NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

INTERVIEW OF

ROBERT REID

Place - Bethesda, Maryland

Date - Monday, August 27, 1979 Pages: 1 - 57

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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Interview of:

ROBERT REID

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6935 Arlington Road
Room 426
Bethesda, Maryland

Monday, August 27, 1979

The interview commenced at 1:40 p.m. Present: Tom Cox, Fred Folsom, and Robert Reid.

* * *

C O N T E N T S

Witness:	Examination by:	Page:
ROBERT REID	Mr. Cox	3

Mr. Reid's Professional Qualifications and Resume appear at Page 4 of this Transcript.

P R O C E E D I N G S

Whereupon,

ROBERT REID

was called as a witness by the Nuclear Regulatory Commission and, having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. COX:

Q Bob, have you read and do understand the witness notification form I have just given to you?

[Handing document to witness.]

A Yes.

Q Do you have any questions or comments on it?

A Not at this time.

Q All right. Thank you.

Did you bring a resume?

A I brought a resume which ends in 1971, and then a copy of professional qualifications which was put together about a year ago, which the two of them, I think, might suffice.

Q Fine. Thank you. I'll take a look.

[Handing documents to counsel.]

A Now those, if I could get a copy back, I would appreciate it.

Q All right. I'm sure we can do that.

MR. FOLSOM: We can do that before you leave.

BY MR. COX:

Q All right. Let me just ask you a couple of questions that may formally update that resume for us.

What was your position with the Nuclear Regulatory Commission from February 1978 to the present?

A Branch Chief of Operating Branch No. 4.

Q And I believe the resume indicates that you were designated Chief, Operating Branch No. 4 in August 1975? And that has essentially been continuous since then?

A Yes.

Q Okay. Approximately how many people report to you?

A At the current time, 11.

MR. COX: At this point we'd like to have the professional qualifications and resume of Mr. Reid bound into the record.

[The documents follow:]

ROBERT W. REID

PROFESSIONAL QUALIFICATIONS

DIVISION OF OPERATING REACTORS
OFFICE OF NUCLEAR REACTOR REGULATION

My name is Robert W. Reid. I am Chief, Operating Reactors Branch No. 4, U. S. Nuclear Regulatory Commission (NRC). My duties include the review and the supervision of the reviews of all reactor safety and environmental considerations for the reactors assigned to the Branch which I supervise.

I received a Bachelor of Science degree in Chemical Engineering from Oregon State University in 1950.

After graduation, I worked for the General Electric Company, and Douglas United Nuclear Company for 21 years as an engineer and manager performing technical support activities in support of the operation of the Atomic Energy Commission's plutonium production reactors. I was responsible for performing reactor safety analyses, preparation of operating restrictions, incident reviews, performance analysis and modification reviews as an individual contributor and as manager.

In 1971 I joined the Regulatory staff of the Atomic Energy Commission (now the Nuclear Regulatory Commission) as a Project Manager with the responsibility of all regulatory matters for the reactors assigned to me. In August 1975, I was designated as Chief, Operating Reactors Branch #4. In this capacity I am responsible for the review and the supervision of the review of all regulatory matters, including reactor safety and environmental for the reactors assigned.

1-29-71

RESUME'

Name: Robert W. Reid

Address: 728 W. 22nd, Kennewick, Washington 99336

Telephone: 582-8537 (home); 942-1111, ext. 2-5578 (work)

Birthplace and Date: Portland, Oregon; April 16, 1924

Marital Status: Married

Height: 6'0"

Weight: 190

Health: Excellent

Education:

College	Dates Attended	Degree	Year	Course or Major
Oregon State University	1946-1950	BS	1950	ChE.
Center for Graduate Study	1952-1953	--	--	Nuclear Physics
	1953-1954	--	--	Diff. Equations
	1964-1965	--	--	Adv. Calculus
	1965-1966	--	--	Matrix Algebra

Special Courses and Programs

Year	Course
1958	Professional Business Management
1961	Business in Our Changing Environment
1969	Sales Analysis Institute

Professional Memberships

American Institute of Chemical Engineers
American Nuclear Society

Work History

11/65 to Present - Douglas United Nuclear, Inc., Richland, Washington 99352

1/70 to Present - Manager, Process Section, Technical Division

Duties: Responsible for managing a section providing direct process assistance, nuclear safety administration, and reactor materials development in support of the Hanford-production and dual-purpose reactors.

7/68 to 12/69 - Manager, Process Evaluation Subsection, Process and Programs Section (Technology Section on 8/1/69), Technical Division.

Duties: Responsible for managing a subsection providing direct process engineering and physics assistance to the Hanford production and dual-purpose reactors and issuing process standards specifying process limits to ensure reactor safety and life.

1/66 to 7/68 - Acting Manager, Process and Reactor Development, and Manager, Reactor Engineering, Research and Engineering Section, Technical Division.

Duties: Responsible for managing a subsection providing research and development, nuclear safety analysis, and special studies in support of the operation and diversification of the Hanford production reactors.

11/65 to 1/66 - Manager, Process Technology, Research and Engineering Section, Technical Division

Duties: Responsible for managing a subsection providing direct process engineering and physics assistance to the Hanford production reactors and issuing process standards specifying process limits to ensure reactor safety and life. Process assistance involves technical support to improve the productive capacity and economic performance of the reactors as well as support in analyzing and correcting problems related to reactor safety and life.

6/50 to 11/65 - General Electric Company, Richland, Washington 99352

3/60 to 11/65 - Manager, Process Technology, Research and Engineering Section, Irradiation Processing Department

Duties: Responsible for managing a subsection (approximately 25 technical and engineering personnel) providing direct process assistance to the Hanford production reactors and issuing process standards specifying process limits to ensure reactor safety and life. Process assistance involved technical support to improve the productive capacity and economic performance of the reactors as well as support in analyzing and correcting problems related to reactor safety and life.

9/56 to 3/60 - Supervisor, Process Engineering, Research and Engineering Section, Irradiation Processing Department

Duties: Responsible for supervising a unit providing direct process assistance to the Hanford production reactors in overcoming process difficulties and achieving optimum plant performance. This assistance involved day-by-day problem solving, and in applying process standards, monitoring conformance to standards and initiating action necessary to assure conformance, analyses, and recommendation for improving efficiency.

12/51 to 9/56 - Pile Engineer, Pile Technology Subsection, Technical Section

Duties: Responsible for providing direct process assistance to a Hanford production reactor through analysis of operating problems and recommendations for improvements for reactor safety and efficiency.

6/50 to 12/51 - Engineer, Pile Technology Subsection, Technical Section

Duties: Perform process and equipment development studies on a unique gas recovery system utilizing high vacuum techniques.

9/46 to 6/50 - Student, Oregon State University

12/45 to 9/46 - Laborer, Sawmill, Corvallis, Oregon

12/42 to 12/45 - Naval Aviator, U. S. Navy

Significant Achievements

Scouters Key - Boy Scouts of America
Silver Beaver Award - Boy Scouts of America
Life Membership Award - PTA
Section Chairman - AIChE

Civic Activities

Boy Scouts of America - Cubmaster, Committeeman, Kennewick Chairman for Annual Fund Drive
PTA - President, Kennewick Council
Kennewick Swim Club - President
Toastmasters - President

BY MR. COX:

Q To whom do you report, or did you report in the period from February 1978 to the present?

