

Transcript of Proceedings

UNITED STATES OF AMERICA

PRESIDENT'S COMMISSION ON THE ACCIDENT AT
THREE MILE ISLAND

DEPOSITION OF: LEE V. GOSSICK

Bethesda, Maryland

August 9, 1979

Acme Reporting Company

Official Reporters

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Washington, D. C. 20005

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7910310 265

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PAGE, LINE	NOW READS	SHOULD READ
5 21	by the Commission. However, it does go on and say that	by the Commission. However, it does go on to say that
6 18	meetings with the Secretary General, oversight respon-	meetings with the Secretary of the Commission, oversight respon-
7 22	being handled by the then Director of Licenses Staff	being handled by the then Director of Licensing Staff
11 12	We also have a formal program, an assessment	We also have a formal program, a program assessment
11 13	review that, the so-called PAR reviews that are held	review, the so-called PAR reviews, that I hold
11 14	by each office on the average of one every three or	with each office on the average of once every three or
11 21	spending their revenues and so on.	expending their resources and so on.
12 7	is such an issue that they didn't want to wait to present	wasn't such an issue that they could not wait to present
13 12	of weeks ago on the form of waste that was removed	of weeks ago on the form of waste to be removed
13 13	from Three Mile Island Two, transporting it to Washington,	from Three Mile Island Two for transport to the State of Washington
13 20	NRR and NCCS.	NRR and NMSS.
14 18	and very often they will ask, usually the Office of	and very often they will ask, usually the Office
14 19	the Directors for their ideas on the matter. Instead	Directors for their ideas on the matter. Instead
14 20	of my having a single base I report to, I have five	of my having a single boss I report to, I have five
14 23	a matter, however, that results in the decision. The	a process, however, that results in a decision. The
15 9	the State of Washington and in the past there have been	the State of Washington. In the past there have been
15 11	difficulties where there is concern about waste that has	difficulties and there is concern about radioactive waste
5 12	radioactivity level, if it is in liquid form the question	being possibly dispersed in such accidents. If it is in liquid form the question
15 13	is if there was damage done to the container it would	is if there was damage done to the container would it

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15 20	be solidified; at least with certain areas as NMMS.	be solidified; at least by some members of NMSS.
15 21	I believe the view of NMMS as far as I can tell, t'	I believe the view of NMSS
15 22	last time I discussed the subject is that the so-	is that the so-
15 23	called de-watered resin, it won't pour like a liquid	called de-watered resin,
15 24	It won't run like a liquid but it isn't truly solidified	won't run like a liquid but it isn't truly solidified
15 25	by a piece of glass subject to heat, immersed in water	and unlike a piece of glass when subjected to heat, or immersed in water
16 1	can result in some dispersion of the material, that	can result in some dispersion of the radioactive material.
16 2	would not happen in true solid form. I believe the	I believe the
16 3	current thinking is although it hasn't really	current NRR thinking is although it hasn't really
16 14	Q Are the heads of NSSR, Mr. Denton and the	Q Are the heads of NRR, Mr. Denton and the
16 15	NMMS, Mr. Derks, have they been reporting to you about	NMSS, Mr. Dircks, have they been reporting to you about
17 9	was that he might, if not had changed his mind, he	was that he might have changed his mind, however, he may
17 10	still has a question about whether it should be solidi-	still have questions about whether it should be solidi-
17 16	and turn it into this process. I am sure there are	of waste and put it through this process. I am sure there are
17 18	time because of the time it would take to install such	time involved because of the time it would take to install such
17 19	a system. I am sure some of the newer plants we have	a system. I believe that in some of the newer plants we have
20	licensed under review, there are provisions being made	licensed or have under review, there are provisions
17 22	resin waste that comes out of this.	resin waste.

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19 17	by the staff on this matter was that NRC should approve	by the staff was whether NRC should approve
19 18	license applications for nuclear facilities. Only four	license applications for nuclear power plants in states that
19 19	states have concurred in this.	do not have NRC's concurrence in their emergency plans.
19 25	been a matter of (inaudible). I think, as you will	been a matter of contention for some time. As you will
20 2	encourage and assist wherever we can for the states to	encourage and assist wherever we can the states to
20 3	make the necessary planning actions to have some such	take the necessary planning actions and to have their
20 4	plan completed and concurred in by the NRC. This, of	plans completed and concurred in by the NRC. This, of
20 8	ject of extensive emergency plans task force activity	ject of an NRC Task Force on Emergency Planning activity
20 9	which has been underway in which we address many points	which has been underway.
20 10	in more detail.	----
20 11	This was a response. This paper is the staff's	The December 18, 1978 letter to Mr. Peach was the staff's
20 12	response to a draft report which was then later put	response to the GAO's draft report which was then later put
20 13	on out and the Commission separately responded to	out in final form. The Commission later responded to
20 21	A Only of the staff. It did not represent the	A Only the position of the staff. It did not represent the
20 22	official NRC position. The routine GAO report, their	official Commission position. The routine GAO report
20 24	meeting which the GOA investigator and other reviewers	meeting with the GAO investigators.
20 25	come. They go over the report with our staff, discuss	They go over the report with our staff, discuss
21 1	it verbally in some cases, depending on the time. Maybe	it verbally in some cases, depending on the time available.

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PAGE, LINE	NOW READS	SHOULD READ
21 2	we were given it to prepare written comments which are	In most cases we are asked to prepare written comments which are
21 3	given to GAO staff which they then included as part	given to the GAO and which are then included as part
21 4	of their final report. The final report that the GAO	of the final report. The final report that the GAO
21 7	a Commission position that that becomes a true NRC	a Commission position that is given in response to the report.
21 8	position.	-----
21 14	Commission and that answer is gone. I can get a copy	Commission and that answer has gone. I can get a copy
22 1	A Only so far as the staff review is concerned.	A Only so far as the staff views were concerned.
22 4	A It is my believe that a copy of the staff	A It is my belief that a copy of the staff
22 13	I think that went to them. I just don't recall the	I think that went before March 28. I just don't recall the
23 7	the fiew that it was, again, a voluntary matter for the	the view that it was, again, a voluntary matter for the
23 11	them. I think it was a generally held view that the	a plant. I think it was a generally held view that the
23 14	and local resources, Department of Defense, Police	and local resources, Director of Civil Defense, Police
24 13	equity or laying on a licensee the requirement for	equity of laying on a licensee the requirement for
24 14	action over someone else which he had no control. Mr.	action by someone else over which he had no control. Mr.
24 15	Ryan pointed that comment out.	Ryan pointed that problem out.
24 20	A I can't recall the specifics of that study.	A I can't recall the specifics of any such study.
25 6	addressed the exclusion zone, that is, the area	address the exclusion zone, that is, the area
5 8	are provided for, or that are required by Regulation	are provided for, or that are required by Regulatory

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PAGE, LINE	NOW READS	SHOULD READ
25 11	to take such action as might be required in the way	to take such action as might be required such as in the way
25 17	Q I take it the NCC staff position, as reflected	Q I take it the NRC staff position, as reflected
25 20	would be licensed by the NCC even if the State in	would be licensed by the NRC even if the State in
26 3	many things, one of which may or may not involve an	many things, one of which may involve plans for an
26 9	A I think that is accurate as far as far as it	A I think that is accurate as far as it
29 18	Mr. Pederson, he is the Director of OPE, the Office	Mr. Pedersen, he was the Director of OPE, the Office
30 21	involved in the emergency works in any State for that	involved in the emergency actions in any State
30 22	matter, in connection with an actual event, It was	in connection with an actual event. It was
31 3	such as this, and as I say, it even resulted in a	such as this, and as I say, it resulted in a
32 12	our state programs state trying to encourage the state	our Office of State Programs trying to encourage the state
32 17	of planning on the part of the State itself was that	of planning on the part of the State itself was at
32 18	various levels of adequacy and inadequacy.	various levels of adequacy or inadequacy.
32 22	the view of the staff, certainly and I believe at	the view of the staff, and I believe at
32 25	State where there was no such a plan because there were	State where there was no such a State plan because there were
33 1	no requirements on the part of the licensee to make	requirements on the part of the licensee to make
33 10	licensee, as I understand that it coordinated with the	licensee, as I understand it to coordinate with the
33 12	in a plan which he provides our licensee's state	in a plan, which he provides our licensing staff,

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PAGE, LINE	NOW READS	SHOULD READ
33 15	the purpose of notifying them as to some event that	for the purpose of notifying them in the event that
33 16	would consult that requirement to take emergency action.	would be a requirement to take emergency action.
33 21	in the light of this regulation Guide 1.101 which is	in the light of Regulatory Guide 1.101, which is
33 26	the details of those plans were not essentially in	the details of those plans were not essential in
34 1	determining whether or not that plan would be opted	determining whether or not that plant could be operated
34 8	so opted, the plan is entitled to a license?	so operated, the plant is entitled to a license?
35 2	won't say they have changed their minds as to that	won't say they have changed their minds as to the
35 3	point as I spoke a moment ago to about the re-thinking	point I spoke to a moment ago, but there is a re-thinking
5 5	that is provided in the Federal Register notice as	that is included in the Federal Register Notice which
35 8	licensee action can be taken.	licensing action can be taken.
35 15	facility in a locations where there was no definitive	facility in a location where there was no definitive
37 5	A I think my own view at that timee was, and to	A I think my own view at that time was, and to
38 5	say, first of all a license meant to make sure that	say, first of all a licensee is required to make sure that
38 8	eventual evacuation if that effort should become	eventual evacuation if that action should become
38 16	I believe this is a State plan, there are some 71	I believe that in a State plan, there are some 71
38 19	regulations guide 1.101 that deals with a plan	Regulatory Guide 1.101 that deals with a plan
38 21	must know, when he understands what the condition is,	must know and understands the conditions
38 22	the degree of the emergency where he has to notify	and degree of the emergency wherein he has to notify

