-year
25 old and a two-year old. The only difference is a birthday.

1 It was decided that you couldn't evacuate just the one-year
2 old and leave the four-year old there.

3 Anyone who had decided -- to make it easier, anyone who
4 had preschool children should evacuate, anyone who had or
5 who was pregnant should evacuate and anyone with preschool
6 children should evacuate. At that point it was decided
7 that people who are in that area of the schools, if they do
8 have brothers and sisters, the schools will also have to
9 be closed down because the people will probably have other
10 children beyond that age that they will have to take with
11 them. So the schools were closed down.

12 That was decided after the telephone call. That was in
13 the discussions afterwards. You know, how do we implement
14 this darn thing? How do I make the statement and that kind
15 of stuff.

16 Critchlow and the other people who were there, were
17 discussing how to implement the recommendation. It is
18 possible that at that point they called for the Assistant.
19 They asked that someone knowledgeable about evacuation from
20 Civil Defense be brought over.

21 Q Who is the Assistant to the Director?

22 A Craig Williamson. He was asked to come over to
23 discuss how evacuation could proceed and where people would
24 be put up and so forth and then they went to a news conference.

25 Q So that as of the time Governor Thornburgh and

1 Chairman Hendrie hung up --

2 A After that phone conversation is when the alarm
3 went off.

4 Q But as of the time they hung up from their
5 conversation, it had pretty much been decided, or the
6 possibility had been raised anyway, of advising pregnant
7 women and young children to leave the area?

8 A Yes, and also, I believe, that the decision was
9 made, and I again don't recall how, to call off to take
10 cover. I am not positive when that happened, whether it was
11 at noontime or -- I think it was at noontime.

12 Q When the phone conversation ended, the logistics
13 of the five miles as opposed to three miles and the pre-
14 schoolers as opposed to two- or three-year olds was decided?

15 A No. I think the five miles was decided and
16 maybe the preschoolers, but that is as far as it went, the
17 school closings and things like that.

18 I don't believe Hendrie was involved in it.

19 Q So it may have been decided during a telephone
20 conversation about the five mile radius and drawing the
21 line between the two-year olds and the four-year olds and
22 going all the way to preschoolers?

23 A Right. It might have been right after he hung up.

24 Q And then after he hung up the conversation turned
25 in logistics by bringing in someone from PEMA and also the

1 question of how to tell the public?

2 A Right.

3 Q What were the discussions on how to convey this
4 advisory to the public?

5 A As a precautionary measure, I think, the decision
6 was made that the Governor would make a statement that he
7 was recommending, because based upon Chairman Hendrie's
8 recommendation, that preschool -- pregnant women and pre-
9 school children leave -- if they were in a five mile
10 radius of the facility to leave.

11 I think at that time they gave them a location where
12 the shelters were that they could go.

13 There were some discussions on the side about locations
14 of places that could be used for evacuation. Telephone
15 calls were made to Hershey, for example, and someone said
16 that Hershey was available. This was a Civil Defense
17 operation and I didn't get involved.

18 Q Was someone from Civil Defense present during
19 those discussions?

20 A Yes, the discussions concerning where the mass
21 care facilities were to be set up, yes. I believe Williamson
22 was involved in that and he was also available for the
23 press conference.

24 Although, the Lt. Governor may have picked up the phone
25 and contacted Henderson and said, "We are going to make this

1 recommendation and we need locations for evacuation sites
2 and what can you come up with in a hurry?" They came up
3 with the information being carried over by Williamson.
4 Williamson was there for the press conference.

5 Q Was any alternative method of informing the public
6 discussed at all other than the press conference vehicle?

7 A I wasn't involved in the discussion of how the
8 public was to be informed. I think that they thought that
9 that was probably the best vehicle.

10 Q Was Mr. Critchlow present?

11 A Yes.

12 Q Do you recall what kind of comments he was making?

13 A No. He didn't say very much during the whole
14 thing.

15 Q Were there any --

16 A Jay Waldman was one of the people who did the
17 most cross-examining of the people who were there, asking
18 all kinds of questions and bringing up all kinds of problems
19 and so forth.

20 Q What, for example?

21 A Not only with us but with the people from the
22 Utility that came in the first night, or the first day, the
23 NRC people. He would really give them a good cross-examina-
24 tion of what was going on.

25 They would come in and make statements and he would come

1 back. He is a good attorney, apparently, and that is what
2 he was using, his skill as a cross-examiner. The Governor
3 would just sit and listen and then ask questions as he
4 felt were appropriate.

5 I don't think the Governor had any problems with the
6 people with trusting or believing the people who were there
7 except that because of the Met-Ed press conferences and the
8 statements that Met-Ed was making versus the statements NRC
9 was making, the discussion centered around we better have
10 one spokesman and that spokesman would be from Denton and
11 the Governor. They would be the ones making statements to
12 the press.

13 Q That discussion came Saturday?

14 A I believe it was Saturday.

15 The Governor requested that Bill Dornsife go down to the
16 plant, be involved in the briefings and report back prior
17 to Denton arriving and filling him in on everything that
18 Denton had learned. Denton came in and he did exactly what
19 Bill had said.

20 The Governor asked us if we could trust what Denton said
21 since Bill was going to be down there everyday and be
22 involved, and we said, "Yes."