A There have been various people I reported to. Probably starting in 1978 it was Carl Goller, and I don't remember the exact date, but then when he left, Brian Grimes was the assistant director, and then recently during the redesignation of organization within DOR, that's Bill Gammill.

Q Okay. In the period following the TMI 2 operating license issuance in February 1978, what were your responsibilities with regard to the TMI 2 project?

A I had no responsibilities for the TMI 2 project, in the sense of it being assigned to me. The only assignment was to start getting ready to have TMI 2 transferred to Operating Reactor Branch 4.

MR. FOLSOM: May I interrupt?

BY MR. FOLSOM:

Q Who was responsible?

A Division of Project Management.

Q And do you know who the project manager was?

A Harvey Silver. I'm not sure whether he was the project manager during that entire time, but at least starting in August or September, during that phase, he was the contact we had with that; so I'm not sure when he started.

BY MR. COX:

Q Would that be August or September of when?

A '78.

Q What was your responsibility regarding amendments submitted to the TMI 2 FSAR during this period?

A None.

Q Are you familiar with Amendment No. 65 to the TMI 2 FSAR that was submitted to the NRC by Met Ed on 11 May 1978?

A I am familiar with that, yes.

Q Bob, I want to show you here a copy of several pages of that amendment, and a copy of this, these several pages, is already marked Exhibit No. 6 in the Varga deposition of Thursday, 16 August 1979.

That's the document you mentioned recalling or you are familiar with?

A When I say familiar with, I am familiar that it exists. I have never read it.

Q Can you recollect when or if you first saw it?

A This is the first time I have seen it.

Q Okay.

A My familiarity stems from the letter transmittal that I got, but it did not involve going back and looking at that submittal. If you recognize -- see, this was not -- this was submitted to Mr. Varga in Division of Project Management on that docket.

Q This Amendment No. 65 contained a revised TMI site emergency plan, Appendix ~~3 A~~ 13-A. Do you know if this change was requested by NRC?

A Not to my knowledge.

Q Did you take some action on this submittal by Metropolitan Edison?

A No, I did not. At the time it was submitted, we might expand -- the first time I became aware that there was such an amendment was at the time of the transmittal I got from Mr. Knighton, you know, November 1st, which addressed the fact that this had been submitted.

Q I see.

Then in your capacity as a branch chief of an operating branch, you or your people did not request Mr. Knighton to do any review?

A No, not to my knowledge.

BY MR. FOLSOM:

Q What is the communication from Mr. Knighton that you speak of?

A A letter dated November 1st, 1978.

MR. COX: Can we go off the record a minute?

[Discussion off the record.]

BY MR. COX:

Q Bob, you just mentioned that you did not request Mr. Knighton to evaluate Amendment 65 or any part of it, and

I'm interested in the emergency plan revision in that amendment. Was there any request that you know of by anybody or any organization, a request of Mr. Knighton to review this revised emergency plan?

A Well, with respect to my organization, my branch, I'm not aware of any request. It's my understanding, which I think has to be couched in those terms, that Mr. Knighton noted the incoming, and since he has the responsibility related to emergency plans, that he determined that he should review it. But whether he received any request from DPM or any other source, I'm not, you know, intimately aware of that.

Q The TMI 2 emergency plan is in fact a site emergency plan, isn't it?

A Correct.

Q In this regard, would it cover the TMI 1 emergency response also, or be the plan for response at that unit also?

A I would presume that that would be the intent because obviously it doesn't make sense to have two plans for one site, when one action is going to be taken. That would indicate that the first error that occurred here was the submittal by Met Ed which was only on one docket, should have been submitted on both dockets and was not.

Q Is the TMI, or was the TMI 1 project your responsibility at this time?

A TMI 1 project was my responsibility.

Q Could you help us establishing the timeframe here as to when the TMI 1 project became your responsibility?

A Let's see. There was two actions after I became branch chief, and at one stage all of the B&W and all of the CE reactors were put into my branch. That occurred in early '78.

However, Three Mile Island was in my branch at that time, so it was in ever since I was the branch chief of that branch.

Q I believe that went back to 1975?

A Yeah, yeah, whenever it was transferred. I can't remember the exact date.

Q But before February 1978?

A But before February 1978.

Q And in the period we are talking about now, TMI 1 was in your branch.

A Right; right.

Q Let's go directly to that document by Mr. Knighton to yourself.

[Handing document to witness.]

I want to show you now a copy of a memo from G. Knighton to R. Reid, dated 1 November 1978, subject Three Mile Island revised emergency plan. And this memo has attached a four-page enclosure 1 which is entitled "Three Mile Island Site Emergency Plan," and the document is already marked

Exhibit No. 7 in the Varga deposition of 16 August 1979.

Could you tell us any more that you know about the circumstances in this particular evaluation?

A Well, first, looking at the document, it says Three Mile Island site revised emergency plan, but the plant name is Three Mile Island Nuclear Station, Unit 2.

The project manager's name here is Charles Zwetzig. He was not at that time the project manager for Three Mile Island, Unit 2.

Those are observations. The TAC number 10082 -- okay, I'm not familiar with it, I haven't personally checked to see who originated that particular TAC number. That's T-A-C, technical activity control form that is used within DOR to record and track work.

Q Would that form indicate who asked that this work be done?

A No, it's not generally signed by anybody as a request form. It would indicate -- it would indicate people on it who were assigned. There's no bottom line signature that says, okay, this was requested by so-and-so.

It would indicate -- let's see -- no, I stand corrected. There is a place on the form for the name of the requester. It's not signed, but there is a name blank for it.

Now I recall receiving this document, and at the time I discussed it with the project manager, Mr. Zwetzig, and

we recognized at this time that it was for Three Mile Island, Unit 2; that we didn't have that reactor and nor did we have the submittal.

Here the recollection gets a little bit unclear, but in discussing this subsequently with him after this memo came to light and after Three Mile Island 2, it's his recollection and mine that we discussed this with Mr. Knighton, and he indicated that he would get back with Three Mile Island 2 project manager on this point.

Now, at the same time, we were in the process of reviewing Three Mile Island 2 with respect to the transfer of Three Mile Island 2. So exactly how this was going to be handled and who was going to handle it needed to be integrated with the transfer of Three Mile Island 2.

So that's -- you know, the two are related in that sense.

Q What implications did this review have relative to TMI 1?

A That was one of the things that would have to be determined, in other words, if this was submitted with respect to the Three Mile Island 2 docket, what was the implication with respect to Three Mile Island 1.

Q Was there some doubt in your mind at this time that this emergency plan and/or its revision applied to both 1 and 2 as a site emergency plan?

A Well, in the legal sense, yes. There was as far as Three Mile Island 1 was concerned, legally they were still bound by the emergency plan that they had of record.

And let's go back one other way. If we were going to make a communication to Three Mile or Met Ed with respect to their submittal and only their submittal on the TMI 2 docket, it would then need to have been transmitted by the project organization responsible for Three Mile Island 2, which would have been the Division of Project Management, but the -- obviously having this memo in this form with this addressee and submitted only on one docket created quite a bit of confusion with respect to the -- you know, how it should be resolved.

