

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

THREE MILE ISLAND
SPECIAL INQUIRY DEPOSITION

DEPOSITION OF: WILLIAM P. DORNIFE

POOR ORIGINAL

Place - HARRISBURG, PA.

Date - September 19, 1979

Pages 1 thru 19

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 TMI SPECIAL INQUIRY GROUP :
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 THE ACCIDENT AT THREE MILE ISLAND :
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(Oral deposition of WILLIAM P. DORNSIFE)

APPEARANCES:

NRC's Special Inquiry Group

- Robert Chin, Esquire
- Malcolm Ernst
- Frederick Herr
- Robert Schamberger
- Peter Sicilia, Jr.

TAKEN AT:

Holiday Inn Town	3:15 p.m., Wednesday
Second and Chestnut Streets	September 19, 1979
Harrisburg, Pennsylvania	

I N D E X

<u>WITNESS:</u>	<u>EXAMINED BY:</u>	<u>PAGE NUMBER</u>
William P. Dornsife	Mr. Chin	3 - 17

EXHIBITS

<u>Number</u>		<u>Marked</u>
1	Letter of confirmation to William P. Dornsife from the NRC TMI Special Inquiry Group	3
2	One page resume entitled "Biographic Information, William P. Dornsife"	4

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P R O C E E D I N G S

WILLIAM P. DORNSIFE,

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

BY MR. CHIN:

Q State your full name and position for the record.

A My name is William Paul Dornsife. I am a Nuclear Engineer for the Bureau of Radiation Protection, Department of Environmental Resources.

(Exhibit No. 1 marked.)

BY MR. CHIN:

Q Let me show you a letter marked Exhibit 1. Is this a copy of the letter we sent to you concerning your deposition before this group today?

A Yes, it is.

Q Have you read the document in full?

A Yes, I have.

Q Do you understand what we portrayed in the letter about the purpose of our inquiry and the fact that you may have an attorney present?

A Yes, I do.

Q And that some of the information or all of it may become eventually public?

A Yes, I am fully aware of that.

Q Mr. Dornsife, are you represented by counsel?

1 A No, I am not.

2 MR. CHIN: I would like to note for the record that
3 the witness is not represented by counsel.

4 BY MR. CHIN:

5 Q Mr. Dornsife, if at any time during this interview
6 if you need an attorney or to have an attorney present, would
7 you please advise us and we will adjourn this meeting to make
8 the appropriate arrangements. Is that all right with you?

9 A Yes, it is.

10 Q Did you bring a resume with you today?

11 A Yes, I did.

12 (Exhibit No. 2 marked.)

13 BY MR. CHIN:

14 Q Is that Exhibit No. 2, your resume?

15 A Yes, it is.

16 MR. CHIN: And I wish to note for the record,
17 Exhibit No. 2 is a single paged document titled "Biographic
18 Information, William P. Dornsife."

19 BY MR. CHIN:

20 Q I understand, Mr. Dornsife, that at one time you
21 had some association with TMI. Could you explain that to us.

22 A Yes, prior to working -- coming to work for the
23 Commonwealth, I was employed by Burns and Roe who is the
24 architect for the engineering of Three Mile Island, and I
25 spent a very short time of my total time at Burns and Roe

1 working on Three Mile Island.

2 I started on the Forked River project, and when the
3 staff was cut back, I was transfered over to Three Mile Island.
4 And I spent about four to five months on the home office
5 effort, which was well down the line, which was a matter of
6 reviewing drawings and purchasing smaller equipment.

7 And then I spent about six or seven months at the
8 site as the Assistant Project Engineer.

9 Q How many months was that?

10 A About six or seven months at the site as the
11 Assistant Project Engineer.

12 Q And at what stage of construction was that?

13 A It was 80 to 90 percent complete at this point.

14 Q I want you to think back to the first three days of
15 the accident. So, from March 28th to the 30th, could you
16 describe just what your function was with regard to the
17 accident?