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PAGE, LINE	NOW READS	SHOULD READ
39 20	NCC?	NRC?
40 13	discussing. At the present time they have not taken	discussing. Up to the present time we have not
40 14	the issues, pointed to them as necessary. That is very	held it to be necessary. That is very
40 24	that it was mandatory, that we should have such a	that it was mandatory that we should have such a
43 10	standard practice, regardless of the subject, is to	standard practice, regardless of the subject, is for it to
45 23	A No, there is some additional -- the details	A No, there are some
45 24	have just been included, additional resources that we	additional resources that we
46 6	For the details you will have to talk to Mr. (Shapar).	For the details you will have to talk to Mr. Stello.
46 17	gaining assurance his own record keeping is on inspections	gaining assurance in his own record keeping on inspections
47 8	that this maintainance action has been taken, the	that this maintenance action has been taken, that valves and
47 9	things have been set in the following fashion. An	such things have been set in the proper fashion, followed by
47 10	audit of that particular component to see whether or	a sample audit of a particular component to see whether or
47 12	was a combination of looking at hardware as well as	is a combination of looking at hardware as well as
48 8	people on this, Mr. Thompson or Mr. -----, the	people on this, Mr. Stello or Mr. Minogue, the
48 12	erable reliance on our being sort of at the tip of a	erable reliance on our inspection program being sort of at the tip of a
48 13	pyramid where below them this goes all the way back	pyramid, with below it a broad based organization on the
48 14	to construction where there is a very broad based	part of the licensee, his vendors, constructors and architect and engineering
48 15	organization and because of resources that go into	groups. The NRC inspections must aim at assuring the proper

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PAGE, LINE	NOW READS	SHOULD READ
48 16	the checking of quality control, the keeping of	functioning at all levels of activity of inspections and the checking of quality control, and the keeping of
48 23	check of at least some portion of the kind of things	check of at least some portion of the hardware and activity
48 24	they looked at on paper.	as well as the related records.
50 1	Three Mile Island could and did happen, that further	Three Mile Island could and did happen, and that further
50 4	reactors that it should have been looked at more	reactors of problems that should have been looked at more
50 7	wherever possible inspection, full time, as opposed	wherever possible; inspection, full time, as opposed
50 16	A I believe it has been said, and it is the	A I believe it has been said, and it is in the
50 17	center of the NRC report, putting the operator as a	NRC I&E investigation report that the operator was a
50 18	principal, very, very significant factor of the	principal, or a very significant factor in the
51 5	working for a resident inspector program for some	working in a resident inspector program for some
53 6	have been addressed in the licensee's staff or	have been addressed in the licensing staff or
53 17	A I am not aware very much in the way of	A I am not aware of very much in the way of
53 18	studies or research work addressing the machine inter-	studies or research work addressing the man-machine inter-
53 19	facing. I think there have been some individual	face. I think there have been some individual
54 6	as I do the problems faced by the operator, I think	as I do the problems faced by the operator, I think it
54 7	the Three Mile Island event -- there were opportunities	is clear that in the Three Mile Island event
1 8	not only opportunities, but there was confusion over	there was confusion over
54 9	the meaning of the level of pressurizer and many	the meaning of the water level in the pressurizer, and that there were many

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PAGE, LINE	NOW READS	SHOULD READ
54 10	warning lights and belts that were going off and I	warning lights and bells going off.
54 11	think that it made it rather clear that the operator	think that it is rather clear that the operator
54 21	general approach toward the operator interfaced with	general approach toward the operator's interface with
54 22	the machine had delt with preconceived emergency	the machine had dealt with preconceived emergency
54 23	situations--loss of coolants. Other matters were,	situations -- loss of coolant situations. For example, that fell
54 24	perhaps, short in fact or the actual circumstances	short of the actual circumstances
54 25	where so many things happened over such a period of	where so many things happened in a short period of
55 1	time that it made it far more complex to deal with	time. It was far more complex to deal with
5 2	than a simulated event such as this would appear to	than a simulated event such as would have been presented to
55 6	event. I think some people had sort of that kind of	event. I think some people had sort of the kind of
56 8	A I think there is thinking of our staff, Dr.	A Dr.
57 15	similar kind of event up there that apparently myself	similar kind of event up there that apparently I
58 4	A It came up during the roughly, two week	A It came up during the roughly two week
58 5	period, we were manning the emergency response	period we were manning the emergency response
59 1	event, interrupted the high pressure engine. At	event, interrupted the high pressure insertion. At
59 20	can't say, but perhaps I our people say it is something	can't say, but our people say it is something
59 24	pressure within a primary system and the level in the	pressure within a primary system is falling and the level in the
60 9	A To NRR; the license people.	A To NRR; the licensing people.

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PAGE, LINE	NOW READS	SHOULD READ
60 12	A I would have gone to the Director. I think	A I would have gone to the Director of NRR. I think
60 13	Systems Safety would have been the logical place.	Systems Safety would have been the logical Division.
60 24	emergency center and I became aware that he, I believe	emergency center, and I became aware that he
60 25	was an inspector that was familiar with this Davis	was an inspector that was familiar with the Davis
61 5	A I think that was it. Somehow the Davis Besse	A I think that was it. I was aware that the Davis Besse
61 6	event and the name Cresswell--he was involved with the	event involved some report by Cresswell--he was involved with the
61 18	A I am not aware of it.	A I am not aware of it.
63 1	was a concern on his part that had not been sufficiently	was a concern on his part that the matter had not been sufficiently
63 11	that it should have been alleviated and I am not sure	that it should have been alleviated. I am not sure
63 19	up to where it would be addressed to the licensing.	up to where it would be addressed by the licensing
65 24	have the license board for the Midland and Davis	have the licensing board for the Midland and Davis
68 21	Not specifically the documents in the package, but	Not specifically the documents in the package, not
70 7	Before that he was Executive Officer for Operations,	Before that he was Executive Officer for Operations Support,
72 8	to reach the hearing board; some ten months. Is that	to reach the hearing board; some two (?) months. Is that
76 9	A I have not, no. I heard it is delegated to	A I have not, no. That responsibility is delegated to
76 11	for making that licensing condition.	for making that licensing decision.
76 16	A No, not specifically I have not. The matter	A No, not specifically I have not. There is the matter
76 17	of exceptions that have been granted for an operating	of exemptions, however, that have been granted for an operating
76 18	license as has been the subject, which is a little	license. This is a little

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PAGE, LINE	NOW READS	SHOULD READ
76 20	Q Exceptions?	Q Exemptions?
76 22	given an exception from some particular licensing	given an exemption from some particular licensing
77 2	Commission reviewing the matter of granting of exceptions	Commission reviewing the matter of granting of exemptions
77 3	in connection with the delegation of the Director of	in connection with the delegation to the Director of
77 4	NRR and as a result of that situation, someone, there	NRR and as a result of that review, there
77 5	is now a procedure that which carries that all exceptions	is now a procedure that requires all exemptions
77 6	be identified and announced to the Commission so that	to be identified and announced to the Commission so that
77 7	they will know prior to the granting of the exception the	they will know prior to the granting of the exemption the
77 10	judging of the propriety of granting those exceptions.	judging of the propriety of granting those exemptions?
77 15	with regard to how an exception could be handled,	with regard to how an exemption could be handled,
77 20	the basis for having granted certain exceptions for	the basis for having granted certain exemptions for
77 23	all exceptions that we are granting now are routinely	all exemptions that we are granting now are routinely
77 25	review prior to actually granting the exception	review prior to actually granting the exemption.
78 14	but there was some exception that was granted. Anyway,	but there was some exemption that was granted. Anyway,
78 18	are informed of exceptions beforehand, or given the	are informed of exemptions beforehand or given the
78 19	opportunity to override the intent to grant an	opportunity to override the intent to grant the
78 20	exception.	exemption.
8 22	that NRR was granting exceptions to licensing require-	that NRR was granting exemptions to licensing require-
78 25	times they would want an exception.	times they would grant an exemption.