Q You didn't feel that Met Ed at this point needed to be contacted via your branch authority to deal with Met Ed concerning TMI 1?

A No, I'm not saying that. I figure it needed to be resolved as to who was going to be doing the contacting and how the contact was going to be going, and what we were going to contact.

The fact that the memo said what it does with respect to the plan not meeting Reg Guide 1.101, Revision 1, and that they should revert back to the old plan, also needed to be looked at before we'd want to communicate with Met Ed.

For example, Appendix E, 10 CFR 50 only requires

that they have a plan. The licensee is free to change his plan as long as it meets -- if 10 CFR 50.51, Part B, which says if the -- if he concludes that changing the plan does not involve an unreviewed safety question, he can go ahead and make that change, and it doesn't require our review.

So in order to tell him to go back and revert to his old plan, we would have first determined that it did not, or that it did involve an unreviewed safety question.

BY MR. FOLSOM:

Q And before that, you'd have to resolve it was your business to say this?

A Right. Correct.

Q So that --

BY MR. COX:

Q Let me repeat that in order for him to be told -- him being Met Ed -- to go back to his original plan, he would have to determine that there was or was not an unresolved safety issue?

A Well, that the change did involve an unreviewed safety question.

Q In which event --

A In which event, then, we would have to review it before the change could be accomplished or in effect.

Q Then if you would just tell me again what is it you did to pursue this in-house resolution of who was going

to --

A The only thing I did specifically was discuss it with my project manager, Jerry Zwetzig, and then he indicated that he would carry it from there, and the discussions with Mr. Knighton, and further discussions were carried on by Mr. Zwetzig, who was the project manager for TMI 1, and was also -- would have been taking over Three Mile Island, Unit 2.

Q Did Mr. Zwetzig conclude some arrangements with Mr. Knighton?

A It's his recollection as he stated to me that he discussed it with Mr. Knighton, and that Mr. Knighton said that he would discuss it with ~~EPM~~ DPM. Now that may -- you know, that was some time ago, and so you'll have to check with him, the degree to which that is an accurate recall.

But let me point out that at that time, if you look at the date of this memo, November 1st, 1978, I do recall that Mr. Zwetzig was gone for, I think, three weeks right around Christmastime, for we're also entering into the holiday period. This was also the time when DOR was actively establishing their accounting system for action items, so there was a lot of activity in the project managers at that time, and then right after the first of the year, he was involved with a refueling review for Three Mile Island, Unit 1, so he was busy at that time.

So I think this also has to be looked at in the

perspective of the total backlog of DOR, and where does this fit in DOR's scheme of priorities. We do have a backlog of approximately 2400 action items. This is not included in that backlog.

Q You mentioned the importance of making a determination about unresolved or unreviewed safety questions in accordance with this 10 CFR 50.59.

In this time period, did you, other than what you have already told us, did you initiate any attempt to determine whether this Amendment No. 65, in particular, this emergency plan, involved such an unreviewed safety question?

A No. That would be done after we determined who is going to handle it.

Q If a licensee submits a change to the FSAR without any declaration about whether the change is or isn't an unreviewed safety question, what is your responsibility relative to this, as far as pursuing the determination of whether something is or is not?

A Well, the primary audit of the determination of an unreviewed safety question for any changes that the licensee makes with respect to 50.59 is I&E's. They review the submittals that are made, the reviews that are made, the fact that a review for whether 50.59(b) question is involved, I&E does that review. It's a primary part of their inspection.

Our role in that is to back up I&E's reviews of those, if we think that the -- something has slipped through, or if the determination has not been properly made, we will attempt to try to backstop the I&E determination.

But the primary responsibility is an I&E responsibility. Now the importance here with respect to whether or not 50.59 question is involved is indeed if there was no unresolved or unreviewed safety question, then we would have no legal basis for going back to the licensee and saying, "He cannot make this change."

So that's the important part.

I think another thing along this line that should be noted, the deficiencies stated in this letter are deficiencies in some way related also to Reg Guide 1.101, Revision 1, okay?

It's not clear whether the deficiencies that are pointed out are deficiencies related to Appendix E of 10 CFR 50 or merely to Reg Guide 1.101.

That would also have to be determined with respect to the need to and the priority for upgrading the emergency plan, and however the statement that they should revert back to the plan that was previously approved suggests that the plan that they submitted was less than the plan that was approved.

But these specific deficiencies I haven't reviewed

to determine whether those are solely related to Reg Guide 1.101, Revision 1, or not.

Q Are you aware of the Regulatory Requirements Review Committee and its role in evaluating new requirements in this case, as well as reviewing and approving Reg Guide 1.101?

A Yes, and Revision 1.

Q Yeah.

A Not explicitly, but generally, yes.

Q I understand they categorize requirements as to their necessity for backfitting or not backfitting.

A Right.

Q And are you aware of the way that the RRRC categorized this particular guide?

MR. FOLSOM: Off the record for a moment.

[Discussion off the record.]

BY MR. COX:

Q I believe the RRRC categorized this regulatory guide prior to the time that the Knighton-to-Reid memo came out on 1 November 1978, saying that there were some deficiencies relative to that guide.

A Correct. That's my understanding.

Q How did the RRRC's determination which is, I understand, the final determination as to whether or not something is backfitted or not by the Staff, how did that fit into your thinking?

A Okay, it's my understanding that the RRRC determination with respect to this reg guide was that it should be backfitted in all operating reactors, and that, I don't recall the exact date of that determination, but it was as early as 1977, but that's -- I'm not positive on that date.

However, particularly in the case of Three Mile Island 2 at the time -- and that was before the operating license was issued for Three Mile Island 2, the backfit of this reg guide to Three Mile Island 2 was determined not to be necessary. It was signed by Ben Rusche who was then Director of NRR. Are you familiar with that?

Q I think -- are you referring to this office letter concerning the implementation of the standard review plan?

A Correct. Correct. Okay. Which would say then at least at that level it was determined that at the time of the issuance of the operating license, that there was not a need to backfit that reg guide for Three Mile Island 2.

Now there was also a program to implement Reg Guide 1.101, Revision 1 on all operating reactors. However, the program priority was such that only those cases which were selected as being -- needing upgrading were in the program.

In other words it's not a high priority effort.

Q For TMI 2?

A For any operating reactor. The -- as I understand it, there are only about five operating reactors which meet

the requirements of Reg Guide 1.101, Revision 1, out of 70 some odd.

Q I thought you had said that there were certain selected reactors for which it was given priority.

A Was given priority, but that doesn't mean it had been fully implemented.

In other words, first you have to decide to implement the requirement on a given reactor, and then it takes time to get it implemented, which I think is perhaps in the realm of opinion, but for example had we started to implement Reg Guide 1.101, Revision 1, on TMI 2 and 1 at the time of this memo, it's certainly questionable as to whether it would have been implemented by the time of the accident.

And I think one way to determine that would be to look at the other plants for which the backfit implementation was being worked on, when those started, and what the progress on those are.

Q After receipt of the November 1st memo from Mr. Knighton, was Met Ed informed of these results of our review?

A No, not by me.

Q Or by anyone else, to your knowledge?