18 A Well, I was -- if I can characterize it as that --
19 probably the only nuclear engineer employed by the state. So,
20 I was looked upon as being the source of technical information
21 and trying to get technical information from the utility and
22 NRC to determine what the status of the plant was and what
23 the future might hold.

24 Q And how did you go about doing that job?

25 A Well, primarily from talking on the telephone with

1 the plant. I tried to get the status of the equipment and
2 plant statuses. Although I have to admit that since we were
3 -- the Bureau was primarily involved in assessing the radio-
4 logical consequences, I was using -- I did have quite a bit
5 of experience in radiological protection from my Navy back-
6 ground. I was using more of my radiological knowledge than
7 engineering knowledge in assessing the situation at the plant.

8 Q At any time were you on site?

9 A No, not the first three days. I was at the
10 Observation Center on Thursday for most of the day but not
11 on site.

12 Q And your source of information was plant operators
13 or NRC people on site?

14 A Right.

15 Q Both?

16 A Both.

17 Q By phone?

18 A Yes, except when I was down on the site Thursday,
19 I was talking directly to the coordination team. The NRC
20 and the utility coordination team was operating out of the
21 Observation Center.

22 Q Can you identify the people involved in the
23 coordination committee?

24 A Well, it wasn't a committee. The utility had a
25 group that was coordinating off site monitoring information,

1 and they had various -- by name I really don't recall.

2 The NRC had Rick Hymie in charge of the operational
3 aspects and Phil Stohr in charge of the radiological aspects
4 operating out of the Observation Center. And I was coordin-
5 ating directly with them for information. And I was essen-
6 tially looking over the Met-Ed peoples' shoulder of the moni-
7 toring that was going on.

8 I also attended the briefings that were held for
9 the congressional people that were held on site.

10 Q So, actually you were never in the control room for
11 the first three days?

12 A No, I was not.

13 Q What were you doing with your information once you
14 had collected it?

15 A I was essentially sharing it with the other members
16 of the Bureau and later with the Governor and whoever -- you
17 know, whatever meeting I may be attending at the time.

18 Q And this was by phone or by personal appearance or
19 both?

20 A Well, depending on -- when I was down at the site,
21 I was sharing it by phone. In the office I was sharing it by
22 personal communications.

23 Q But those first three days, were you more on site?

24 A No, it was more in the office.

25 Q More in the office. Governor Thornburgh has said

1 that he sent radiation experts and nuclear engineering experts
2 to the site. Were you the sole nuclear engineer expert on
3 site?

4 A Yes, I was then. By on site, I was at trailer city.
5 From Saturday morning -- well, from Friday afternoon on, I
6 went down and attended the same briefings that Harold Denton
7 attended when he first arrived on site. And I came back and
8 reported to the Governor before Harold Denton arrived of what
9 I had heard. And then on Saturday morning, I started spending
10 full time at the trailers, at least 12 hours a day.

11 Q Which trailer?

12 A I was primarily working out of the NRR trailer, and
13 I had free run of it, the NRR trailer and the utility trailer
14 if I so desired.

15 Q Apparently, on the 28th you were asked to brief
16 Lieutenant Governor Scranton. Who asked you to do that?

17 A The Deputy Secretary Mittendorf came down and asked
18 somebody to go over and brief the Lieutenant Governor and
19 possibly attend a press conference. And since at that point
20 I probably knew as much as, if not more than anybody off site,
21 I was volunteered or volunteered myself. I am not sure.

22 Q What did you do to prepare yourself for that brief-
23 ing?

24 A I wasn't comfortable with the information I had at
25 that point on the plant status. So, I called the site and --

1 we had an open line, but I, you know, got the open line
2 activated and told them what I was going to do, that I was
3 going to brief the Lieutenant Governor and I would like to
4 talk to somebody with a detailed knowledge of what had
5 happened.

6 And I got to talk to Gary Miller, the station
7 Superintendent, and he briefed me on what had happened to the
8 best of his knowledge at that point.