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PAGE, LINE	NOW READS	SHOULD READ
79 3	A Not specifically but from the previous	A Not specifically.
79 4	connection with their observation of the licensing, it	It
79 5	was my understanding that it was, again, a matter	was my understanding that it was a matter
79 7	this could be done and still, with the provision of	this could be done, still with the provision of
79 13	been granted with exceptions from certain licensing	been granted with exemptions from certain licensing
79 19	exceptions already granted previously for previous	exemptions already granted previously for previous
80 18	were improperly granted or alluded, that would be a	were improperly granted or allowed, that would be a
81 5	raise an issue saying that a license was granted	raise an issue with a license that was granted
1 6	although they have made their decision and referred it	although they had made their decision and referred it
81 10	A I am not sure. There was one, but I just	A I am not sure. There may have but I just
82 16	don't know the arguments of the blocked valve problem.	don't know the arguments regarding the block valve problem.
82 20	impression that the TMI situation, it was not classified	impression that in the TMI situation, it was not classified
83 6	A In a general sence I believe that is correct.	A In a general sense, I believe that is correct.
84 1	item and because it had a blocked valve upstream from	item and because it had a block valve upstream from
84 3	the blocked valve was not considered a safety related	the block valve was not considered a safety related
84 9	A We have a PORV and a blocked behind	A We have a PORV and a block behind
84 13	blocked valve behind it to back it up and the block	block valve behind it to back it up and the block

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PAGE, LINE	NOW READS	SHOULD READ
86 3	the other things I am responsible for from the day	the other things I am responsible for in the day
86 19	I don't recall any specific subject or	I don't recall any specific subject from
86 24	A Dr. Hanauer, and he took a job with NRR	A Dr. Hanauer, and he has taken a job with NRR
87 17	fact, with my support, has pushed forth is ATWS --	fact, with my support, has pushed forth is ATWS -- the
88 5	strongly revolved around a course by industry, the	strongly revolved around one view by industry, another by the
90 14	determination, say, this is such a situation -- sure,	determination, that the event
90 15	it is an abnormal occurrence and it is put out for	is an abnormal occurrence. It is put out
90 16	comment along with a paper that explains in more	along with a paper that explains in more
90 18	occurrence for comments by the staff, and once that is	occurrence, for comments by the staff, and once that is
90 24	It is sponsored--we put money into running the system.	It is sponsored by the industry, however, we put money into running the system
90 25	It is run by I&E--EPRI rather, where there is a	It is run by EPRI where there is a
91 4	A Yes, it is first of all submitted by the	A Yes, it is submitted by the
91 5	licensee after he has---some licensees are participating	licensee. Some licensees are participating
91 8	is participating in this system. The attempt there	is participating in this system. The purpose
91 24	collection of information through the inspection report.	collection of information through inspection reports.
92 15	permit to submit an optional history of the devices to	permit to submit an operational history of the devices to
92 25	valve.	valve?
93 24	think what it does for you on say, where you now have	think it would help you, for example where you now have

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PAGE, LINE	NOW READS	SHOULD READ
94 12	A I know generally the principle it takes.	A I know generally the principle it involves.
94 19	and I am not sure one would be involved in the	and I am not sure one could be involved in the
94 20	collation of all this information to the degree of	collation of all this information to the degree you
94 21	which one; we would be inclined to accept the licensee's	suggest. We would be inclined to accept the licensee's
94 24	plants and it has been relying on a level of such and	plants and it has been reliable to a level of such and
95 22	of water in the Westinghouse unit as there is in the	of water in the Westinghouse unit than there is in the
97 9	this is not just something that happened: We suddenly	this is not just something that happened; that we suddenly
97 10	realized there was a difference. It has been an	realized there was a difference. There has been an
97 24	A That is not new. No, not more simply than	A That is not new. No, nothing more than
98 25	to the Office of the Director depending on their area	to the Office Directors depending on their area
99 5	schedule in the general programatic sense has since	schedule in the general programmatic sense has
99 7	For the reverse, we are putting into, for	For example, are the resources we are putting into
99 8	example, NRR, the numbers of backlogged license	NRR to handle the numbers of backlogged license
99 9	amendments being addressed are a fair approximation	amendments being effectively applied and are the actions
99 10	for such thing as falling out of the Browns Ferry fire--	falling out of the Browns Ferry fire--
99 11	are we meeting our schedule and getting things done	being accomplished? Whether or not we are meeting our schedule and getting things done
99 12	on schedule is, in a more broad pragmatic sense, my	on schedule is, in a more broad programmatic sense, my
99 16	A I have to say I have no way of knowing.	A I have to say I have no way of judging that.

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PAGE, LINE	NOW READS	SHOULD READ
100 4	only NRR but NSS or I&E, depending on the subject.	only NRR but NMSS or I&E, depending on the subject.
100 12	half of the full time.	half of their full time.
102 19	there is a body of expertise in NSS I might go to, or	there is a body of expertise in NMSS I might go to, or
102 20	in our standard office where there is certain expertise.	in our Office of Standards Development where there is certain expertise.
103 21	have this agreement for exchanging operation information.	have this agreement for exchanging operational information.
104 5	license in recent years, I believe, are all the countries	license in recent years, I believe, have been to countries
104 16	If they have not had something happen and not report	If they have had something happen and not report
104 25	agreement dealt with---we have the agreement you must	agreement dealt with---a requirement that they must
105 7	public distribution until they initiate such a time	public distribution until they decide on such a time
106 4	box situation. We learned of it through Westinghouse.	box vibration situation. We learned of it through Westinghouse.
107 20	A Set up operational testing personnel to	A Providing operational testing personnel to
109 1	feature which would require certain things to certain	feature which would require the sensing of certain
109 2	different events or measurement or activations to	different events or measurements or activations that
109 3	occur that are common to an event or transient or some	occur that are common to an event or transient.
109 4	sort of accounting. So that you aren't constantly	The purpose is to avoid constantly
109 5	having a shutdown on a single item which in particular	having a shutdown on a single item which in itself
109 6	could be of no consequence but a combination of things	could be of no consequence, but rather to require a combination of things
109 7	that occur. Yes, it says there enough signs or	that provide positive indication that things are

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109 8	enough investigations, if you will, of things being	-----
109 9	out of their normal condition that the following	out of their normal condition and that certain
110 12	Q In other words, it the choice is between	Q In other words, if the choice is between
110 15	A I believe that is probably right.	A I would not opt for an accident.
111 5	high pressure engines and ECCS. However given the	high pressure injection and ECCS. However, given the
111 6	coincident logic actualy, that would not automatically	coincident logic actuation, that would not automatically
112 16	given to one of the staff members in NRR by one, I	given to one of the staff members in NRR by someone, I
113 10	A I am trying to call. I recall, as I	A I am trying to recall. As I
14 8	think there was something here in it. It is easy to	think there was something in it. It is easy to
114 14	which very closely parallel the set of circumstances	which very closely paralleled the set of circumstances
116 11	possibility of misinformation, as you would, for the	possibility of misleading information for the
116 24	A Yes I have, I see it--the left crack.	A Yes I have, that is the OIA report.
117 8	they reached without the benefit of hindsight--it is	they reached was that without the benefit of hindsight--it is
117 13	whether or not the I&E investigation properly addressed	whether or not the OIA investigation properly addressed
118 5	addressed, I agree.	addressed, and will be by NRC's special inquiry of the TMI accident.
119 6	the results that perhaps, are no different than what	results that perhaps, no different than what
121 4	known to the rest of NRC and anybody in NRC, as I	known to the rest of NRC or anybody in NRC, as I
121 18	A Yes, I think we would have tucked it in	A Yes, I think we would have put it in
122 15	with Mr. Case at NRR.	with Mr. Case, Deputy Director of NR

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
122 22	physically, a complexion of the staff so that we	in a physical compression of the staff so that we
122 23	can be together and my role was the Director of the	can be together. My role was the Director of the
122 25	spelled out in the chapter you have been provided.	spelled out in the Manual Chapter you have been provided.
123 8	appropriate people are on site. Proper notification	appropriate people are on hand and that proper notification
123 9	to people who should be informed is made that the	to people who should be informed is made and that the
123 11	notification of other agencies of establishing contact	notification of other agencies, in establishing contact
123 19	he doing what he has committed to do in the past?	he doing what he has committed to do under his license?
123 20	This was certainly a departure from any prior kind of	TMI was certainly a departure from any prior kind of
23 21	event which necessitated the evacuation of the AEEM.	event which necessitated the evacuation of the EMT.
124 8	of a transient or some sort of event that really still	of a transient or some sort of event that
124 9	had for a considerable period of time this question	had existed for a considerable period of time. There were questions
124 10	about why were the plant parameters, why were they	about why were the plant parameters
124 19	gency or saying contingencies were being taken into	gencies or seeing contingencies were being taken into
124 21	aerial radiation radial system was that the other	and resources of other
124 22	resources of the agencies such as DOE were being	agencies such as DOE were being
125 3	Q Did you have any information from Mr. Sello	Q Did you have any information from Mr. Stello
125 22	that briefing. It was Mr. Eisenhut and John Jordan	that briefing. It was Mr. Eisenhut and Ed Jordan
125 24	and the Commission and later with the Committee.	with the Commission and later with the Udall Committee.

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
126 6	March 28 he had realized there was some permeated steam	March 28 he had realized there was some superheated steam
126 22	of time. We didn't know how long or how much that	of time. We didn't know how long or how much.
126 23	there was possibly because of the radioactivity	Because of the radioactivity
126 24	measured in the coolant water that there had been some	measured in the coolant water, it was concluded that there had been some
127 4	the Chairman was asked specifically by Mr. Weaver;	that Chairman Hendrie was asked specifically by Mr. Weaver;
127 8	remember, again, it was largely that we don't know	remember, he answered that we don't know
127 9	and didn't think there was any fuel that was melted	but didn't think there was any fuel melted
127 12	ten percent--fifteen--I would have to look.	ten percent--fifteen--I would have to check the transcript.
127 19	time we didn't anticipate. There was a degree of damage	time we didn't anticipate. The degree of damage
127 20	that we later on Friday concluded it was more likely	that we later on Friday concluded was more likely to be
128 5	then asked Mr. Case to relate to the Commissioner	then ask Mr. Case to relate to the Commissioners
128 6	the technical aspect of the reactivator itself.	the technical aspect of the reactor itself.
128 21	A Jordan, Eisenhut and myself at the meeting	A Jordan, Eisenhut and myself. At the meeting
129 8	day's history of finally getting the research pump	day's history of finally getting the recirculation pump
130 1	understanding as to what the situation or what the	understanding as to what the situation was or what the
130 2	problem was with that situation even with our own	problem was with that situation. Even with our own
30 10	advice or take further action. On Thursday, on	advice or take further action. On
130 12	inspector force from Region II and elsewhere where it	inspector force from Region II