A Not to my knowledge.

Q Why not?

A Well, as I say, to inform them of the results of the review, first we would have to determine, okay, based on

these results, what action was required of Met Ed, and before we could do that, all these things I was discussing would have to be resolved, would need to be resolved, and those were not resolved, at least on my part, and I am speculating on the part of the project manager, because of the priority of other work relative to this.

Q Does this hold true even for an informal kind of notification that the project manager might do, say, by phone? You feel it would have been out of order for him to have said to his contact there that --

A It wouldn't have been out of order for him to contact him, but then he would have been immediately if he did -- and he might have, you'd have to check that with him -- the immediate question would have been, okay, where do we go from here.

But I think again if he was going to talk to Three Mile Island 2, he would have had to have integrated with the other project manager for Three Mile Island 2.

Q I think that's one of the things we are trying to examine here, Bob, is the apparent lack of cross-talk, if you will, between this work that's being done in the project management organization that had responsibility for TMI 2 at that time, had the nominal responsibility, anyway.

A You mean this particular --

Q The review of this emergency plan change. See, we

are examining the system and the process, and how it works.

A Well, let me step back one.

For example, there are two groups that implement, for example, the emergency planning reviews. One is in DOR, one is in DSS. At that time it was under Scovall. I'm not sure whether he was in DPM at that time.

Okay, if we were going to go back and handle this on the TMI 2 docket, then there is even a question whether Knighton's group would have been involved, because the review of the original plan, the reviews for DPM, are not done by DOR.

So, in other words, to go back and to restart this thing, you'd have to get both the reviewing parties and the project parties together at that time.

Logically, when this came in, it would have been reviewed on the docket that it came in on, determining whether these -- the questions that you raise with respect to should it have been reviewed and, if so, initiated the review, it should have been done on the Three Mile Island 2 docket.

Q But the operating license is already issued, right? We're talking about the period where the operating license has been issued already after February 1978.

A Well, the operating license, I don't think, has any significance. It's the date of transfer from one organization to the other that has significance.

For example, Fort St. Vrain has had an operating license issued, what, three -- two, three years ago? It's still the responsibility of the Division of Project Management entirely.

Q And yet in this case the Division of Project Management emergency plan review organization was not working on this after February '78, but Mr. Knighton's group was; correct?

A Apparently, yes.

Q And I guess what we have not established here is exactly why.

A Correct. Yeah. And I don't have the answer to that.

Q Could you shed any light on what version of this site emergency plan was in effect as of the time of the accident on March 28, 1979?

A I don't think I can. As I understand that which is in effect is the emergency procedures and the plan is only that which is a description of the procedures. That which is implemented would be the procedures themselves, and so what you'd have to look at is as a result of submittal of this change in the emergency plan, was there any change in the emergency procedures.

But the direct answer to your question, I don't know.

Let me expand that a little bit. Legally I would

say that it would be confused, that the plan of record for TMI 1 would be the original plan, and therefore if there was any citable deficiencies with respect to any action, the plan of record with respect to TMI 1 would obtain, because of Met Ed's error in not submitting it on both dockets.

So, in effect, they had two plans, and I guess legally are bound to the most conservative of both of them.

Q If they had submitted -- if I can ask a hypothetical question that I think might shed some light:

Suppose that Met Ed had submitted Amendment 65, or some other amendment number, but this emergency plan change on the TMI 1 docket, what would your actions have been in that regard?

A The action would have been to issue a Technical Assistance Control form to request the review and concurrence with respect to that change in plan.

BY MR. FOLSOM:

Q And it was not done in this instance?

A Not by DPM -- I mean not by DOR.

Q Do you know whether it was done by anybody?

A It's my understanding it was not.

Q That was because of the confusion about where responsibility lay?

A I guess it was not confusion on my part, but confusion with respect to, I would say, the nonassumption of

responsibility, yes. And, yeah, let's say confusion with respect to the fact that we are in a transfer status.

BY MR. COX:

Q How would you -- let me start again.

How was the licensee to know what version of the emergency plan is in effect?

A Well, again, you'd have to determine that from the licensee, if he went by the plan of record, that's the only way that I can see that he would know. But I haven't asked the licensee which plan he considered applicable to TMI 1. That would be the only way I would find out -- know to find out, and I doubt that the answer today would necessarily be an answer that would be the same as you would have gotten before the TMI 2 accident.

Q Or when the licensee submits an amendment to change the plan back to the hypothetical case of a moment ago --

A Let me -- I'd like to correct a statement there. The licensee submitted a changed plan. He didn't submit an amendment or any request to change the plan.

In other words, he submitted an amendment to the FSAR. That's different than submitting a request for an amendment to the license, so he didn't submit an amendment to change. He apparently submitted a change.

Q And in the absence of response from the NRC, his

having filed this change to the FSAR, how do you view the applicant's position with regard to using a particular plan? Which plan do you feel he is authorized or permitted to use?

A At least in the TMI 2 docket, he would be authorized or permitted to use the revised plan that he submitted. How he interpreted it for TMI 1, again, I don't know.

Q Even in the absence of a response by DOR project organizations, with an approval or disapproval, he could go ahead and use the plan that he just put in here and docketed?

A Yes. If you go strictly by what the rules require.

Q Even in the absence of a declaration by the applicant one way or the other as to whether this was an unreviewed safety issue or not?

A He doesn't have to submit to us that they are a declaration that there was or -- you know, with respect to an unreviewed safety question.

However, he should have in his files and in his committee meetings, there should be a determination with respect to an unreviewed safety question.

In other words -- and, in fact, he would not necessarily be obligated to file a revised plan. That's only requirement for an application for a license, not a requirement for continuation of a license.

Q Well, if this revised emergency plan contains an

item which had high potential for being an unreviewed safety issue, how would we pick this up?

A Through, as I mentioned, the primary means would be through the I&E inspection. The licensee makes numerous changes in his procedures, his equipment, and his operation, which he's authorized to make, but he makes those -- makes a determination on his own that it either does or does not involve an unreviewed safety question, and he need not make any submittal to us, unless he determines that it does involve an unreviewed safety question. And that involves changes to things which are stated in the FSAR.

But, in other words, that's a basic part of the regulation.

Now, the review of those determinations is an I&E function, and they do report those determinations, changes to procedures test, modifications, in their what used to be annual report; now their monthly report.

Q But if the applicant comes in right up front with a change to the FSAR which we have reviewed and which was one of the bases for the issuance of a license, isn't that -- what's the status of that kind of a change?

A That's an information -- you mean just an information submittal?

Q Well, I would think a change of the entire emergency plan, at least prior to our looking at it, would be more than

just information. There might be some really technical substance there.

A Well, no, I wasn't looking, I wasn't talking about an emergency plan. I thought you were generalizing.

Q Well, in this case we are talking about a change to the FSAR that was a change in the emergency plan that had been previously approved as a part of the FSAR.

A Well, first of all, let me say I don't have any question but what, yeah, this should have been reviewed. I mean I'm not making the statement that it should not have been reviewed, since it was submitted, and I think the practice is that everything is reviewed or everything that's submitted we will take a look at, and make an independent -- at least check to see whether it's within the bounds of the proper determination of an unreviewed safety question, or safety irrespective of that.