23 Q This was on Saturday?

24 A Friday.

25 Q Friday?

1913 093

1 A It was on Friday because of the briefings on
2 Friday that Denton got.

3 (Please go to page No. 74.)
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1913 094

1 Q Was there any discussion of evacuation on later
2 Friday extending the evacuation?

3 A For the pregnant women?

4 Q For anybody.

5 A On Friday the discussion centered around the
6 possibility of what was going on at the plant. The possibility
7 of a meltdown and the time frame that it would take.

8 I don't ever recall a conversation where a recommenda-
9 tion was made of the 20 miles. I believe that was a recommenda-
10 tion of Denton's that evacuation plans should be readied out
11 to 20 miles in case we have to take some action -- do some-
12 thing to the plant that could cause a major release of radio-
13 activity or if something happened at the plant that we didn't
14 cause, if things just got worse at the plant, that 20 miles
15 was good. Ten miles was -- the planning was for 10 miles.
16 The circumference took place after the call from Collins,
17 and I believe on Friday night it expanded to 20 miles, either
18 that or Saturday morning.

19 Q Do you think that 20 mile expansion was a result of
20 a recommendation from Denton?

21 A I think so.

22 Denton and Hendrie -- Hendrie came up, and I am not
23 sure if it was Friday or Saturday that he was there, and they
24 were both talking. I don't recall who was discussing what,
25 and then they informed us about the President.

1913 095

1 Q Were there any discussions concerning evacuation or
2 other protective action that took place in your presence on
3 Saturday or Sunday?

4 A Yes. There was a discussion about whether the KI
5 ought to be distributed to the workers and to the NRC people.

6 Q Other than the distribution of potassium iodide?

7 A No, none that I can recall.

8 As a matter of fact, the 20 mile thing, I don't even
9 remember being involved in it at all, because on Sunday, I
10 think, when I went home for a break, I noted that there was an
11 announcement in my mailbox saying where we should go to
12 evacuate, and we were beyond 10 miles. I said, "I didn't know
13 this was being done." Somebody else told me that we would be
14 evacuated to a location past Carlisle with radio communications
15 and everything else all set up. An awful lot of evacuation
16 plans were going on without my knowledge. I just didn't know
17 they were taking place.

18 Q Were you present when the decision was made to have
19 one spokesman?

20 A Yes.

21 Q When did those take place?

22 A They took place, I think, Saturday, after -- maybe
23 it was Sunday.

1913 096

24 I think there was a call to the White House suggesting
25 that the White House put some pressure on Met Ed to stop holding

1 press conferences, but I think they had their last press con-
2 ference on Saturday.

3 Q Who was present there?

4 A The Governor, the Lt. Governor and the top aides.

5 Q Mr. Waldman, Mr. Critchlow?

6 A Probably Waldman or Critchlow.

7 Q You were there as well?

8 A Yes.

9 Q How did that meeting occur?

10 A I can recall on Saturday night as the Governor and
11 Denton were going out to the press conference to brief the
12 press on what was going on, that we were getting calls -- we
13 were getting through the ticker that was coming in.

14 Q The wire service?

15 A The wire service. The statements that were coming
16 out of Washington that so and so said that the plant can go
17 critical, meaning have a meltdown. There were also additional
18 statements out of Washington.

19 Q Meaning NRC in Bethesda?

20 A NRC in Bethesda. Particularly the Washington Post
21 and the Washington Star were headlining statements made in
22 Bethesda.

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23 Q When had these statements occurred?

24 A Friday and Saturday, I think, because there was kind
25 of a panic down there on Friday. Statements were being made

1 to the press about a variety of things by a variety of people.

2 The problem was, Met Ed -- the bigger problem to us
3 was the information that was given out at the press conference
4 by the Governor and by Denton was completely different than
5 the information that was being given out by Met Ed. The
6 credibility gaps seemed to be widening even with Denton there.

7 Met Ed agreed that they wouldn't make their own press
8 conferences and that they would let the NRC make the statements.

9 Q How was that agreement reached?

10 A I think that came from the White House, I don't know
11 exactly.

12 Q What happened at this meeting on Saturday with the
13 Governor and you and Jay Waldman and Mr. Critchlow concerning
14 one: spokesman and the call to the White House and Jack Watson?

15 A Again, just so there wouldn't be mass confusion,
16 that if people had anything to say, they could say it through
17 two people. The person -- the President's personal envoy on
18 site or the Governor for Pennsylvania. There were people in
19 Pennsylvania that were making statements too.

20 Q Who initiated the call?

21 A I think we did. I don't know who the individual was.

22 Q But someone in that group placed a call to Jack
23 Watson?

24 A I believe it was Watson.

25 Q Were you present at the time the call was made?

1 A I think so, but I am not sure. There were so many
2 calls. I couldn't recall who made the call.

3 Q Do you recall --

4 A I don't even know who the people were, really. This
5 was only the third day and I wasn't sure who these people were
6 that were in the Governor's office at that time. I learned
7 later on who they were. I am not sure who was on the phone.

8 Q This was Saturday?

9 A I think it was Saturday.

10 Q What was the substance of the call to Washington, do
11 you recall?

12 A That statements were being made out of NRC, Washington
13 and out of Met Ed that were causing everybody lots of concern
14 because the information we had was entirely different than the
15 statements they were making and that there should be a spokes-
16 man for the President, a spokesman for the Governor and a
17 spokesman for NRC and that no one else should be talking about
18 what was going on at the plant.