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
130 13	was convenient on the scene up there, we would send	we would send
130 18	was under control and which you know, didn't pose any	was under control and which you know, didn't seem to pose any
130 22	am not talking about hard lines or physical telephones.	am not just talking about hard lines or availability of telephones.
130 24	dealing with was one that clearly was a first major	dealing with was one that this was clearly the first major
131 1	we had done, I think was useful and I don't think that	we had done, I think was useful and
131 6	over and take over that plant, operate it, do whatever	and take over that plant, operate it, do whatever
131 7	you have to. The role of the staff, until it was clear	you have to. The role of the staff was not clear until it was decided
131 9	ended up being Mr. Denton, in which case then the	ended up being Mr. Denton, after which the
131 10	staff became, the role became more of a support function	staff role became more of a support function
131 11	to Mr. Denton than the people we had up there.	to Mr. Denton and the people we had up there.
132 3	core damage that happened. I think these things	core damage that happened. I think
132 4	were--there was probably some damage already done	there was probably some damage already done
133 2	know whether we might have resulted in more problems	know but what we might have resulted in more problems
133 9	heat role past saturization temperature. Yes, very	heat made above saturization temperature. Yes, very
134 2	led us to some incident because we didn't have any	led us to some insight because we didn't have any core
134 3	temperature inclusion.	temperature information.
134 6	A At the briefing and Mr. Weaver's inquiry,	----
34 7	apparently in the first four hours or so there had	Apparently in the first four hours or so there had
134 8	been some temperature taken that went around	been some temperatures taken that went around

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
135 1	have been far worse off because in the depressuring.	have been far worse off because in the depressurizing.
135 2	system then, we keep it depressurized. I don't want	I can't
135 3	to lay out the scenario of what happened. My	lay out the scenario of what would have happened. My
135 5	it would not have gone down and you probably would have	it would not have cooled down and you probably would have
135 22	A I was aware that the hydrogen calculation	A I was aware that the hydrogen calculation and
135 25	now the exact night most vividly	now the exact time.
136 1	however, on Saturday afternoon, sometime Saturday	By Saturday afternoon, or sometime Saturday
136 4	it sort of started to revolve by word that we were	it sort of started to be resolved by word that we were
136 5	getting back from Mr. Denton and Stello who was then	getting back from Mr. Denton and Stello who were then
136 7	hydrogen problem really wasn't as prepared by those	hydrogen problem really wasn't as suggested by those
136 12	A I can't answer that whether one can make a	A I can't answer that. Whether one can make a
136 24	pursue that average than to have a situation where you	pursue that avenue(?) than to have a situation where you
137 12	standarized. There are differences in control roles.	standardized. There are differences in control rooms.
137 20	upper power limit. Things had been going repeatedly.	upper power limit, which had been going steadily and rapidly up.
137 25	Just the realization of the fact, that	Just the presence of this fact,
138 1	knowledge led to repeatedly changing design situations.	led to repeatedly changing design situations.
138 2	Once they fixed the power level to the maximum of	Once they fixed the power level to the maximum of about
138 13	still under review being different from one another.	cases still under review being different from one another.

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
138 22	And, there are 700 different situations.	-----
139 4	was a part of that proposal to try to put additional	was a part of that proposal, to put additional
139 5	emphasis on the standardization design.	emphasis on the standardization of design.
139 10	extent, I think the utilities are. They want their	extent, I think the utilities resist it. They want their
139 21	in fact, many different designs. I think among the	in fact, many different designs. I think
139 22	basic types. BWR and PWR there are probably advantages	there are probably advantages
140 2	A Obviously, we have not made any intensive	A We have not made any intensive
140 5	such a proposal and I don't think that we have	such an approach. I don't think that we have
140 6	enhanced any particular proposal or report that they	endorsed any particular proposal or report that they
140 14	A Well I believe that as I recall, the concern	A Well, as I recall, the concern
140 15	was that not so much the utilities that put the people	was not just with the utilities but with the people
140 16	who were designing these plants were extrapolating	who were designing these plants.
140 17	the technology at a rate a little faster than might	The technology was being extrapolated at a rate a little faster than might
141 14	shape to answer the question than I am. I can only	shape to answer that question than I am. I can only
141 16	sort of like saying I want a 747 and I decided to	sort of like saying I want a 747 aircraft and I decided to get one
141 17	multiply an old DC 3, one by 150.	by scaling up by a factor of 10 or 15 an old DC-3.
141 19	A A whole lot of things. The energy ---	A A whole lot of things. The power plants
141 20	for a 747 won't do if scaled down for a DC-3. The	for a 747 won't do if simply scaled up from a DC-3. The

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
141 21	whole systematic action in the design approach for a	systems considerations in the design approach for a
141 22	high power machine is quite different than one for a	high power machine are quite different than for a
141 24	thought and we have had some discussions on this, is	thought and we have had some discussions on this,
142 7	for some period of time, hopefully, standardization,	for some period of time, hopefully, standardizing,
142 9	The possibility would have been far less painful than	It probably would have been far less difficult
142 10	to have gone from the 500 level with that body of	to have then gone beyond the 500 level with that body of
142 12	we would still not be as far along as we are or	we would be as far along as we are or
142 14	that we would have nothing but a bunch of prototypes	that we have nothing but a bunch of prototypes
142 16	They are sufficiently different except for these	They are sufficiently different except for those few
142 17	who have been literally, more images of one another.	that are literally, replications of another plant.
143 3	think that the Congress in the form of a Joint Committee	think that the Congress in the form of the Joint Committee
143 4	was so inclined. So conveniently, any attempt to	was so inclined. Consequently, any attempt to
143 20	would have been better if we had it earlier. There	might have been better if we had done it earlier. There
143 22	inside.	in size.
144 6	Commission with regard to the nuclear power issues, the	Commission with regard to the nuclear power issues, and the
144 8	in the environment that energizers have been brought	in the environment that nuclear energy has been brought
144 13	by an agency that I think properly as an independent	by an agency that I think properly has to be an independent
144 15	one way or the other. It is a long term proposition.	one way or the other.

ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
144 18	policies that the Commission must face without as much	policy issues that the Commission must face without
144 19	concern on the part of the public, the Congress,	concern on the part of the public, the Congress, and
144 20	everyone that that individual brings to it, his own	everyone that the views of a single individual
144 21	peculiar or strong held viewpoints and consequently	-----
144 22	depending on who that individual is, decisions may	could result in decisions that might
144 23	be made that are not in the best interest of the	not be in the best interest of the
144 24	country and its economical energy situation.	country and its economic and energy situation.
145 1	Commission, a colloquial approach. There are	Commission, a collegial approach. There are
145 2	inefficiencies. On the other hand, there are at least,	inefficiencies. On the other hand, there are at least
145 5	issues on which the country itself is widely disbursed	issues on which the public itself is widely diverse
145 15	operational kind of situation in which we have rarely	operational kind in which we have rarely
145 17	Mile Island. I doubt that anybody who had helped	Mile Island, I doubt that anybody who helped
145 19	Act ever envisioned that kind of a situation, where	Acts ever envisioned that kind of a situation, where
145 20	a colloquial body of the Commission would try to	a collegial body of the Commission would try to
145 21	deal with a situation.	deal with such a situation.
145 24	one man would proceed to our operations center and	one Commissioner would proceed to our Operations Center and
146 2	handling it. The day to day management of the total	handling it. Regarding the day-to-day management of the total
5 3	Commission, my feeling is that that charter given the	Commission, my feeling is that the charter given the
146 4	Chairman by its amendments to the Energy Reorganization	Chairman by amendment to the Energy Reorganization

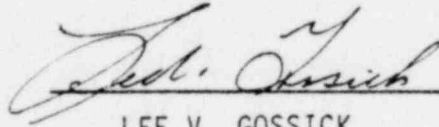
ERRATA SHEET

PAGE, LINE	NOW READS	SHOULD READ
146 6	and rather well describing certain functions that he is	and rather well describes certain functions that he is
146 7	responsible for which the other Commissions are not.	responsible for and which the other Commissioners are not.
146 11	From the standpoint of the Executive role	From the standpoint of the Chairman's Executive role
146 12	and the effect of some of our day-to-day routine	and the effect on some of our day-to-day routine
146 14	efficiency of the operations in which certain issues	efficiency of operations, and the effectiveness with which certain issues

CERTIFICATE

I certify that I have read this transcript and corrected any errors in the transcription that I have been able to identify, except for unimportant punctuation errors.

Date: 8-21-79



LEE V. GOSSICK

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UNITED STATES OF AMERICA

PRESIDENT'S COMMISSION ON THE ACCIDENT AT
THREE MILE ISLAND

DEPOSITION OF: LEE V. GOSSICK

7735 Old Georgetown Road
Bethesda, Maryland

August 9, 1979
2:00 o'clock, p.m.

APPEARANCES:

On Behalf of the Commission:

KEVIN KANE, ESQ.
GARY M. SIDELL, ESQ.
Associate Chief Counsels
2100 M Street, N. W.
Washington, D. C. 20037

On Behalf of the Deponent:

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JAMES FITZGERALD, ESQ.
Office of General Counsel
Nuclear Regulatory Commission
1717 H Street, N. W.
Washington, D. C. 20555

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I N D E X

For the President's Commission:

<u>EXHIBIT NO.</u>	<u>FOR IDENTIFICATION</u>	<u>IN EVIDENCE</u>
1	5	
2	9	
3	36	

P R O C E E D I N G S

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Whereupon,

LEE V. GOSSICK

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

DIRECT EXAMINATION

BY MR. KANE:

Q Would you state your full name for the record?

A Lee Van Gossick.

Q Have you ever had your deposition taken before, Mr. Gossick?

A No, I have not.