So, yes. But if you look at the submittal, the submittal came in in May, and that's where it has to be left to the responsibility of those who have that docket to resolve it because, in other words, until you showed it to me, I'd never seen the submittal, although I obviously could have looked at it in November. But the -- it's not -- the submittal doesn't go to, you know, all over the NRC.

Q If I could just ask you one more in this area. We talked a minute ago about what you would have done had this

been submitted in the TMI 1 docket.

Again, assuming that instance, and this change had been submitted on the TMI 1 docket, would you have waited for or needed an I&E report that this is something that ought to be looked at before you had started that review?

A Well, no, recognizing that we were in the process of upgrading all emergency plans eventually to Reg Guide 1.101, Revision 1, and that the trigger on that, generally speaking, was a submittal of a change to an emergency plan. I think that would have been the basis for me to initiate the review, because I would have assumed that since they had submitted a change that we would now want to upgrade them to Reg Guide 1.101, Revision 1.

So I think there's two actions, two separate determinations that have to be made here. One is with respect to the inadequacy of the plan that they submitted. The other one with respect to are we going to upgrade to Reg Guide 1.101, Revision 1, and those are two separate things.

Q Why, in your opinion, did it take so long after the February 1978 oral issuance to effect the transfer responsibility for TMI 2 from DPM to your branch in DOR?

A That's, I think, largely a function of transfer policy. In other words, when is it the policy to transfer a reactor? There are general guidelines with respect to those transfers, but in the past it's been that normally DPM will

retain the responsibility for the reactor until it gets up to some power, say near 100 percent power, and then there's the matter of putting together the transfer document which also takes time to put together, and to evolve to satisfaction, so that it adequately describes the status of the reactor that's been transferred.

Q You mentioned one thing, the power level, and then just now you said something about the transfer memo evolving to the satisfaction of some or all the parties.

Could you clarify any further the kind of criteria we are talking about that would be required to be met for the transfer to take place?

A Well, there are no absolutes. If there are major hearing actions, for example, which are continuing beyond the issuance of the operating license, and after the reactor gets up to some power, that will have a bearing on whether or not the reactor is transferred, because the project manager or project organization that's been directly involved in those hearings need to continue their part in the role with respect to those hearings.

The transfer also would be dependent upon the problems that occur at this facility. In other words, if they issue an operating license and then for one reason or another the facility had some major difficulty and, in fact, has to go to substantial activity, that may also delay the

transfer.

We could also ask the same question, I guess, with respect to the transfer of TMI 2 after the accident. That occurred March 28th, and the transfer occurred last Thursday.

Q You mentioned the hearing issues outstanding and technical problems occurring during the early OL phases. Any others?

A I think those are the main -- there's also a matter of relative staffing capabilities to handle the reactor on the DPM side versus the DOR side that may be controlling in particular cases at particular times.

Q Are you talking about staffing outside the immediate project management area, project managers or review people?

A Both, but I'm thinking primarily of the project management types of individuals. It's also, I think, reviewers, too. I know -- well, okay, you asked --

Q The reason I asked --

A You were asking additional factors and one of the factors is how much workload is, for example, is it going to mean for DOR to take on such a facility. I know that and resolution of that has delayed some transfers.

Q You're saying this latter problem, potential problem, staffing in DOR, was one of the reasons -- is that one of the reasons?

A In TMI 2? No, I was generalizing there. No, I had

at least a project manager assigned, Mr. Zwetzig. He had two other reactors at the time, but at least I had no particular problem with the timing of the transfer. But I think the delays there were primarily getting the transfer papers put together in a definitive form.

Now, whether when we got those fully -- all the outstanding action items fully described, whether that would have resulted in a problem with respect to DOR observing TMI 2 from the reviewer part of the DOR division, I don't know. We didn't get that far.

Q It took the better part of -- well, I guess it was more than a year to describe the technical issues outstanding, to lay them out in a written document?

A Well, TMI 2 got its operating license in -- when, February of '78? Okay, the first draft transfer memo was in September of '78. I don't know whether you have a copy of that or not. If not, I brought a copy along with me.

Now, that partially described the outstanding issues and description of resolved issues. The action from there on, I think, was primarily related to the priority of DPM to finish putting together the transfer memo.

In other words, they have quite a bit of work to do to dig up the history on various items which we need to know in order to take on a facility, to know what actions are outstanding.

Q The first thing you mentioned was hearing, outstanding hearing issues. Were there any of those kinds of things that you know of?

A No, there was a hearing, an outstanding hearing issue with respect to Three Mile Island 2, but it was not one that would affect the transfer.

Q So I think you've narrowed it down, then, really to the development of this transfer memo and any administrative problems associated with writing out these issues and scheduling their work?

A Yeah, and I don't know what -- what other activities are going on with respect to absorbing the priority attention of DPM, in getting the transfer memo put together. I don't think they were working 100 percent of the time from September to March just preparing the transfer memo.

Q How does your branch participate in the participation of this memo?

A We primarily review it to see whether they adequately addressed current items of interest to DOR. For example, we have a list of 80 generic items which we are applying across the board to all operating reactors, n[illegible]ll of which are applicable to B&W reactors. I don't know right offhand how many are applicable to B&W reactors. But we want to be sure that we know what the status of the reactor is with respect to each of those items that are applicable to

B&W reactors.

And then I think the other major part is that, okay, for those items and for all of the open items which are identified by DPM and by the license, that we want to be sure that the responsibility is designated as to who is going to finish those up, and whether it be -- if there is technical work, review work to be done, which technical organization is going to finish the reviews.

BY MR. FOLSOM:

Q Before we leave this, may I ask some questions as a ayman here?

A Okay.

Q The transfer package would also include outstanding problems that the licensee has to fulfill, doesn't it?

A Yes. Certainly recently every license that issues has some number of requirements that are not yet closed out. TMI 2 was certainly no exception, and those are obligations on the licensee, direct obligations of the license. And many of these things which say, all right, so-and-so is going to have to be completed by the first refueling outage.

So those are specifically identified in the license. There are other things which have come up since issuance of the operating license, either due to operating experience or other sources, which would also add to that, plus the items that we have that we are working on, which hopefully we've

communicated all those previously to DPM, but we want to be sure that they are specifically addressed on the transfer.

This may involve -- you know, anywhere from 35 to 50 items.

BY MR. COX:

Q There's been some discussion in our inquiry of the applicants or the licensees' move toward commercial operation, which I believe was attained somewhere around the end of 1978. Does the licensee's declaration of commercial status have anything to do with criteria in transferring a project from DPM to DOR?

A Not specifically, except it generally signifies that he's at 100 percent power, which has been one of the criteria from time to time that would trigger a transfer.

So in that sense it's related, but it's broadly related, but not specifically related.

Q When you say trigger a transfer, how do you mean that? By itself?

A No, when I said that the ground rules were not firm for transfer and they have changed from time to time, depending -- but they're not written down, as far as I know, as to when a transfer would occur.

But at times there has been agreement between DPM and DOR that when you get to 100 percent power, that's the time to make the transfer.

One reason for that is that there are various license conditions which are put into effect at the time of the issuance of an OL. Some of those require changing before they can get to 100 percent power, so that it's felt that the people who have the background that establish those particular licensing conditions, it would be better if they handled the changes related to those license conditions.