9 Q At what time did you brief Scranton?

10 A At about, I would guess, in the neighborhood of
11 10:00 a.m.

12 Q After that briefing or before that briefing, did the
13 Lieutenant Governor have a phone conversation with Mr. Miller
14 to your knowledge?

15 A Not to my knowledge. Apparently, there was one
16 because he later came up to his office that afternoon. I have
17 no idea when that conversation was. I am not sure if it was
18 even with Gary Miller. Maybe with Herbein or one of the
19 people in management. But he requested a meeting with Met-Ed
20 people later that afternoon.

21 Q I am going to ask you about three planned procedures,
22 and I would like for you to tell me when you heard about each
23 one of them, what you understood them to mean and what you did
24 about communicating the implication of those procedures to
25 other people in the Pennsylvania state government.

1 The first one would be the venting of the make-up
2 tanks. Do you remember when you first heard about that pro-
3 cedure?

4 A I first heard it on Friday morning when we were
5 notified by the plant that that operation was proceeding and
6 they had found an elevated reading of 1200 millirems above
7 the plant vent.

8 Q Were you aware of a 3R reading on Thursday?

9 A Yes, I was.

10 Q What did you associate that reading with in terms
11 of the plant status?

12 A At that time the readings were -- there were numerous
13 readings that I was seeing at the Observation Center looking
14 over Met-Ed peoples' shoulders who were coordinating the data.
15 And there were a number of readings in that range on site or
16 in the plant. And I really didn't associate the 3,000 Rem
17 with anything because the off site readings were relatively
18 low, and that was my major consideration.

19 Even though the readings were high on site, the off
20 site levels were still within the range of 1 to 10 millirems.

21 Q You learned about the venting on Friday morning.
22 This was in your office?

23 A Yes.

24 Q Not on site?

25 A No, not on site.

1 Q Who did you learn it from?

2 A I believe Margaret was the one who received the
3 phone call and they informed me of the reading.

4 Q What does venting the make-up tank mean to you in
5 terms of releases?

6 A Well, normally it doesn't mean anything. Normally
7 it is a closed system. The make-up tank is vented into a
8 waste gas header and it is then compressed from the waste gas
9 header into the waste decay tanks for eventual release after
10 decay. And that is what I had associated with it. I hadn't
11 known that there was any leakage in the waste gas header.

12 Q When did you first learn about the leakage?

13 A I didn't learn that there was any suspected leakage
14 until a couple of weeks after this incident occurred. But it
15 was by association that you suspected that there was something
16 that was causing the leaks, that it wasn't just venting into
17 the atmosphere of the auxiliary tanks.

18 But officially, I didn't learn from any people that
19 they suspected a leak on that morning.

20 Q But you suspected that on Friday morning?

21 A Yes, I guess it was in the back of my mind; it had
22 to come from somewhere.

23 Q Prior to Friday morning, what was your understanding
24 of the sources of releases of radioactivity off site?

25 A Well, initially it was thought, in terms of the

1 information we were receiving, that the venting -- the
2 atmospheric dumping of steam was the primary release path on
3 Wednesday morning. When it was terminated and, as a result
4 of the briefing which I unfortunately did not attend when
5 Met-Ed came up and briefed the Lieutenant Governor, it was
6 then thought that the releases were occurring from water that
7 had been pumped over from the reactor building, of degassing
8 on the floor of the auxiliary building.

9 And it wasn't until much, much later that it became
10 evident that the leakage was really a combination of various
11 system leakages contributing to just the general radiation
12 levels in the auxiliary building.

13 Q You mentioned steam dumping. When did you learn
14 about that event?

15 A Sometime Wednesday morning. I am not sure of the
16 time. It was one of the routine releases that they had lost
17 condenser vacuum and they had to go to atmospheric dumping of
18 steam.