Q Briefly, let me comment on what we are doing here today. You have been sworn, and although we are sitting in the informality of your office, you should be aware that the testimony that you give has the same force and effect as if you were testifying in a court of law. My questions and your responses are being taken down and they will later on, be reduced to a booklet form. You will be given the opportunity to look at that booklet and make changes that you deem necessary. However to the extent that the changes are significant, it may result in those changes may be adverse to your credibility. For that reason, it is necessary to avoid this by being as accurate and

1 precise as we can now.

2 I would ask if you, at any point during the
3 deposition, if you don't understand a question, please
4 feel free to stop and indicate that and we will make
5 the clarification at that time.

6 Let me remind you of two basic groundrules.
7 One is that you permit me to finish my questions before
8 you give your response, even if you know what the
9 question is going to be, because the reporter cannot
10 take down both of us speaking at the same time.

11 Secondly, respond audibly. Motions, such
12 as nodding your head cannot be taken down by the
13 reporter.

14 Mr. Gossick, you were requested to bring a
15 resume here with you today in connection with this
16 deposition. Do you have that with you?

17 A My secretary has it.

18 MR. KANE: Off the record.

19 (Whereupon, the witness presented the resume and the
20 document was examined by Mr. Kane.)

21 BY MR. KANE:

22 Q Mr. Gossick, you have handed me a document
23 which has at the top, the letterhead of the United
24 States Nuclear Regulatory Commission and under that,
25 your name appears in all capital letters. Does this

1 statement accurately summarize your educational and
2 employment background?

3 A It does.

4 MR. KANE: (Indicating to reporter). Let's
5 have this marked as Exhibit 1 to the deposition.

6 (Whereupon, the above mentioned
7 document was marked Exhibit 1 for
8 identification).

9 BY MR. KANE:

10 Q Mr. Gossick, you are the Executive Director
11 for Operations in the Nuclear Regulatory Commission.
12 Could you briefly explain what your duties are in that
13 position and what the nature of your office is in terms
14 of its function within the NRC?

15 A Provisions for this office is established by
16 the Nuclear Reorganization Act of 1974 along with
17 certain other statutory offices spelled out in that Act.
18 The duties of the Executive Director as provided for
19 in the Nuclear Reorganization Act are, also the words
20 in the law, I believe, are to the effect as prescribed
21 by the Commission. However, it does go on ^{to} ~~and~~ say that
22 the Executive Director for Operations will be the day-
23 to-day Manager of the affairs of the staff, and also,
24 as spelled out in my manual, the chapter which describes
25 my position...I am also responsible for coordinating

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the activities of the offices that report to me and for providing the Commission with proposed policy matters that require their consideration.

Q According to your resume, Deposition Exhibit 1, prior to your position as Executive Director for Operations, it states you were Assistant Director of Regulation with the U. S. Atomic Energy Commission and that you held that post from February of 1973 until January of 1975.

A That's correct.

Q What were your duties as Assistant Director of Regulation with the AEC?

A The position was one that involved primarily, as the title implies, assistance to the Director of Regulation in carrying out his responsibilities. I was involved primarily in interfacing with the Commission staff, the arrangement of our Commission meetings with the Secretary ^{OF THE COMMISSION} ~~General~~, oversight responsibilities primarily in the administrative and inspection and enforcement areas as specifically directed by the Director of Regulation.

Q So you were involved then in inspection and enforcement matters?

A Simply in keeping track of what was going on; not directly involved with their programs.

1 Q Did you have anything to do with the licensing
2 branch?

3 A Indirectly. This was almost entirely handled
4 at this time by Mr. Muntzing.

5 Q As Assistant Director you would not become
6 involved in those matters?

7 A No, there was a Deputy Director position that
8 was unfilled for a considerable period of time. After
9 I arrived the job became vacated and then the Nuclear
10 Reorganization Act was sort of on the horizon and the
11 position was never filled. The direct licensing acti-
12 vities and major policy issues that had to do with
13 licensing, or for that matter, regulatory actions, were
14 handled solely by Mr. Muntzing.

15 Q Did you have anything to do with the super-
16 vision of operating reactors?

17 A No, not really.

18 Q Did you have anything to do with technical
19 evaluations of generic safety issues?

20 A No, not, I think, in the sense that I under-
21 stand your question, the generic kind of questions were
22 being handled by the then Director of Licenses^{ing} Staff
23 which, as I say, was almost entirely ~~of~~ the domain of
24 the Director of Regulation.

25 I was aware of some of the issues that were

1 going on. I sat in on some of the meetings, but
2 decisions and direction were done by the Director.

3 Q Did you have anything to do at that time with
4 the writing or handling of the safety issues raised
5 by Inspections and Enforcement within the organization?

6 A Not that I can recall. I can't recall any
7 specific involvement in that.

8 Q Prior to today, I believe it was in June,
9 the Presidential Commission did submit a letter of
10 request to the NRC to provide documentation of a number
11 of different items. One was the documents that would
12 bear upon the role of the Office of the Executive
13 Director for Operations. We were provided with the
14 documents and I have a copy of it here. It is a
15 portion, I take it, of the NRC manual relating to
16 the organization and functions of the Office of the
17 Executive Director for Operations, and let me ask you
18 if you recognize that to be a portion of the manual
19 relating to the functions of your office?

20 A This is the chapter of the overall manual
21 that deals with the functions of my office, that is
22 correct.

23 Q I note in the second page of this document,
24 in paragraph 0103-02, it states that the Executive
25 Director of Operations is responsible for supervision

1 and coordination of policy development and operational
 2 activities of the following line offices: the Office
 3 of Nuclear Reactor Regulation, the Office of Nuclear
 4 Material Safety and Safeguards, the Office of Nuclear
 5 Regulatory Research, the Office of Inspection and
 6 Enforcement, the Office of Standards Development, and
 7 it lists a number of staff offices including International
 8 Programs. Is that an accurate statement of the functions
 9 of your office?

10 A That is.

11 MR. KANE: (Indicating to reporter). This
 12 will be marked Exhibit 2 to the deposition.

13 (Whereupon, the above-mentioned
 14 document was marked Exhibit 2
 15 for identification.)

16 BY MR. KANE:

17 Q Mr. Gossick, this description of the functions
 18 of your office suggests to me that, for example, if
 19 there were a dispute between the Office of Nuclear
 20 Reactor Regulation and that of the Office of Inspection
 21 and Enforcement as to how a particular issue should be
 22 handled, it would be likely that the dispute would come
 23 to your attention?

24 A That's correct.

25 Q If there were a situation in which a safety

1 issue had been identified by an inspector from the
2 Office of Inspection and Enforcement and this inspector
3 felt that this was a matter that should be handled by
4 the Office of Nuclear Reactor Regulation, and NRR felt
5 it was not the appropriate office to handle it and it
6 should stay with the Office of Inspection and Enforcement,
7 and this inspector insisted it should be handled in
8 the way he felt; would that eventually reach you?

9 A Depending on the treatment of the issue by
10 the supervisory personnel in both organizations, and
11 in the event it reached the level of the Office of the
12 Director being unable to agree on an issue such as that
13 then, yes, it would. Unless it was solved, it would
14 end up here.

15 Q Would that also be the case if there were a
16 dispute between NRR and the Office of Nuclear Material
17 Safety and Safeguards as to, for example, the treatment
18 of transportation of nuclear waste. If there were a
19 dispute between those two heads of these offices, would
20 it come to your attention?

21 A Between the heads of the offices? That's
22 correct.

23 Q The function of the Director of Operations
24 is more of a managerial one to make sure the other
25 sections are working in a coordinated way and without

1 any debilitating difficulties, is that a fair assessment
2 of that?

3 A I would say that is correct.

4 Q Is there any system whereby the heads of
5 various agencies within the NRC regularly report to you,
6 Mr. Gossick?

7 A Yes, there are both formal and informal means.
8 One, through a weekly staff meeting. Every Friday morning
9 staff heads are assembled here in this building and we
10 address matters of general interest, issues that may
11 have surfaced in one way or another.

12 We also have a formal program, ^{a PROGRAM} an assessment
13 review ~~that~~, the so-called PAR reviews, that ^{I hold} ~~are held~~
14 ^{WITH} ~~by~~ each office on the average of ^{ONCE} ~~one~~ every three or
15 four months. There are so many offices that it takes
16 a while to get around to each of them, but at any rate,
17 there is a prescribed format for a presentation of their
18 special items of interest such as personnel status,
19 equal opportunity achievements; a general report on
20 their overall program, how it is going, how they are
21 ^{expending} ~~spending~~ their ^{RESOURCES} ~~revenues~~ and so on.

22 Q When you say "PAR review", what is "PAR"?

23 A Program Assessment Review.

24 Q Is that a vehicle whereby you, as Executive
25 Director for Operations, are able to assess the ongoing

1 performance of the various departments?

2 A That is the intent of the program, yes.

3 Q If I&E, for example, were having manpower
4 problems in carrying out the various directives, it
5 would be brought up in this context?

6 A It could very well be brought up provided it
7 ^{WASNT} ~~is~~ such an issue that they ^{COULD NOT} ~~didn't want to~~ wait to present
8 it. Otherwise, it would be a matter of the Office
9 of the Director coming to me and saying, I have a
10 problem.

11 Q In terms of the situation of the dispute
12 between the two offices as to how a certain matter
13 should be handled, would you have the authority to
14 dissolve that dispute by saying it should be the respon-
15 sibility of the Office of Nuclear Reactor Regulation
16 or the responsibility of I&E?

17 A That would depend largely on the nature of
18 it, of the issue. If it is a matter which would seem
19 to involve possible policy implications that should be
20 determined by the Commission, then my action would take
21 the form, most likely, of what is the best or most
22 appropriate way to bring this issue to the Commission
23 for consideration and resolution. If it purely relates
24 to operational activities or a matter that is prescribed
25 in the manual chapters for those offices--in other

1 words, an interpretation of their function, yes, it
2 would be within my directive to settle an issue.