For example, I'm thinking of Arkansas 2, which had certain license conditions related to a core protection calculator, which is a new device on CE reactors, and there were certain requirements with respect to those devices which, if needed to be met before the power could be increased beyond certain levels, it would appear logical then that those are directly involved in the review of that and establishing those conditions should be the ones to review and relax those conditions. And that's why 100 percent power is certainly one break point for making the transfer.

It's hard to determine what is the optimum time for making a transfer. You could say, well, the day they issue the OL. That could be a time.

Q What do you see as the definition of commercial operation of a reactor plant?

A Definition of commercial operation is strictly a licensee determination, and it has strictly commercial and tax purposes definition, but it does have one direct

implication with respect to us, in that the code requirements for a reactor are triggered and tied to the date of commercial operation. That's the only direct regulatory implication.

Q You mean the ASME code?

A Right.

Q Do you see any specific problems with a split in the responsibility between DPM and DOR regarding this operating plant for which licensee matters are still managed by DPM?

A Well, I see no -- I see no fundamental difficulty if DPM fully exercises, you know, their responsibility with respect to the licensing role for an operating facility, then the main problem, assuming that, then the main -- the main difficulty would be to be sure that there is communication then during the transfer phase as to what's the background and what's been transferred, you know, and make sure that that flows.

The more overlap you can have between individuals and the more free time that they have at the transfer phase, the better transfer of information you will get. And I think there are probably more optimum ways of doing it, but I think they are broader than just the simple transfer problem.

Q More optimum ways of doing what?

A More optimum ways of handling that phase from start-up to, you might say, normal operation and exercising the regulatory role during that phase. It's a little broader than

just the transfer problem. I think the transfer from DPM to DOR is just a subset of that difficult phase for any reactor.

Q I'm sure the inquiry in general will be very interested in hearing your views in that area, and you could either-- I mean if you feel like expanding on that at this point, feel free, or if you'd like to write it down for us, if you feel that it's too involved at this point, but in whatever form, we would certainly be pleased to take your views on that.

A Okay. I just recently prepared a writeup on that subject, and how do you want -- I think I would like to enter it.

Q That would be all right.

BY MR. FOLSOM:

Q All right, submit it, then, if you would. Give us a copy when you get back to the office.

A Okay.

Q Fine.

BY MR. COX:

Q This writeup you just mentioned, now, is that a memo to somebody, or paper?

A No, it's a writeup that I just made and I recently gave a copy to Denny Ross for his consideration. I haven't written it as a memo to anybody else.

Q In connection with one of the task force operations?

A No, no, just based on the experiences I observed.

Q Were you aware of any management discussions, formal or informal, on this general topic? Now, of course, I mean excluding the one you just told us about. Maybe your discussion with Denny or any other --

A On the transfer?

Q On the general problems that you or others might perceive regarding this long transfer period between OL issuance on the one hand, and full acceptance of responsibility by DOR on the other hand.

A Well, I haven't participated in any other than just this one I mentioned with Denny Ross, but it's a little different subject, so the only thing I guess I'm kind of aware of is that there obviously is a desire, a pressure, if you will, to get a reactor transferred to DOR as soon as possible, which undoubtedly then is a result of some sort of management discussion that's -- but I'm not sure what those management discussions were, or the total reason.

BY MR. FOLSOM:

Q Now when you speak of management discussion, do you mean management of the utility or management with the NRC?

A Management with the NRC.

Q I see.

Is there pressure from the utility to get the transfer accomplished?

A I haven't -- I have never seen any, and I have had

two cases, anyway, where I had reactors -- well, Met Ed certainly was one case, and I have another case, Arkansas Power & Light, which is Arkansas Unit 2 and Unit 1, one which is still in DPM, the other one is in DOR, which, you know, if there was any pressure on the part of the utility, you're talking to them, so you would hear it, and I haven't heard any pressure on those lines.

Q You don't sense any commercial advantage to the shift from DPM to DOR?

A No, I don't sense any commercial advantage. I don't know what the utility says with respect to whether they would rather be under the jurisdiction of DOR or DPM. I have heard nothing from the utilities on that.

BY MR. COX:

Q Bob, in your several years now as branch chief here of Operating Reactor Branch, are you aware of any change or exchange of correspondence that has taken place between DSS or DPM and DOR, making the point that it was hazardous not to transfer an operating project from DPM to DOR after the reactor reached a significant power level?

A Not in correspondence. I wouldn't say it was hazardous.

Q Well, maybe hazardous is a strong word. Any formal -- has there been any document or management discussions of the kind we were just talking about a minute ago? You

mentioned pressures to get this in hand.

Q No, the only documentation I was trying to recall, the last documentation I can recall, I think, goes back to Giambusso, which would be some time ago, before DOR. But we still had the same operating branches and the -- you know, the CPOL branches, so the same things with respect to transfer existed then as they do now.

I don't think the formation of DOR has had any marked effect with respect to that. I would have to look at the guidance. We do have an operating or project manager's handbook, and whether that has specific guidance in it with respect to the transfer, I think it does, but I can't recall for sure.

But with respect to memos, at least in the last few years related to -- anything related to safety in the transfer, I don't recall any. I don't remember seeing any.

Q Maybe I'm leading you down the wrong kind of thinking path here. I'm interested in any documentation that would indicate that our management at, say, the AD level or higher, is discussing the problems inherent in our process because of this long transfer period. Are they exploring ways to shorten it? Have there been discussions at the management level including, of course, your own level, to talk about how to smooth this out and how to make it happen better?

A I'm not aware of anything explicit. I do know that on the two cases which are actively up for transfer which I'm involved -- one is Three Mile Island 2, the other one is Arkansas 2 -- that we were given -- I was given explicit direction by my boss, who indicated that -- Ed Case indicated that he wanted them transferred right away.

Now that's about the extent of my knowledge. Obviously there's been some discussion, but --

Q Okay, when did that take place?

A About three weeks ago, approximately.

BY MR. FOLSOM:

Q Were you privy to the discussions in any regard?

A No.

Q You don't know what prompted this urgency?

A I don't know what -- no.

Well, the two are not -- the two are two separate cases. One, Three Mile Island 2, is certainly not an operating case. The other one is Arkansas 2. It is an operating reactor case, but they were both put in the same hopper, so that the -- whether the reasons were administrative or something else, I can't even speculate.

MR. FOLSOM: Should we take a break at this point and stretch our bones?

MR. COX: Well, let's go off the record a minute. Maybe we could if you wanted to.

[Discussion off the record.]

BY MR. COX:

Q Let me ask you a more general question now, Bob, relative to the management of the licensing process which regards operating plants, how do you perceive the relative roles of the Division of Operating Reactors versus the Division of Systems Safety?

A Repeat the first part of the question.

Q We've been talking about interface between DPM and DOR a fair amount.

A Yeah.

Q How do you see the roles of DOR versus or opposite from DSS?