19 Q You knew they were doing that before the Lieutenant
20 Governor's press conference, or I think it was around 12:30?

21 A I think it was after -- I don't think I knew before
22 -- about it before that.

23 Q Now, I want to move on to a second procedure, and
24 that is the procedure adopted by the utility to attempt to
25 reduce the size of the hydrogen bubble. They described it as

1 a cycle process.

2 A Yes.

3 Q Were you informed about that particular process or
4 the bubble itself?

5 A Well, I guess the first time we were informed about
6 a void or the uncovering of the core and the bubble in the
7 reactor cooling system was on Friday afternoon when Chairman
8 Hendrie called the Governor and he informed us of his assess-
9 ment of the situation. At that point he and Denton were still
10 in Washington.

11 This was the first time we had heard about the
12 uncovering of the core. But, of course, we had suspected a
13 lot of fuel damage based on the radiation levels of concen-
14 tration in the reactor coolant system. I learned of the
15 proposed venting operation -- and in my opinion, the -- the
16 bubble was being decreased in size from Wednesday on when the
17 letdown flow was re-established because the letdown was being
18 vented into the make-up tank, and then the water being pumped
19 back in was deficient in dissolved gases and it was allowing
20 some of the bubble, but not very much, to slowly dissolve.

21 But on Saturday morning, a procedure was put into
22 motion to -- the primary purpose was to vent this gas, and
23 it was venting of the pressurizer into the reactor building.

24 Q You learned about that Saturday morning?

25 A Yes.

1 Q From whom?

2 A Well, just from the general talk that was going on
3 in the trailers when I arrived on site.

4 Q The next matter I want to address is the possibility
5 of oxygen generation within the reactor vessel head in the
6 hydrogen bubble. When did you learn about that?

7 A Again, Saturday morning. And when I heard of it,
8 I know when I thought about it for a while, based on the
9 experience I had in the Navy and other pressurized water
10 reactors, I couldn't for the life of me figure how oxygen
11 could be generated, because I knew there was required to be
12 an excess of hydrogen in the system to prevent that, to
13 scavenge oxygen and prevent radiolysis from occurring.

14 And I remember I relayed that information to every-
15 body on the NRC staff whenever I could. And everyone tended
16 to agree with me. And it seemed that Roger Mattson was the
17 only one who was not convinced that that was still a problem
18 or was not a problem.

19 Q Who else did you communicate with? Could you name
20 some names.

21 A Vollmer, Jerry Clingler. That is all -- and some
22 people from IME. I forget whom.

23 Q Did you also communicate your feeling to anyone in
24 the state government?

25 A I believe I informed the Bureau over the telephone of

1 my feelings in that direction. And I know I mentioned it to
2 the Governor on Sunday when we had a mixed meeting. And I
3 told the state legislators -- I told them my opinion that the
4 hydrogen bubble presented not that very great risk because of
5 what I had known about hydrogen overpressure and because there
6 just didn't seem to be a spark source in the reactor vessel.

7 Q What was the date of that?

8 A That was Sunday evening.

9 Q Sunday evening. Were you in touch with any of the
10 Metropolitan Edison people about the hydrogen bubble or the
11 oxygen above the bubble at any time?

12 A Not in that time frame. Later I was, after the
13 bubble had dissipated, I was, you know, wondering how they
14 felt about the problem, whether it was a real problem or not
15 because, of course, it was the thing that caused all the
16 consternation over the weekend.

17 And I again communicated with some Met-Ed people to
18 see what their assessment was.

19 Q Was there any reason why you didn't contact Met-Ed
20 people prior to that time about the bubble?

21 A There was no specific reason -- I guess I didn't
22 have any formal lines of communication with them, any people
23 in a decision-making status. I was free to roam in the
24 Observation Center and look at the readings. But as far as
25 anyone in a decision-making capacity, I really wasn't

1 communicating on any regular channel.

2 Q You made no attempt to contact some of your normal
3 contacts in the plant about the plant status at that time?

4 A Well, I was getting enough plant status from being
5 at the trailer, from the information the NRC was receiving.
6 That is how I was getting my information.