19 Q Who was saying that?

20 A I think it was either Waldman or one of the staff
21 in the Governor's office. It may have been a joint effort,
22 that NRC agreed that that should be the way it should be done.
23 I don't know, it has been so long ago. I don't think I could
24 have told you three days later exactly what happened.

25 Q Do you recall what the reaction was on the other end

1 of the phone?

2 A An agreement. There was nothing negative. There
3 was no argument about anything. It was all agreed that the
4 headlines were causing more problems than the reactor was.

5 Q Was Jack Watson on the other end of the phone?

6 A I think. That was the contact -- he was the contact
7 in the White House -- was he or was he not the contact at one
8 point? I mean, there were calls to him and there were calls
9 to Powell, and I remember somebody saying, "Get Jody on the
10 phone." I don't remember, maybe it was Powell who the contact
11 was with. I believe he was with the President, and the
12 President was out in Detroit or someplace like that at the
13 time.

14 Q When the proposal was made to limit the number of
15 spokesmen making statements, and there was general agreement
16 in principle that that should be done, was there any discussion
17 about how that should be carried out? Who should contact Met
18 Ed?

19 A I don't recall, but I thought that the Met Ed contact
20 was supposed to come through the White House.

21 Q So that the White House would make the request of
22 Met Ed?

23 A I thought so, but maybe it was NRC, but I thought it
24 was the White House.

25 Q Do you recall any discussion about how the logistics

1 of that would be set up? Who would become the spokesman and
2 how they would make --

3 A It was recommended that Denton would be the spokesman
4 at press conferences in Harrisburg or in Middletown.

5 Q Who recommended that?

6 A I don't know. I think it was just an agreement
7 between the people that Denton would be a good spokesman. He
8 is the President's envoy, let him speak. He is at the reactor,
9 and he knows what is going on, instead of having it come out
10 of Washington, and that the Governor's office would be filling
11 people in on what our activities were and what action would be
12 needed in case -- what the ongoing situation was.

13 That Denton would take care of the technical aspects
14 of it and that the Governor would take care of the less
15 technical aspects of it.

16 Q What role was the White House to play?

17 A Just to coordinate the other agencies.

18 One of the other problems was all of the other
19 agencies that were involved and to coordinate what was going on
20 in the other agencies down in Washington, although very few
21 people were making press statements from other agencies, but
22 on Monday morning Califano testified.

23 Q Was there any discussion of a general order going
24 out to state agencies not to speak to the press and to route
25 all press inquiries to one person?

1 A Yes. I don't know if we got a written order, but
2 we did get verbal orders that the only person to speak to the
3 press would be the Governor or the Governor's press secretary.

4 Q When was that order?

5 A About Saturday. That is in our log, too, with the
6 date.

7 Q Was that as a result of this phone conversation, and
8 the agreement reached there?

9 A Yes.

10 There were some statements that were being made by
11 Civil Defense, public relations officers, that were a little
12 bit out of date. I don't know if that had anything to do with
13 it either. I wasn't privy to very many conversations. It was
14 the technical stuff we went over and discussed with him. We
15 were there, Denton was there, and then we left, and then Denton
16 left. There were a lot of meetings going on that I wasn't
17 involved with.

18 Q Was there any discussion on how information would be
19 coordinated through to the Governor's office so that what the
20 state agencies knew or the Governor would know?

21 A Yes.

22 We were supposed to report to the Governor anything
23 new that came up. We had telephone lines that would go directly
24 to the Governor or the Lt. Governor, usually to one or the
25 other, but usually the Lt. Governor, and to Critchlow.

1 We were constantly on the telephone updating them
2 as to what was going on at the reactor from our standpoint.
3 What the radiation levels were and if anything significant was
4 going to happen they wanted to know about it ahead of time.

5 We were given the telephone numbers to contact the
6 Governor's office, the Lt. Governor's office, and Critchlow's
7 office.

8 Q For your Bureau, did you put out an order advising
9 the people in your Bureau that they weren't to speak to the
10 press?

11 A Yes. All calls were referred to the press office.
12 That was the first statement that was made by me. Nobody
13 answer calls from the press. We transferred them to our press
14 officer who could handle them.

15 Calls were still coming in and at times we hesitated
16 not taking them, but we didn't. The girls answering the phones
17 were sometimes answering questions from the public until the
18 Governor's hotline got set up, and we were referring them to
19 the Governor's hotline for answers.

20 Q After the evacuation advisory to pregnant women and
21 pre-school children, there eventually came a time when they
22 had to be brought back. What happened there? How was the
23 decision reached to lift the advisory?

24 A Almost every day the Governor asked Denton if the
25 pregnant women -- if that advisory could be lifted. Denton

1 said, "Well, we would like to come to a point where there is a
2 break, something that happens like cold shutdown, and we think
3 there will be a cold shutdown tomorrow. By tomorrow afternoon
4 I will be able to tell you that if there is a cold shutdown
5 you can bring the women back." That happened almost every day.

6 After a week it got to the point where, "Hey, we are
7 not going to see cold shutdown. Cold shutdown isn't going to
8 come the way they are talking. If it does come, it will be a
9 couple of weeks from now and there is no reason to leave these
10 people out there."

11 Everybody agreed that we have to bring them back,
12 the crisis was over. The potential for a release was basically
13 small and we had lots of time to get them out if something did
14 occur.