A Well, I view DSS similar to the review functions that we have within DOR, as far as their role is concerned, except for the -- you know, the additional role that they have in setting some of the fundamental acceptance criteria for new reactors and then -- but now our interface with DSS people comes about to transfer a reactor. They will retain some responsibility for completing some actions and so in that sense we try to make sure that the responsibility is clear. In fact, we try to get the individuals who are going to complete that identified by branch, by reviewer, and by date. The -- in that -- that's whether it's within DSS or within DOR.

Now the interface with DSS is a little more

cumbersome than it is with the reviewers in DOR because basically you're crossing a division line and the communication is not as frequent, so it's just not quite as easy to know who to communicate with, and who is the best one to answer the resolution of a problem, and if the reviewers change, it's a little cumbersome to get it fixed up.

Now I'm not sure whether that is getting at what you are after, though, because, in other words, we have no direct interface as it relates to our facilities which would be, I would say, initiated by them. We request of DSS at various times work from them, but if it's not something that's been relegated from the transfer, it's usually something which has been decided that, okay, DOR needs DSS' assistance, and that's handled normally by our review branch as requesting that assistance from their DSS counterparts.

Am I touching on what you are interested in?

Q I think so. When you mentioned your review branch is going directly to DSS, would they do this without necessarily coordinating with the OR project manager?

A No, not necessarily. In fact, usually the OR project manager would be involved -- I can't say -- there are many kinds of things that go on, some of them are, say, generic. We make it a topical report which is primarily oriented to OR facilities from one of the vendors, which is going to be -- the review may be going to be managed primarily by DOR, but we

need DSS assistance;in that case project managers may or may not get directly involved in that. But if a particular problem on a particular facility was requested to be done by our reviewers and then is transferred to DSS reviewers, the project manager, I think, in 99 percent of the cases, will know that.

There's also an interface with DSE, in addition, which is similar.

Q Which division would have the responsibility for bringing to the OR project manager's attention safety issues, new issues?

A Well, new issues generated out of reviews or new issues generated on operating experience? I think new issues generated out of operating experience, I think it's basically DOR's responsibility, you know, to recognize that, together with I&E they are a joint thing and, in fact, it's our responsibility to communicate those to DSS-DPM.

Safety problems arising out of reviews, obviously it has to be those who are doing the reviews responsibility to notify the others.

Q To what extent are you informed about significant transients that occur in operating reactors?

A Well, I see all the LERs on all the facilities for which I'm responsible. The -- you know, with respect to -- well, I don't see the results of the experience unless it's been highlighted in some way or another. For other reactors,

say, for example, the Westinghouse reactors or the reactors that are in this systematic evaluation program,are the BWRs, so I will only the LERs for my plants and, as I say, I have all the B&W plants and all the CE plants except one, but that's only existed since about a year ago last March that I've had all those. Before that, I had a mixture of Westinghouse, GE, B&W and CE so that, okay, there again I'm seeing the experience on those plants that I have, but not all the plants.

In other words, then I wasn't seeing ever all the B&W experience. So you would only see that experience which was highlighted for one reason or another.

Q So you've had all the B&W operating reactors since about March of '78?

A Yeah, all except those which have been transferred subsequently, which include Davis-Besse.

Q Yeah.

BY MR. FOLSOM:

Q How do you learn of transients? What's the mechanism, the LERs?

A Well, LERs, plus the project manager's contact with the licensee. If the transient causes a shutdown, probably we would probably know about it, and we would probably inquire into it, and there is a monthly report, for example, which we get from every licensee which will describe his experience over and above the licensee event

report including, you know, when he's been down, if -- so you may see it there. Of course, the sensitivity to transient experience, I'm sure, you know, will vary from project manager to project manager and from -- throughout the whole NRC.

Obviously people are more sensitive to transients now than they were before TMI 2.

BY MR. COX:

Q Prior to March 28th, 1979, were you aware of the Davis-Besse event of September 24th, 1977?

A Yes, I became aware of the Davis-Besse event in about October or so of '78. This was about the same time that Davis-Besse was being transferred, but in the nature of the awareness was primarily related to the amendment and the procedural change that they had made with respect to accommodating that event, not the event itself. It was an accommodation of the event. In terms of the -- they had made a procedural change with respect to the control of the steam generator water level following a LOCA, and that change was detected by I&E.

The question was raised whether that involved an unreviewed safety question, and I think it was finally determined it did not involve an unreviewed safety question, but it was determined subsequently that it should be -- the level control should not be a procedural control, it should be automated.

So that's the area we were looking at, was the control of the steam generator water level. That question arose apparently out of the -- in part the 1977 -- September 1977 transient.

And so again my involvement was to look -- looking primarily at this water level control in the steam generator and its acceptability and where do we go from there. It was at our request.

In other words, we did request some further analysis and there was some question raised about the voiding in the primary system, the effect of the water level control in the steam generator in the voiding of the primary system, which was there a document, I think, submitted in December of '78, and then a document submitted in February of '79, to put in an automatic change, and it was, you know -- that area was under review at that time. But that's about where it was when TMI 2 happened.

Q Where did the questions that you mentioned being asked of the applicant or licensee come from, those questions that you mentioned you had asked? Where did they originate in our organization?

A Well, the first question was with respect to the acceptability of this water level control point, and that was raised by I&E.

In other words, they raised that question to NRR.

In other words, was that a proper course of action for the licensee, and that was -- most of that was -- the initial point was discussions between our project manager, the inspector, and the licensee.

And as a result of that, it was decided that they would make these submittals that would analyze both the two cases of not controlling the water level to, I think, 35 inches and 110 inches are the two numbers. In other words, having transients under those two different conditions.

And those questions were between -- raised by my project manager and one of our reviewers -- I think it was Sy Weiss there, I'm not too clear, but I think it was Sy Weiss that was involved in those questions.

BY MR. FOLSOM:

Q Who was the reviewer?

A Yeah, he was section leader.

Q Who was it, do you remember the project manager? Excuse me.

A Oh, project manager was Guy Vissing.

BY MR. COX:

Q I thought the question was concerning the void formation in the NRC system. Where did they originate within the organization?

A Well, they came up in the submittal that Davis-Besse made, where they looked at the two cases with and without, and

that was a submittal, I believe, that was made in December.

Q '78?

A Yeah, December '78, in which they mentioned void formation without the steam generator level being controlled to the lower level, as I recall, and that was in support of the acceptability of this procedural control that they had in effect and also led to this requirement that they submit an automatic system for doing that.

Now there was a final decision and discussion in a letter written to Detroit Edison near Christmas and -- however, I wasn't involved in those, I was on vacation at the time, but Brian Grimes and I believe Sy Weiss were the ones involved in those discussions with the licensee and finally obtained the commitment to put in the automatic installation.

I don't know the details of that discussion.

Q Then you feel that our questions regarding void formation were in response to a Davis-Besse submittal that had already brought up that matter of void formation?

A These questions you are thinking about, some that went out later?

Q Did we ask any questions in relation to the applicant's submittal?

A No, we were also getting their submittal on the automatic system. We were reviewing the submittal they made late December, waiting for the submittal on the automatic

system. The whole thing was being reviewed in one package. I don't think any questions went out with respect to that December submittal, if I recall. In fact, none went out on the automatic system, because at about that time we're getting there, TMI 2 happened. So we still have not approved the final design of the automatic system.

Q You had not at that time?