3 Q Have you had occasion to do that kind of
4 thing since you have been in this office?

5 A There have been cases, yes. I don't know if
6 I can give you any particular example, but it is not
7 an uncommon thing.

8 Q Have there been any issues that have come to
9 your attention in this manner in connection with Three
10 Mile Island Two?

11 A There has been one that surfaced a couple
12 of weeks ago on the form of waste ^{to be} ~~that was~~ removed
13 from Three Mile Island Two ^{for} ~~transporting it~~ ^{the state of} to Washington,
14 whether it would be de-watered resin or solidified in
15 some form. This was actually an issue that surfaced
16 at a lower staff level. I became aware that our Chairman
17 had also been involved through a visit to Three Mile
18 Island, I believe, on the issue and the matter is still
19 in the process of being argued or discussed between
20 NRR and ^{NMSS} ~~NCCS~~.

21 Q I am curious about that situation in which
22 Mr. Hendrie, the Chairman, investigated this. Is it
23 a usual thing that the Chairman or any member of the
24 Commission of the NRC would become involved in that
25 kind of dispute prior to your referring it to them?

1 A It is not something that surprises me greatly
2 because of their interest and involvement in Three Mile
3 Island. They have all visited up there from time to
4 time. No, it doesn't strike me as unusual at all.

5 Looking at the way the Commission is organ-
6 ized and taking into account the fact that there is a
7 fair span of control, that I have got some thirteen
8 offices that report to me, I try to keep track of
9 everything that is going on and certainly, all the
10 correspondence and policy papers and reports go through
11 my office; but there are times which I not only condone
12 but I encourage the Commissioners to talk directly with
13 the offices. Even with or without my encouragement,
14 they are inclined to do so on matters that are of a
15 particular interest to them. They are of different
16 backgrounds and interests but from time to time
17 there will be a subject that comes to their attention
18 and very often they will ask, usually the Office ~~of~~
19 ~~the~~ Directors for their ideas on the matter. Instead
20 of my having a single ^{boss} ~~base~~ I report to, I have five
21 and it is not uncommon for the Commission to become
22 interested in and address certain issues. That is not
23 a ^{process} ~~matter~~, however, that results in ^a ~~the~~ decision. The
24 decision is made by the Commission as a whole.

25 Q This issue that you are talking about

1 relating to the removal of waste at Three Mile Island
 2 Two, you mentioned that that is an issue that involves
 3 the Office of Nuclear Reactor Regulations and the Office
 4 of Material Safety and Safeguards. What is the issue
 5 about?

6 A Well, as I understand it, the concern has
 7 arisen because of the considerable distance that this
 8 material will have to travel going from Pennsylvania to
 9 the State of Washington, ~~and~~ In the past there have been
 10 some accidents where trucks have overturned or other
 11 difficulties ^{and} where there is concern about ^{radioactive} waste ~~that has~~
 12 ~~radioactivity level~~, ^{being possibly dispersed in such accidents.} If it is in liquid form the question
 13 is if there was damage done to the container (it would)
 14 be more difficult to keep contained than in a solid
 15 form.

16 There has been some expression of interest from
 17 some of the State governors; concern about the form and
 18 protection of this material as it is being transported
 19 so that the view, as I understand it, is that it should
 20 be solidified; at least ^{by some members of NMSS.} ~~with certain areas as NMMS.~~
 21 I believe the view of ^{NMSS} ~~NMMS~~ ~~as far as I can tell, the~~
 22 ~~last time I discussed the subject~~ is that the so-
 23 called de-watered resin, ~~it won't pour like a liquid.~~
 24 ~~It won't run like a liquid but it isn't truly solidified~~
 25 ~~by~~ ^{and unlike} a piece of glass ^{when} ~~subjected~~ to heat, ^{OR} ~~immersed~~ in water

1 can result in some dispersion of the ^{radioactive} material, ~~that~~
 2 ~~would not happen in true solid form.~~ I believe the
 3 current ^{NRR} thinking is although it hasn't really
 4 gone to the Commission for a decision at this point
 5 in time, and I am not sure it will--currently, I think
 6 the feeling is that it will be moved in a de-watered
 7 resin form because of the degree of protection plus
 8 the difficulties and length of time that would be
 9 added by going through the pure solidification step
 10 that would put it in a solid form.

11 As I say, I don't know that this is completely
 12 resolved yet. It is something that I intend to inquire
 13 about.

14 Q Are the heads of ^{NRC} ~~NSSR~~, Mr. Denton and the
 15 ^{NMSS} ~~NMMS~~, Mr. ^{DIRCKS} ~~Derks~~, have they been reporting to you about
 16 this?

17 A I believe both of them were present last week
 18 at our staff meeting. There had been some discussion
 19 with the Commission. They had been briefed on the
 20 pros and cons of both sides, of both propositions.
 21 Last week, I believe, it was reported that there was
 22 some further study and discussion going on at the lower
 23 staff level to see if agreement could be reached and
 24 that is what I have to check on to find out.

25 Q Has Chairman Hendrie expressed any viewpoint

1 on this dispute?

2 A It is my understanding that he initially took
3 the view that it should be "solidified". Whether he
4 meant it to run through the solidification process
5 and turned into a solid such as we described earlier,
6 I am not absolutely certain. However, my last conver-
7 sation with him was to the effect that perhaps he had
8 not understood all the considerations and my impression
9 was that he might ^{have} ~~if not had~~ changed his mind, ^{however he may} ~~he~~
10 still ^{have} ~~has~~ a questions about whether it should be solidi-
11 fied.

12 Q What is the objection to solidification?

13 A Simply, as I understand it, it is an added
14 step, adding another process to the equipment there
15 at Three Mile Island to take the rather sizeable amount
16 ~~OF WASTE AND PUT IT THROUGH~~ ~~and turn it into~~ this process. I am sure there are
17 economic considerations as well. There is certainly
18 ^{INVOLVED} time [^] because of the time it would take to install such
19 a system. I ^{believe that in} ~~am sure~~ [^] some of the newer plants we have
20 licensed, ^{or have} [^] under review, there are provisions ~~being made~~
21 for solidification as a routine matter of this so-called
22 resin waste, ~~that comes out of this.~~

23 Q The objection would be time and expense?

24 A I think probably those are the major factors.

25 Q In terms of truckloads, do you know what kind

1 of volume we are talking about?

2 A I don't know precisely, but it is dozens of
3 truckloads.

4 Q Dozens of truckloads, okay. If I understand
5 you correctly, the objection in the de-watered resin
6 form is the probability of some dispersion?

7 A I think that is correct.

8 Q Have there been any studies done on the
9 dangers or problem of shipping radioactive waste in the
10 de-watered resin form?

11 A I am not aware of any specific studies. I
12 am sure it has been addressed but I am not familiar
13 with these studies.

14 Q Are you aware of any other inter-departmental
15 disputes that have arisen in connection with Three
16 Mile Island that would, of course, be before or after the
17 March 28, 1979 accident?

18 A I guess none come to mind right now. This is
19 not to say there haven't been some. I am probably
20 aware of them but I can't think of them right at the
21 moment.

22 Q I have a copy of a letter which I presume
23 was signed by you. It is dated December 18, 1978 and
24 it is addressed to Mr. J. Dexter Peach, Director of
25 Energy and Minerals Division, U.S. General Accounting

1 Office. It appears to set forth NRCs comments on a
 2 draft General Accounting Office Report entitled,
 3 "Emergency Preparedness Around Nuclear Facilities Needs
 4 Improvement".

5 A I recall the letter. I did not write it, the
 6 staff prepared it for my signature.

7 Q Did you read it over before you signed it?

8 A Yes.

9 Q Can you explain what this situation is that
 10 you are commenting on that the staff prepared comments
 11 for your signature on?

12 A There are several issues. There is more than
 13 one issue involved here, primarily, it has to do with
 14 the results of GAOs review of emergency planning as
 15 carried out by the states. One issue here in particular
 16 that was of considerable interest and was addressed
 17 by the staff ~~on this matter~~ was ^{WHETHER} ~~that~~ NRC should approve
 18 license applications for nuclear ^{POWER PLANTS IN STATES THAT} ~~facilities.~~ ~~Only four~~
 19 ~~states have concurred in this.~~ *do not have NRC's concurrence in their emergency plans.*

20 Q Paragraph one of the first page?

21 A Correct. This is a matter that has been
 22 brought up from time to time. The fact that NRC does
 23 not have any legal authority for directing a state to
 24 prepare an emergency plan in which we would concur has
 25 been a matter of ^{contention for some time.} ~~(inaudible).~~ ~~I think~~ As you will

1 recall from the contents of this document, we will
 2 encourage and assist wherever we can ~~for~~ the states to
 3 ~~make~~ ^{take} the necessary planning actions ^{and} to have ~~some~~ ^{their} such
 4 plans completed and concurred in by the NRC. This, of
 5 course, has been an issue of greatly heightened interest
 6 since Three Mile Island. It has been the subject of
 7 several proposed pieces of legislation. It is the sub-
 8 ject of ~~an extensive Emergency Plans Task Force~~ ^{an NRC TASK FORCE ON Emergency Planning} activity
 9 which has been underway, ~~in which we address many points~~
 10 ~~in more detail.~~

11 ~~This was a response. This paper is the staff's~~
 12 ~~response to a draft report which was then later put~~
 13 ~~on out~~ ^{IN final form.} ~~and~~ ^{later} ~~The Commission separately~~ responded to
 14 GAO on this overall report including the staff comments.
 15 Very frankly, some of the issues that were involved
 16 here have been the subject of considerable re-thinking
 17 and re-study since TMI.