15 We wanted to hold -- NRC wanted to hold until they
16 had a break point.

17 Finally, I got on the phone with Dornsife who was
18 down at the plant to talk to Denton and say, "Look, try to
19 convince him to come up with some three or four items that
20 could be used as a break point. The levels of radiation are
21 decreasing from the plant. The plant is in the state of being
22 readied for cold shutdown. There is nothing that could occur
23 that could cause people to have a massive exposure before we
24 would be able to get them out."

25 There were four or five items they finally put together

1 and he and Hendrie came together to a meeting in the Governor's
2 office and said, "Because of these things, we think that it
3 would be appropriate to advise the women to come back."

4 By that time, most of them had left Hershey and had
5 already come back anyway. That was maybe 10 days, something
6 like that. It was a long period of time before that finally
7 came.

8 Then Hendrie apparently went back to Washington and
9 told them that he had agreed to this. A call came back in
10 quickly, I think, saying, "Hold on letting the pregnant women
11 come back because we've got to have a vote from the Commission."
12 The Commissioners wanted to vote on it.

13 Q You mean the NRC Commissioners?

14 A Yes. The NRC Commissioners voted, and they agreed
15 that it was all right to let the pregnant women come back and
16 then Hendrie said, "Go."

17 In the meantime, I think he was going anyway, but
18 somehow maybe he called down there -- when he got back to TMI,
19 he called down and told them what was recommended, and he
20 called back saying hold, then they all voted yes.

21 Q What is your sense of the reason for the NRC's
22 insistence on the break point to bring back the pregnant women?

23 A Well, when there is no good reason for making a
24 recommendation to start with, one has to have something to
25 justify the first recommendation.

1 If you can have a standard and say, "Okay, this
2 standard has been exceeded, therefore, you have to take this
3 action." There was no standard, it was just . . . I think
4 they wanted more credibility to cover their first decision.

5 Q In effect, they were saving face as a result of having
6 made the recommendation?

7 A I think so.

8 They just didn't want to come out and say, "Well, we
9 really didn't need to have you people leave, but now we think
10 it is all right to come back." If they didn't know enough
11 about the plant then, how would they know enough about the
12 plant now to say, "Come back."

13 They wanted something positive that had happened at
14 the plant to make it look like it was safer, and it would be
15 in effect, safer for the people to return except that kept
16 dragging on and dragging on and dragging on, and we still
17 haven't got a cold shutdown.

18 Q Did Dr. McCloud or the Department of Health, as far
19 as you know, participate in any of the development of the
20 criteria for bringing back the pregnant women?

21 A No. The criteria was all developed by NRC. They
22 brought in the three or four or five different criteria, and
23 I don't remember what they were. Everybody agreed that that
24 was acceptable.

25 Q Do you know whether the Department of Health or Dr.

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1 McCloud was involved in any way in urging that the pregnant
2 women be returned?

3 A I don't recall. I don't think so.

4 Q Do you know if he made any recommendation to the
5 Governor?

6 A No, I don't think he did.

7 Q Potassium iodide was a problem throughout this
8 incident at least logistically. I understand that you were
9 the first contact in the state government concerning potassium
10 iodide supplies.

11 Could you tell us when and by whom you were contacted?

12 A I believe it was Thursday evening, but I am not
13 positive. It was either Thursday or Friday that I got a call
14 from John Villforth saying that they would make available to
15 us potassium iodide if we so wished, if we would accept it
16 and use it.

17 Q John Villforth is the --

18 A -- the director of the Bureau of Radiological Health
19 in FDA.

20 Q And that is part of HEW?

21 A Yes.

22 I said, "Yes, get it together and send it." I then
23 went to my boss, the secretary, and said that potassium iodide
24 is coming in and that we should logistically, to handle it,
25 turn it over to either the Civil Defense or the Health Department

1 and Civil Defense, because it is a drug.

2 The Secretary of Health -- we could get the Secretary
3 of Health involved in the process, since he wanted to be
4 involved in the process. That we should have a meeting with
5 the Secretary and discuss it with him and find out whether they
6 would handle the KI distribution, and they said, "Yes."

7 We met with the Secretary of Health and the Deputy
8 Secretary of Health and discussed it. They said they would
9 take it, and I believe I called Villforth back and told him
10 that the Secretary of Health would handle it.

11 Q Prior to the contact to you by John Villforth, was
12 there any discussion that you recall by anybody about bringing
13 in supplies of potassium iodide?

14 A No. Mainly because we had been investigating the
15 possibility of putting KI into the environment of nuclear
16 power plants for the last four or five years. Every time we
17 went to the federal government or the state government and
18 requested assistance in purchasing or establishing a system to
19 get KI in we were told the state is going to have to spend the
20 money if they want it, and we didn't have the money to set up
21 the KI program.

22 It was not even thought about. The reason it wasn't
23 thought about was because we didn't have any idea that it could
24 even be made available.

25 Q Did it occur to you at all on Wednesday or Thursday

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1 prior to the Villforth contact, did you think to yourself,
2 maybe we should try and get ahold of some potassium iodide?

3 A No, especially since the releases showed no iodide.
4 We had thought the incident was going to be over each day
5 through Friday morning.

6 Q So that when John Villforth called, if it was
7 Thursday --

8 A It still would have been nice to have. I told him,
9 "It would be nice to have, John. If these things go on, we
10 may need it. You can make it available, and we will take it."