7 Q So, you were basically getting your information from
8 NRC people on site?

9 A Yes.

10 Q Rather than --

11 A Because I was in the trailer where the information
12 was coming in. And I felt at that point it was sufficient
13 from Saturday on, when the staff was there, I felt that was
14 a sufficient source of information.

15 Q My last question has to do with the names of your
16 contacts in NRC, and I think you have answered that. Were
17 there any other persons at NRC that you were normally in
18 contact with on site or at Region 1 during the accident?

19 A Well, just about everybody that was there. I would
20 probably include almost everybody I was at least talking
21 to or communicating with because I was just there all the time.
22 And people in fact thought I was part of the NRC staff. That
23 is how I was able to learn a lot of the information at the
24 Incident Response Center on Friday morning.

25 Q After the first three days, would you tell us what

1 you did at the plant? You were there every day from Saturday
2 on?

3 A Right.

4 Q For how many days?

5 A Oh, for at least a month.

6 Q At least a month. What were your hours?

7 A Typically, 8:00 to 8:00.

8 Q Eight to 8:00?

9 A I would stay later if something were going on of
10 any significance.

11 Q And that was from Saturday plus 30 days?

12 A Right about that. Probably longer.

13 Q And you maintained communications with your head-
14 quarters by phone?

15 A Yes. I would update them probably two or three
16 times a day, you know, find out what was going on up there
17 and they would fill me in and I would fill them in. There
18 really wasn't very much going on after Saturday. There was
19 a sparcity of new information.

20 MR. CHIN: Fine. Are there any other questions?

21 MR. ERNST: No.

22 MR. HERR: No.

23 MR. SCHAMBERGER: No.

24 MR. CHIN: Now, do you want to adjourn the meeting?

25 MR. ERNST: All right. I would just want to state

1 that this does conclude this session. However, I don't want
2 to recess the deposition because there may be a time in the
3 future when we might want to ask another question of you. But
4 I do want to thank you for your time and effort on behalf of
5 our inquiry.

6 MR. CHIN: Before we do wind up, is there anything
7 that you want to help us out by commenting on or explaining
8 to us about the accident that would help us in our inquiry
9 as far as a general nature or lessons learned?

10 THE WITNESS: Well, I guess one of the mainly
11 obvious things that I saw in my dealings with the NRC staff
12 that was on site was that the NRC staff is typically organized
13 to license nuclear power plants. And because of this -- and
14 rightfully so -- they are a group with expertise in that area,
15 and quite a few different areas. But I wasn't totally
16 impressed that the group had any full, detailed knowledge of
17 that particular plant. That was a very big problem.

18 In fact, I knew more about that plant than anybody
19 from NRC from having worked on it. And it was a big problem.
20 A lot of the problems that did occur, if somebody would have
21 had a detailed knowledge of that plant, they could have been
22 able to better decipher some of the information. And each
23 group seemed to be making very pessimistic findings in their
24 each individual area. And the NRC staff has been known to
25 do that. And it caused a lot of problems.

1 MR. CHIN: Fine. Anything else, Mr. Dornsife?

2 THE WITNESS: I can't think of anything else. I
3 have a lot of other comments --

4 MR. CHIN: Well, feel free --

5 Again, we want to thank you very much. The meeting
6 is adjourned.

7 (Thereupon, the deposition of Mr. Dornsife was
8 recessed.)

9
10 CERTIFICATE

11 I hereby certify that the proceedings and evidence
12 are contained fully and accurately in the notes taken by me
13 on the hearing of the foregoing cause, and that this copy is
14 a correct transcript of the same.

15
16 *Nancy O'Neill Reusing*
17 Nancy O'Neill-Reusing, Reporter
18 Notary Public in and for the
19 Commonwealth of Pennsylvania

20 MONICK STENOGRAPHIC SERVICE

21 My commission expires
22 December 13, 1982.

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25 **POOR ORIGINAL**