18 Q Did this letter of December 18, 1978 represent
 19 the official NRC position on the subjects raised and
 20 discussed?

21 A Only ^{The position} of the staff. It did not represent the
 22 official ~~NRC~~ ^{Commission} position. The routine GAO report, ~~their~~
 23 draft is presented to us, normally in an informal
 24 meeting ~~which~~ ^{WITH} the ~~COA~~ ^{GAO} investigators, ~~and other reviewers~~
 25 ~~come.~~ They go over the report with our staff, discuss

1 it verbally in some cases, depending on the time ^{available.} ~~Maybe~~
2 ~~In most cases we are asked to~~
3 ~~we were given it to~~ prepare written comments which are
4 given to ^{the} GAO ~~staff~~ ^{and} which ^{are} then included as part
5 of their final report. The final report that the GAO
6 publishes and releases to the public is then sent to
7 NRC for formal comment and at this time it must be
8 a Commission position that ^{is given in response to the report.} ~~that becomes a true NRC~~
9 position.

10 Q It is labeled Appendix VII. Was that report
11 submitted to NRC?

12 A Yes it was, and there has since been a response,
13 again, prepared by the staff but considered by the
14 Commission and I think modified to some degree by the
15 Commission and that answer ^{has} ~~is~~ gone. I can get a copy
16 of it for you.

17 Q Prior to March 28, 1979, had the Commission
18 come to some final decision relative to the GAO report?

19 A I think not.

20 Q It is still being considered?

21 A I think it was. In fact, I am quite sure
22 now that it was after the Three Mile Island accident,
23 that the final NRC response was provided to GAO.

24 Q To the extent that any position existed within
25 the NRC as to the subject matter of this letter prior
to March 29, 1979, does this letter state that position?

1 A Only so far as the staff ^{views were} ~~review is~~ concerned.

2 Q Did the Commission consider in an official
3 way, matters in this letter prior to March 28, 1979?

4 A It is my believe^f that a copy of the staff
5 response had been furnished formally or informally to
6 the Commission's offices. I am not aware there were
7 any questions or comments on it.

8 Q Prior to March 28, 1979 had the NRC Commission
9 come to any official position on the subject matters
10 raised in this letter?

11 A I don't think so. At least there was a
12 prepared response that was sent to the Commission and
13 I think that went ^{before Mar 28.} ~~to them.~~ I just don't recall the
14 dates now. I would have to check the timing on it.
15 Again, the final report was sent to us for the prepar-
16 ation of a proposed C ommission response and that was
17 sent to the Commission. It was there for some time but
18 I don't know the dates.

19 Q Prior to March 28, 1979, this letter represented
20 the NRC's staff position on these matters?

21 A That's correct.

22 Q One of the questions or suggestions that was
23 made in the GAO draft was that the NRC should approve
24 license applications for nuclear facilities only in
25 states that have concurred-in emergency plans, and I

1 take it the reverse way of stating that would be;
2 the subject would say the NRC would refuse to license
3 nuclear facilities in a State that has no plan that
4 is concurred in this way. You have read this over.
5 What was the NRC's staff position on that question?

6 A Well in general, I think that it reflected
7 the ^{view} ~~view~~ that it was, again, a voluntary matter for the
8 states and a matter over which we had no legal juris-
9 diction to really require them to provide a plan; that we
10 would require our concurrence before we would license
11 ^{a plant} ~~them~~. I think it was a generally held view that the
12 arrangements that were being made or were required to
13 be made by the licensee with his local authorities
14 and local resources, ^{Director of Civil} ~~Department of~~ Defense, Police
15 Department and so forth, were adequate to take care of
16 any situation that was perceived to be likely.

17 There was a regulatory guide that has been
18 up-dated and had further addressed the requirements that
19 the licensee must, or should follow.

20 The GAO report, as I recall, did not suggest
21 legislation in this regard but I think it was generally
22 the staff's view that it was not necessary to go to that
23 extent of actually requiring that that plan be in hand
24 and have our approval prior to licensing a nuclear power
25 plant.

1 Q As you say, it was felt, I guess, that the
2 NRC did not have the authority to require any State
3 to prepare a plan. However, they did have the authority
4 to refuse a license in the absence of a plan?

5 A Yes, and I recall there was a comment some-
6 where in commenting on this proposal whether or not it
7 would be proper for us to deny a license on the grounds
8 that it required an action on the part of some other
9 entity, i.e., the state. I do believe that there was
10 at least on staff office, the Office of State Programs,
11 that was more inclined to feel such a requirement was
12 a good requirement. There was a concern about the
13 equity ^{of} ~~or~~ laying on a licensee the requirement for
14 action ^{by} ~~over~~ someone else ^{over} which he had no control. Mr.
15 Ryan pointed that ^{problem} ~~comment~~ out.

16 Q Was there any determination made as to whether
17 or not it would be illegal for the NRC to issue a
18 license because that State in which was the facility,
19 did not have an emergency plan?

20 A I can't recall the specifics of ^{any such} ~~that~~ study.
21 I am quite sure our legal people who coordinated on
22 this response as well as a letter response proposed for
23 the Commission's approval certainly were aware. I
24 don't know if that specific question was put in that
25 way.

1 Q You also stated it was felt that the licensee's
2 own emergency plan would be sufficient. Do those
3 emergency plans normally include a plan for the evacu-
4 ation of a given area around the plant?

5 A No. It is my understanding that they only
6 addressed ~~the~~ the exclusion zone, that is, the area
7 immediately around the plant and the arrangements that
8 are provided for, or that are required by Regulation^{ary}~~ion~~
9 Guide 1.101 , I believe it is. It requires that the
10 licensee have agreements with the local authorities
11 to take such action as might be required, ^{such as} in the way
12 of medical assistance, but I don't believe there is
13 any requirement for the licensee to actually provide
14 for an evacuation plan other than just for his own
15 plant people and anyone living inside the exclusion
16 zone around the plant.

17 Q I take it the ^{NRC}~~NRC~~ staff position, as reflected
18 in this letter prior to March 28, 1979, at least was
19 that a facility, if it met all other requirements,
20 would be licensed by the ^{NRC}~~NRC~~ even if the State in
21 which it was to be located did not have an evacuation
22 plan in which the NRC had concurred for an evacuation
23 around that facility?

24 A I think that is a fair statement. Again,
25 I think we need to be careful about the matter of

1 our approving evacuation plans as opposed to our
2 concurring in a state emergency plan which provides for
3 many things, one of which may ~~or may not~~ involve ^{plans for} an
4 evacuation around a given facility.

5 Q Under the circumstances, it would be a situ-
6 ation in which the facility could be licensed in the
7 absence of any evacuation plan, be licensed by the
8 State in which the evacuation facility would be located?

9 A I think that is accurate as far ~~as far~~ as it
10 stands, or for that matter as it now stands although
11 we are not licensing any plants at the present time.

12 Q What people actually prepared this letter we
13 have been talking about?

14 A I believe that the action office on this was
15 more than likely the Office of State Programs. However,
16 it would have been concurred in by NRR probably by
17 I&E and by ELD, the Executive Legal Director.

18 Q Who in the Office of State Programs would have
19 prepared this?

20 A Probably Harold Collins or someone in his
21 organization.

22 Q Who?

23 A As I say, now I am not absolutely certain
24 this was their action but it would have been either
25 them or NRR.

1 Q You are not aware of the specific individual
2 who drafted this document?

3 A I can't tell you who the individual is at
4 the present time.

5 Q To the extent NRR had to concur, who would have
6 concurred in this matter?

7 A This would have been a matter for the Office
8 of the Director or his deputy.

9 Q At that time, Harold Denton?

10 A That would have been him...December 18--
11 yes, it would have been Harold Denton or Mr. Case,
12 his Deputy.

13 Q You mentioned I&E concurring in this as
14 well. Who would have concurred from I&E at that time?

15 A Probably the Acting Director, at that time,
16 Mr. John Davis. I am not certain they coordinated
17 on this but in retrospect, I would have expected it to
18 have been.

19 Q Would it be a normal practice?

20 A Yes.

21 Q You mentioned ELD. Who would have concurred
22 from ELD?

23 A Either the Executive Director, Howard Chapar,
24 his Deputy or it could have been signed off by one
25 of his Division Directors.

1 Q But you don't know who?

2 A I can find out for you. We can get the
3 coordination copy.

4 Q Is that readily available?

5 A Yes, I believe so.

6 Q Let's take a brief time off the record.

7 A We may have to get this from Central files
8 in which case it may take a while.

9 Q Fine.

10 (Whereupon, a request was made to locate the above
11 mentioned document).

12 BY MR. KANE:

13 Q I think you mentioned that since the accident
14 at Three Mile Island there has been some re-thinking
15 to this staff position reflected in this letter.

16 A I think that is a fair statement

17 Q What is the re-thinking that is going on
18 there?

19 A I believe it is the natural result of the
20 Commission having been directly involved in an event.

21 MR. KANE: Off the record.

22 (Whereupon, the copy of the above-mentioned document
23 was presented to Mr. Kane.)

24 MR. KANE: Back on the record.

25 BY MR. KANE:

1 Q Mr. Gossick, your secretary has just brought
2 in what appears to be another copy of the same letter,
3 only your copy has a series of notations at the bottom
4 of Page 4 relating to routing the letter or concurrence
5 in the letter. What does that reflect?