11 Q Was there any discussion of how much?

12 A I think there was discussion of the number of people
13 that would need it. I don't remember the details. He knew
14 more about it than I did. The number of people in the vicinity
15 and the number of people who might be evacuated who might need
16 it. It was set up -- they set it up based upon that discussion.
17 It was his recommendation rather than mine.

18 Q From that contact with John Villforth, you went to
19 your boss, Secretary Jones --

20 A Yes, and suggested a meeting with the Secretary of
21 Health and request that he handle the KI situation.

22 Q What was your reason for bringing in the Secretary
23 of Health? 1913 109

24 A One, we didn't have the staff to logistically handle
25 it. We would have had to turn it over to Civil Defense to

1 handle, and that means spending a lot of time with them and
2 telling them how things should be done. Or have the Secretary
3 of Health, who should have the staff of people, who were
4 knowledgeable in drugs. They have a drug device and cosmetic
5 program. They have people who are druggists on their staff who
6 know how to distribute and know how to give out instructions.
7 They would also know how to take a look at it and see whether
8 or not it was good or bad.

9 Apparently, they had some problems when it came in
10 with the quality of the material.

11 Q So you met with the Health Department, the Secretary
12 of Health, the following day, on Saturday?

13 A It may have been the same day if he was available.

14 Q What was the substance of the meeting?

15 A Just that we brought with us, I think, an ~~HEW~~^{NCRP} hand-
16 book on potassium iodide and explained to him and to Randy,
17 and I believe to Neil Wald, because I think Wald was there at
18 the time, that the KI was coming and Villforth -- HEW was
19 making it available to us. They would contact us about when
20 it would be coming in.

21 We needed help, logistics in getting it ^{1913.110} picked up
22 from the airport, locating it out where people could get to it
23 and so forth and could he handle it, and he said, "Yes, we
24 would like to." At that point they took it over, and we were
25 just not involved with the decision making process.

1 Q Did they raise any concerns about the side effects
2 or the logistics or anything like that?

3 A In general discussions with them, yes.

4 I met with the Secretary and with Dr. Wald and with
5 Randy Welch, and I think that was probably Saturday morning,
6 in the Secretary's office and discussed KI in general and what
7 the side effects were that Wald knew about and whether we
8 thought there was a need for it and what the limit, you know,
9 the 10-R thyroid exposure prevention.

10 It was more, how does one determine the dose to the
11 patient. And would we inform them when the KI should be dis-
12 tributed based upon the estimated 10 rem thyroid exposure,
13 and that kind of a situation, rather than where it should be
14 located. It was not the logistics of handling the KI, although,
15 I attempted to get KI for our staff.

16 We had received a call from -- at Civil Defense from
17 people in the Bell Telephone System who had installed all
18 these new lines and were required to be there, probably til
19 the last, they would be the last people to evacuate. I said,
20 "Why don't you just go over to the Health Department and get
21 some KI and get it down to them and tell them they will be
22 contacted if an evacuation was necessary and to take the KI
23 instead, and we would tell you when to get out?"

24 A call came back and said, "No, the Health Depart-
25 ment won't release it."

1 At that point we got indications that there were
2 problems with the release of this to anyone.

3 Q You tried to get potassium iodide or KI for your
4 own staff?

5 A I suggested it for the staff of the NRC people down
6 there on site. We had even suggested that it could be located
7 at the State Police -- the State Police had set up a communica-
8 tions setup at the trailer park. We had suggested that the
9 State Police could be responsible for keeping it until it was
10 necessary to be given out to the people who were down there.

11 Subsequent discussions with health physicists down
12 at the site and with the NRC people indicated that they didn't
13 want it and didn't believe they needed it. And that the on-
14 site people had potassium iodide available to them in capsule
15 form.

16 Q From Met Ed?

17 A Yes.

18 Q So Met Ed had supplied KI to its own personnel,
19 apparently?

20 A Apparently it was always there.

21 Q You wanted potassium iodide for your own personnel
22 that were going to be in the vicinity of this site?

23 A Right.

24 Q Did you make the contact with the Health Department
25 to get supplies?

1 A Yes.

2 Q Who did you contact?

3 A I think Welch.

4 Q What was the substance of the discussion?

5 A That, "Sorry, but if we give it out to anybody, the
6 general public will find out about it, and they will want it,
7 everybody will want it. We cannot give it to select individuals."

8 Q What was your response?

9 A I wasn't too happy. I said, "Damn, we will make our
10 own if we need it."

11 We thought about going to the laboratory and making
12 our own.

13 The thing that bothered us was that the people from
14 HEW that were all up there had their own little bottles, and
15 nobody else could get any.

16 Q So that the federal HEW people had their own supplies
17 of KI, the Met Ed people had their own supplies of KI, and the
18 NRC didn't want it, and the state health Department wasn't
19 going to make supplies available to on-site state personnel
20 until they made it available to everyone, including the general
21 population?

22 A Until there was a problem that would be reason to
23 give it out.

24 It was not -- I mean, there could be the potential
25 for a release. At that point things were not, you know -- the

1 exposure levels were down and things looked pretty good, at
2 least we thought things looked pretty good, and they felt
3 there wasn't any reason to give it to us. The potential just
4 was not there. If you need it, you will get it in time.