A We did not at that time, and have not yet to date. It's being reviewed currently by Denny Ross' task force group as part of the overall review of the items in response to the order to shut them down and allow them to restart.

Q At that time, December '78, was the reactors systems branch and DSS involved at all in coping with this evaluation?

A No, not to my knowledge, unless DOR, you know, informally discussed it with them at the reviewer level. There was no formal involvement that I'm aware of.

Q Were you aware prior to March 1979, were you aware of the Michaelson report of January 1978?

A No, no.

Q Were you aware at all of the Novak memorandum of January 10th, 1978, sometimes called the Israel memo?

A No.

Well, I'm wondering, when you say Novak, there are two Novaks. One works for Detroit Edison, one works for --

MR. FOLSOM: Eugene Novak?

BY MR. COX:

Q I mean Tom Novak.

A No, I wasn't aware of it.

MR. COX: Could we go off the record a moment?

[Discussion off the record.]

BY MR. COX:

Q Bob, are you fairly satisfied that you've understood and answered all of our questions to the best of your recollection?

A Yes. Of course, I would like to see the transcript and see how it came out.

Q You will see the transcript.

MR. FOLSOM: Yes.

THE WITNESS: Do I have an opportunity to make corrections if it looks like there is mis--

BY MR. COX:

Q Absolutely. You will receive a copy to mark up.

A Good.

Q Do you believe on the basis of your knowledge today that any additional questions should have been asked to elicit information on the subjects that we've covered so far in this interview?

A Not that I can think of, but, you know, that depends a little bit on what you're trying to show, but I

think with respect to the emergency plan, that's covered pretty adequately. With respect to we talked about the Davis-Besse event, you know, there's certainly a broader realm there to talk about. My involvement has been fairly narrow, so within that scope, I don't think other than pure speculation that I have anything to add there.

Q Do you have any additional comments or statements that you'd like to make with regard to the licensing and/or regulatory process?

A That's a very broad topic.

Q I know it.

BY MR. FOLSOM:

Q In other words, at the moment you haven't written any memoranda such as you have with respect to -- well, you spoke of a memorandum that you have and that you promised to give us a copy of.

A Yeah.

Q And you haven't done any more general memoranda than that?

A No. With the -- with the, I guess, exception of I've had an opportunity to comment on the Lessons Learned report so there are, you know, handwritten comments on drafts and that sort of thing which -- so when you say comments with respect to the broad picture, it doesn't, I don't think -- there is so many comments to make, but most of those have

already been made and are being implemented that there's not much sense in regurgitating everything that's already being done. Like this operating experience, for example, obviously there's a great need to do a more systematic review of operating experience and feeding that back into the system, but that's, as far as I know, being done.

BY MR. COX:

Q Maybe another way to say it is are there any parts of the regulatory process that you feel strongly about that haven't been implemented yet, or you don't see being done? Do you feel there's something that ought to be considered and ought to be evaluated? Maybe it's in your mind very worthwhile. We're certainly trying to get that, too.

A Nothing that I don't think is being considered and/or being implemented, although there could be many slips between here and implementation.

Q Well, if there's something dear to your heart that you want to reiterate simply for emphasis, feel free to.

A Well, I don't think so at this point.

Q Okay. If something else does occur to you concerning that that we've talked about or any other matter that you feel is important as you reflect on our interview, perhaps when we're finished here, and you think it's important, would you please contact me?

A Okay. Yeah. Let me think. There is one item

that I think I would like to mention, and that is that the -- of course, the heavy reliance on reactor safety has to be placed in that area, it is in the hands of the licensee, and the NRC can at most only see a small part of what goes on in a facility and therefore we have to rely on the licensee to operate his facility in a safe manner, irrespective of how much inspection we're going to do, whether it even gets down to -- you know, there are a lot of small things that can make things go wrong.

Therefore, I think what we need to explore are better methods for emphasizing the safety responsibility is in the hands of the licensee and that he is exercising that responsibility, not for us to always try to exercise and take that responsibility and implement, but to have him take the responsibility and implement and challenge his decision process with respect to this.

In other words, find a system for doing that rather than for us making the decisions. I think we are tending to do more of that, which is fine for those things which we know about, but there are many, many more decisions that go on which we do not participate in, which have probably an equal importance.

So I think there is an area where I am not sure whether it's going to come out of anybody's studies or recommendations, and it's very difficult. I'm not clear yet

how you would implement it. I think what it would mean is that periodically you would have to find and have a group of people who would meet with, for example, the safety committees of the licensee, and if you think they made a decision which was not safe, explore with them how they reached their decision and the basis for it, why they made it the way they did, and try to get the safety committees tuned in to what we think would be a better decision-making process. If that doesn't work you know, there may be other approaches, but that kind of approach, I think, to me, is something that needs some sort of a program to see what can be implemented.

Q Do you feel that any closer contact with the operating utilities is needed or would be beneficial between those utilities and NRR, or is it happening well enough with I&E and the path now that comes from I&E to NRR is okay or acceptable?

A No, I think in terms of, you know, the things that I&E sees and things that we see, you know, as a sampling, you can get a sense of the problem and I&E or ourselves, I think generally speaking, takes the action with respect to those items that they see, but certainly in the past, anyway, I don't know what the current number is, but I&E would indicate that they only see and inspect about 1 percent of the activities that go on in the facilities. It's probably higher than that now, but if you only take an action on the

deficiencies that you find looking at the 1 percent as if it were just a deficiency not representative of a symptom, then in trying to get back and cure what caused that deficiency in the first place, then we are not properly perhaps doing -- exercising the fact that we are only doing a sampling.

And, as I say, I think that's why you need to get back and explore the corrective actions, if they are inadequate or what-have-you, with the people at the utility that should be reviewing the broad picture with respect to safety, which I think should be, at least in the present scheme of things, the safety committees, and try to beef them up.

And, for example, one of the thing that occurs, for example, is that, okay, we have an event at a reactor, an operating reactor. If the ACRS is interested, then a representative of I&E or the Staff will go down to the ACRS and make a presentation of what was done and why it's okay, and that is the end of it.

Maybe it would be better to have the safety committee from the utility come in and make that presentation to the ACRS and get them involved in the decision process and making their deliberations public a little more. ACRS would only be a small part of it, but I think it would lend them both the sense perhaps if there is any problem with respect to their authority, within their own organization, this would help bring that out, or at least give them more

authority, because they'd have to be able to make statements, but it also would give them, I think, a better tuning-in, if you will, to at least where is this magic level of safety that everybody wants and thinks is appropriate.

So I'm not sure the safety committee is ultimately the right way to do it, but that would seem to be the first approach, would be to try to interact more with that group. We interact primarily with the individual usually who's designated as a licensing contact, or directly with the licensee's management, but not with the safety committee.

MR. COX: All right.

MR. FOLSOM: I have no further questions.

MR. COX: Thank you very much, Bob, for coming down here, and your cooperation with the inquiry, and since we have no further questions, at this time the deposition is recessed.

MR. FOLSOM: We are recessing as opposed to adjourning in the possible, but not necessarily probable, event that you might be called back, and you will remain under oath on your return, so we don't have to go through too many formalities again.

Tnank you very much.

[Whereupon, at 3:25 p.m., the interview was adjourned.]

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