5 Q Did they seem to have distribution plans to make it
6 available, were you aware of that?

7 A They were working on distribution plans to make it
8 available.

9 Q As of what point?

10 A This was as soon as they were told it was going to
11 be available.

12 Q When did you make a request for potassium iodide?

13 A I don't know. Sunday, Saturday, Sunday. When we
14 realized that we still may have some problems and need to
15 evacuate. I said, "Jeez, we are not going to be evacuated
16 here. We are not going to be the first ones out, we are going
17 to be the last ones out. We are going to have to go out and
18 find out where the devil the radioactivity is going, and we
19 are going to ^{use portable} be probably supplied air and it will be a good
20 idea if somebody gets out to have the KI."

21 I thought that everybody should have it with them
22 and for their families, because they wouldn't be able to be
23 with their families either.

24 But no, we couldn't get it.

25 Q And as of that point, the KI that had come in --

1 A There were problems with it. I wasn't very aware of
2 what the problems were.

3 Q It was also in a warehouse in Harrisburg?

4 A Yes, and we were told that they had to keep it under
5 lock and key with guards, because people were finding out
6 where it was and they were afraid people were going to rush it
7 or something.

8 Q Was there any suggestion made by the Health Department
9 to take some supplies of KI out of the warehouse and put it
10 down near the site and hold onto it for state personnel?

11 A No. We recommended that the State Police trailer
12 be a storage location for it, but NRC said they didn't want it.

13 I was under the assumption that it would be distributed
14 to local communities where it could be handed out by people if
15 there was a need to evacuate.

16 Q But you were unable to obtain it for your own staff?

17 A Right.

18 Q As a final topic, I would like to just go into, very
19 briefly, the interaction of the federal agencies from your
20 perspective.

21 I think you mentioned that the Department of Energy,
22 DOE, came in and did a creditable job and were prepared for a
23 reactor incident. Is that a fair statement?

24 A Yes.

25 Q Was it the DOE data and monitoring efforts on which

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1 you relied principally?

2 A No.

3 The utility data was vitally important because they
4 were doing the monitoring on site and immediately off site,
5 and up and down the river.

6 NRC was doing monitoring right off site and up and
7 down the river.

8 The DOE people were complementing all the work that
9 they were doing further out, doing air, water, milk, everything
10 that could be imagined that should have been done early on
11 that wasn't really finished.

12 The first people that came in from DOE came in with
13 survey equipment and were doing field survey work. Later,
14 when the rest of the DOE team got there, they were set up to
15 do milk, water, soil, everything in the environment. They
16 came in with C-47's full of equipment and set up their opera-
17 tions so that they could actually do much more detailed evalua-
18 tions than the first people who came in on the helicopter.

19 Q You already had a prior relationship with some of
20 the DOE response teams?

21 A Yes.

22 Q Your agency had been working with them over a period
23 of time? 1913 116

24 A Since 1961 when I got to the state. When I was at
25 Brookhaven, I was a member of the response team that was ^{set} sent

1 up at Brookhaven when I was there in '57 and '58.

2 Q Was there a prior relationship between your agency
3 and the NRC Region I?

4 A Yes. A very good, close working relationship.
5 These were the people that we would go out on inspections with
6 and would be discussing emergency planning with. We would be
7 involved with a mock accident at a reactor with telephone calls
8 and all.

9 All of the Health physics staff, at least, at the
10 regional office, we had been closely working with for a long
11 time. We worked with them with routine emergency accidents
12 involving transportation or other types of accidents where we
13 could handle it or they could handle it. It was just a good
14 working relationship at the level of people who are the workers,
15 not the bosses.

16 Q And is it your sense that the Region I people were --

17 A They did their job well.

18 Q They did their job well but were superseded or over-
19 shadowed by the Bethesda people as the incident developed?

20 A Yes.

21 On Friday when Denton came up, the regional people --
22 well, the regional people never got any credit. The only
23 thing they got was criticism for not being there when the phone
24 rang.

25 Q Criticism from Bethesda?

1 A From everybody, in particular, Bethesda. They did
2 not get any credit for being there and keeping the situation
3 under control.

4 I think they did as credible a job as anybody or
5 maybe better than the people down in Washington did.

6 Q Were you consulted or did you request the EPA to
7 come in and do environmental monitoring?

8 A I think they called and said they were available.
9 Someone who was on the shift at that time said, "Yes, we could
10 use you, particularly in relationship to water monitoring and
11 could you come in."

12 I am not sure who made the request. It was not that
13 they showed up or if they did show up, we agreed to work with
14 them. I am not sure who asked. I didn't.

15 Q It wasn't a formal contact with you?

16 A No. I wasn't there at that desk 24 hours a day.
17 When the call came in, I am not sure who got it and how they
18 got involved.

19 Later we found out that EPA's Montgomery lab ^{was} in Maryland
20 was sitting and waiting ^{with} for their portable equipment and their
21 van to come up and help us. Apparently, they had contacted us
22 and asked if we needed their help.

23 Someone in our office said, "No, we already have the
24 EPA here. We don't need more EPA." At that time we had feds
25 all over. There were hundreds of federal people around, maybe

1 up to a thousand at one point. They were all over. You
2 couldn't turn around without seeing a federal representative
3 from one of the agencies.

4 They were sent back. They would have been a tremendous
5 help to augment our laboratory situation, because we were
6 inundated with samples that had to be analyzed -- that they
7 wanted analyzed by the Department of Agriculture, our Depart-
8 ment of Agriculture or Hershey Foods, or somebody wanted us to
9 analyze, not one of the federal agencies. There was a problem
10 with FDA.

11 Q Before we go to the FDA, when you first became aware
12 of the EPA involvement, did you assume that that was the office
13 of radiation programs?

14 A Yes.

15 Q Was it?

16 A No.

17 Q Where were they from?

18 A The Las Vegas operations office.

19 Q When you talked earlier about DOE being prepared for
20 a reactor incident, what did you mean by that?

21 A They understood what kinds of materials come out of
22 reactors. They understood what the consequences of a reactor
23 accident would be and understood how reactors work.

24 Q Is that true of the EPA team from Las Vegas as well?

25 A The EPA team from Las Vegas were mainly laboratory

1 people who were involved with the weapons testing program.

2 They were good laboratory people, but they didn't
3 have any -- very good working knowledge of what a reactor
4 accident was all about.

5 As a matter of fact, one of the guys from EPA who
6 was up, who was a nuclear engineer, gave them a short course
7 on how reactors work.

8 Q Is it your understanding from being in this business
9 since 1961 that the EPA people from the Office of Radiation
10 Programs would have been prepared for a reactor incident?

11 A Yes. The Montgomery people were very prepared.

12 Q And they were not on site?

13 A No.

14 Q At one point there was --

15 A I find no fault with the people we got now. We
16 didn't need EPA there, but when EPA then took over after DOE
17 left, I have no problems with what they are doing now, except
18 it takes a hell of a long time to get information back from
19 Las Vegas.

20 One of our problems is that when samples have to be
21 analyzed in a hurry, we have to do them in our laboratory
22 instead of shipping them out to Las Vegas to be done. It is
23 just overloading our lab, even though they have some people
24 here. They have some technicians, I believe, that are operating
25 one piece of equipment. In Harrisburg they just cannot do the

1 job.

2 Q Were you aware of a conflict or a disagreement between
3 NIOSH and NRC during the incident or its aftermath?

4 A Yes, but only in hearsay.

5 Apparently, NIOSH -- apparently Califano felt that
6 there was a need to have somebody independently look at the
7 exposures of the workers on site, because he didn't want to
8 trust the NRC and that NIOSH was responsible for radiation --
9 occupational radiation exposure and that they ought to be
10 allowed to go on.

11 NRC said, "Hey, you are not responsible, and we are
12 not going to let you wander around the site, there are too
13 many other problems." There were a couple people from NIOSH
14 who showed up and wanted to get on site. There was a subsequent
15 agreement between NRC and NIOSH saying, "We will give you the
16 data and the information of the exposures," and that was it.

17 Q You were mentioning the FDA figures. Was there a
18 problem with the FDA laboratory work?

19 A There have always been problems with the ^{West-}Chester
20 laboratory work of FDA. Their numbers consistently come back
21 higher than anybody else's. As a result, our Secretary of
22 Agriculture -- we would split samples, for example, and their
23 numbers would come back higher than ours. It would cause
24 problems.

25 Our Secretary of Agriculture said all of our samples

1 we are going to do, so that meant an awful lot of samples.

2 In the meantime, though, FDA had the authority to
3 go in, and they do it routinely, sometimes without telling us,
4 and collect samples around reactors and run them off at
5 Winchester.

6 In the past, we have gotten calls in the middle of
7 the night from Winchester saying, "Hey, we found all kinds of
8 problems as a result of a milk sample collected at Peach
9 Bottom three weeks ago."

10 You know, it stirs everybody up, and then you find
11 out they made a mistake, and they were running the calibrations
12 standard instead of the actual milk standard.

13 We are not very happy with the way Winchester
14 performs.

15 Q Did that same problem occur during the incident?

16 A Yes. A cross-calibration afterwards from -- with
17 the National Bureau of Standards, EPA supplied iodine and
18 indicated that they were high, and everybody else's was pretty
19 close to the actual number.

20 Q Did that cause a problem with the context of the
21 incident?

22 A It was small. If the numbers had been higher, it
23 would have caused a big problem. Forty versus twenty -- we
24 were finding some contamination, but the levels were so low
25 that it didn't make any difference.

1 Unfortunately, the numbers they were reporting --
2 they were reporting a lot more positives than everybody else
3 was, and that did cause problems with milk being delivered
4 out of state and milk being purchased in local areas.

5 I got a call yesterday from a reporter in Minnesota
6 asking me if the milk from around Three Mile Island was being
7 shipped to Minnesota.

8 I said, "Why would it be shipped to Minnesota? You
9 got too many cows out there anyway." He said, "I don't know,
10 but we heard it anyway."

11 I said, "Talk to the Department of Agriculture. It
12 is not contaminated. It is okay to send it out."

13 There were also some other problems, the lab in New
14 York -- the New York State lab indicated that they found con-
15 tamination in milk samples that were coming from Pennsylvania,
16 and that was an error. That was not a positive sample.

17 There were people from all over the country -- there
18 was a guy up in Maine who said he turned his geiger counter
19 on and it went off scale, and that caused problems.

20 Q One last discrepancy between federal agencies and
21 their numbers.

22 There was a discrepancy between DOE numbers and
23 NBC numbers at one point.

24 Could you describe briefly what that problem was?

25 A It was on Easter Sunday night. The plant was putting

1 out iodine in increasing quantities of radioiodine that was
2 being released from the plant.

3 I received a call from Harold Denton saying that it
4 looked like the problem was the filters, the charcoal filters
5 were not as ^{efficient} sufficient as they were when the plant first
6 started.

7 There was iodine that was being released, and they
8 were going to work on changing the filters.

9 In the process of changing the filter bank, they
10 did not replace -- when they took filters out, they did not
11 replace them right away, so there were some blank spaces.
12 Iodine was being released from the plant. I got a call from
13 the DOE team people who were monitoring air monitors indicating
14 that the levels were 60 to a hundred times the maximum permis-
15 sible concentration off site.

16 The NRC utility team surveys indicated that they
17 were at MPC off site or below. They spent all night sampling
18 at the same locations that were coming up with these different
19 numbers.

20 Finally, at about 4:00 in the morning, I said, "Look,
21 why don't you guys get together and get all your samples
22 together, bring them into one location and we will check them
23 on our counters, because to find out which one is high -- if
24 there is a high one or a low one, at this point we weren't sure.

25 At about 8:00 o'clock I got a call, and maybe it was

1 prior to 8:00 o'clock on Monday morning, saying somebody else
2 had come in to take over the shift and had one a quick recal-
3 culation, and they forgot -- DOE forgot that they were counting
4 minutes and the activity in seconds. Sixty makes a big
5 difference, and that is what the difference was between the
6 two of them.

7 Everybody in state government was ready to go.
8 Sunday night everybody was wide awake, and I am sitting there
9 all by myself saying that I might have to do something. I
10 procrastinated a little while, because I couldn't believe --
11 I wanted to make sure which number was right. We had time,
12 but we didn't have much time, because a hundred times MPC
13 was, you know, a lot of iodine and the exposures, if they
14 were going to continue that way, we would have to do something
15 about getting people out of there. Luckily, it worked out.

16 Q It was a mathematical error?

17 A It was an error that anybody could make after spend-
18 ing -- you know, people had been there for a month, and they
19 were tired.

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20 I am glad they reported high rather than low. If
21 they are going to make an error, make it on the high side and
22 we don't take any chances. That is what I told him when he
23 called and apologized for keeping me up all night.

24 Q Throughout the incident, I imagine that errors or
25 events like that occurred on a small basis?

1 A Not many. Most of the time the reliability of the
2 data and the information was good. We didn't have many cases
3 where there were any conflicts among groups or even within the
4 organizations as far as I know.

5 Everything was wide open. The information was all
6 there. You just had to be there. We had people down at the
7 site and people over at the facility over at the DOE setup at
8 least once a day. All the data was reviewed and discussed.

9 There are some things that we probably should have
10 done. We could have done more strontium 90 checking. That
11 is something we just got EPA to start on today.

12 Overall, I think it was handled well. We needed
13 more TLD's out of the environment. They are being placed out
14 of the environment. The NRC is coming in on that. They are
15 putting TLD's all over the place.

16 The problem is that they are asking the states to
17 set them up and take them down. Do you know how long that
18 takes to run all over the state changing TLD's?

19 Q Speaking of TLD's, this is my last question.

20 Were you aware of the FDA putting out 237 TLD's?

21 A Yes. We went out with them and showed them where to
22 put them.

23 Q What happened to that data?

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24 A It is all down in Washington. The data indicated
25 nothing but background levels if I recall.

1 Q Were those appropriate TLD's for the monitoring?

2 A No. They were as good -- they were TLD's. They
3 were not calibrated for the types of radiations that were
4 involved, but they could be and they ^{were} weren't calibrated, and
5 they came up with a plus or minus 20 percent of the real
6 numbers, so there was no real problem.

7 You know, it was good that they -- it is just another
8 backup. They were down there thinking, and you can't -- it
9 wasn't a bad idea at the time to put those out.

10 I have no problems with what the Bureau of Rad
11 Health did. They have no control over what FDA does and what
12 the federal Department of Agriculture started to do was to
13 condemn meat right away in the area. They shut down meat
14 plants because they thought the meat was contaminated without
15 asking anybody.

16 All in all, I think that the federal agencies -- the
17 working levels of federal people worked out pretty well.

18 Q Is it fair to say that the technicians who were on
19 site doing the monitoring and doing the laboratory work
20 functioned smoothly and that the problems came at the decision-
21 making layer, Bethesda, HEW --

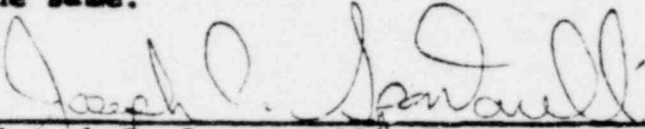
22 A HEW's superstructure, whatever that is. I have no
23 idea whatever happened with the federal Department of Agri-
24 culture except that they did open up the meat plants again. I
25 don't know what they did. I wasn't involved.

1 MR. HARVEY: I have nothing else.

2 (Whereupon, the deposition was concluded at 4:00 P.M.)

3 _____
4 CERTIFICATE

5 I hereby certify that the proceedings and evidence
6 are contained fully and accurately in the notes taken by me on
7 the hearing of the foregoing cause, and that this copy is a
8 correct transcript of the same.

9 
10 _____
11 Joseph C. Spontarelli, Reporter
12 Notary Public in and for the Common-
13 wealth of Pennsylvania

14 MOHRBACH & MARSHAL, INC.

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24 My ommission expires
25 July 20, 1981

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