6 A This indicates that the letter was originated,
7 apparently, by Mr. DeFayette in the Office of States
8 Programs. There are copies to Mr. Collins and Mr.
9 Ryan, the Office Director. It shows that copies
10 were provided Mr. Denton, Mr. Minogue and Mr. Shapar.
11 The note says, "Comments received as per attached
12 memorandum have been incorporated".

13 Q Is there another document attached to your
14 copy?

15 A There is a document attached to it signed by
16 Mr. Ryan addressed to Mr. Denton, Mr. Minogue, Mr.
17 Davis, the Accounting Director of I&E, Mr. Shapar,
18 Mr. Pederson, he ^{was} ~~is~~ the Director of OPE, the Office
19 of Policy Evaluation; also, to Mr. Cummings, the Director
20 of OIA and Mr. Davis, the Acting Director of the
21 Office of Inspections and Enforcement. This memo
22 attached a draft response and asked that these
23 addressees telephone any concerns or comments to Mr.
24 DeFayette at the close of business, Tuesday, December 12,
25 and apparently, that was the manner in which the

1 proposed response was passed out to other offices and
2 comments were brought back in by telephone.

3 Q So this document that is attached to the
4 back is sort of a preliminary work-up?

5 A I think that is a correct statement.

6 Q Would it be possible for us to have
7 a copy of this since yours is more complete?

8 A Sure.

9 (Whereupon, a xerox copy of the above-mentioned document
10 was made.)

11 BY MR. KANE:

12 Q Mr. Gossick, before we began discussing your
13 copy of this document we were talking about possible
14 change in the NRC staff positions or Commission
15 positions with regard to the subject matter of this
16 letter. I think you were beginning to comment on what
17 that change may be or how it has come about.

18 A Yes, as I was saying, I think the natural
19 result of something like the Three Mile Island event
20 where we had, for the first time, really become
21 involved in the emergency ^{actions} ~~works~~ in any State ~~for that~~
22 ~~matter~~, in connection with an actual event. It was
23 clear that on our part there were things that needed
24 to be done. I think, everything fairly put, the
25 conclusion of many of us and the Commission was that

1 perhaps more needed to be done at the State and local
 2 levels with regard to making plans for an emergency
 3 such as this, and as I say, it ~~even~~ resulted in a
 4 re-examination of literally all aspects of our
 5 emergency planning activities and their adequacy. That
 6 task force effort has been concluded by the way. I
 7 will be receiving in the next day or two, the report
 8 of the task force and I will be passing that on to
 9 the Commission for their consideration in the very
 10 near future.

11 Q I am looking at the letter which was prepared
 12 on December 18, 1978 and it does state on the first
 13 page attached about the subject matter and it states:
 14 "From this point of view, State and local emergency
 15 plans provided an added margin of protection for the
 16 public in the vicinity of a nuclear facility in which
 17 we believe that an adequate measure of safety already
 18 exists. The Commission's licensing decision process
 19 is structured to take into account a wide variety of
 20 standards and criteria in the evaluation of proposed
 21 or existing nuclear power plants to the end that sub-
 22 stantial conservatisms exist in design and operating
 23 safety margins. To the extent that proposed or
 24 existing plants fail to meet these standards, NRC
 25 would not license them or permit them to continue to

1 to operate. In this context, State and local plans,
 2 while related to the facilities undergoing the licensing
 3 process, and to applicant's emergency plans, are not
 4 essential in determining whether the plant can be
 5 operated without undue risk to public health and safety!

6 At the time this letter was written, was it
 7 recognized by you that there might well be a state that
 8 had no evacuation plan for nuclear facilities?

9 A It was clear there were states that did
 10 not have emergency plans concurred by the NRC. In
 11 every case, as I recall, there have been actions by
 12 our ^{Office of} state programs ~~state~~ trying to encourage the state
 13 agencies and state entities to get on with preparing
 14 such a plan and bringing it to a point where it could
 15 receive the concurrence of the NRC. It was certainly
 16 understood that there were States in which the degree
 17 of planning on the part of the State itself was ^{at} ~~that~~
 18 various levels of adequacy ^{or} ~~and~~ inadequacy.

19 The ones that were in good shape we did concur
 20 in; I think there were ten or twelve sites that had
 21 received our concurrence, but again, I believe it was
 22 the view of the staff, ~~certainly~~ and I believe at
 23 that time it was not disagreed by the Commission that
 24 one could still go ahead and license a plant in a
 25 State where there was no such a ^{STATE} plan because there were

1 ~~no~~ requirements on the part of the licensee to make
 2 arrangements with local authorities and facilities
 3 in his area that would augment his emergency operations
 4 if he needed to call on their help.

5 Q Wasn't it recognized at the time this
 6 response was prepared in December of 1978 that there
 7 might be licensees that had not taken such steps to
 8 coordinate with local and State authorities?

9 A There was no particular requirement for the
 10 licensee, as I understand ~~that~~ it ^{to} ~~coordinated~~ with the
 11 State authorities, but he is required to demonstrate
 12 in a plan, which he provides our ^{licensing staff,} ~~licensee's state~~
 13 that he has made arrangements with local hospitals,
 14 local police, the Sheriff, the Civil Defense Corps,
 15 ^{for} ~~the~~ purpose of notifying them ^{in the} ~~as to some~~ event that
 16 would ^{be a} ~~consult that~~ requirement to take emergency action.
 17 I must, as I recall, say that the degree to which
 18 those facilities, emergency plans had been developed
 19 varied with relation to the age of the plant. Some
 20 of the older plants did not have those plans reviewed
 21 in the light of ~~this~~ ^{any} regulation Guide 1.101, which is
 22 a later document and which includes the requirements
 23 for such plans.

24 Q But in any event, the point of this response
 25 was it not, that as far as the NRC was concerned,
 the details of those plans were not essentially in

1 determining whether or not that plant ^{could} ~~would~~ be ^{operated} ~~opted~~
2 without undue risk to public health and safety?

3 A That is correct.

4 Q That is not the purpose that it was proposed
5 to do?

6 A That is correct.

7 Q If the determination is made that it can be
8 so ^{operated} ~~opted~~, the plant is entitled to a license?

9 A That is correct.

10 Q That is regardless of the existence or non-
11 existence of an evacuation plan for a five or ten mile
12 radius, is that correct?

13 A That's correct.

14 Q Has it been recognized within NRC since March
15 28, 1979 that it is necessary for a nuclear power
16 facility to be located in a State or County in which
17 there is a recognized or approved evacuation plan for
18 some distance around the plant?

19 A This is a subject that has been discussed
20 at considerable lengths at the Commission level in the
21 process of their firming up their response to that GAO
22 report. The substance of that response was to the
23 effect that the Commission had decided to go to a
24 rule making procedure where public input would be
25 requested. There has been an advance notice of rule-

1 making that went out, I believe, early July. So, I
2 won't say they have changed their minds as to ~~that~~ ^{the}
3 point ~~as~~ I spoke ^{to} a moment ago, ~~to~~ ^{but there is a} ~~about the~~ re-thinking
4 of the subject. This is certainly one of the issues
5 that is ~~provided~~ ^{included} in the Federal Register notice ~~as~~ ^{which}
6 requested comments from the public as to should or
7 should not such a plan be a requirement before a
8 licensee^{ing} action can be taken.

9 The Commission has not, as yet, reached a
10 final position in this matter.

11 Q Nevertheless, it is still under consideration?

12 A Yes, it is.

13 Q Did anyone within NRC prior to March 28, 1979
14 raise the question that licensing a nuclear power
15 facility in a locations where there was no definitive
16 evacuation plan could pose a serious safety hazard?

17 A I only recall one, I believe, person who I
18 believe expressed a view there should, in fact, be
19 such a plan and that, I believe was Mr. Bob Ryan. I
20 don't know whether his staff members felt the same
21 way or not, but I know that he expressed such a view
22 to me--you said prior to March 28?

23 Q Yes, pre-TMI.

24 A I can't recall whether it was pre-TMI or
25 after TMI but it was whenever his initial draft on

1 this matter---Wait a minute, maybe we can tell from this.

2 Q While you are looking through that document,
3 I see you brought several copies into the room. If
4 we could have one of these copies which is Mr. Gossick's
5 version of the letter of December 18, 1978, that we
6 have been discussing and also, a further document
7 attached to it which is the memorandum which was
8 referred to before which was dated December 11, 1978
9 from Mr. Ryan to a number of individuals within the
10 NRC and which are attached to a document entitled;
11 "Specific Comments on GAO Report " which you identified
12 as a preliminary work up of the letter which appears
13 on top here, dated December 18. If we could have
14 this entire document marked as Exhibit 3.

15 (Whereupon, the above-mentioned
16 document was marked Exhibit 3
17 for identification).

18 THE WITNESS: I don't believe this was the
19 matter in which his views surfaced. I believe it
20 came later when we were preparing the proposed, not
21 Staff Response, but a proposed Commission Response,
22 and I believe that was post-TMI when he made his
23 view known to me. I don't know if I was aware of any
24 stated view on his part prior to TMI.

25 BY MR. KANE:

Acme Reporting Company

1 Q In December of 1978 didn't you think that the
2 operations of a nuclear power facility in an area
3 for which there was no definite evacuation plan around
4 that plant posed a serious safety hazard?

5 A I think my own view at that time~~e~~ was, and to
6 this date I am not sure to what extent I have changed
7 this view, is that while there must be a plan for
8 dealing with emergency situations, plans for calling
9 into play the local police and law enforcement poeple,
10 medical facilities and so forth, that a plan for
11 evacuation is perhaps of marginal value. I am quite
12 aware that in this country we evacuate neighborhoods
13 and communities almost on a weekly basis in the the
14 absence of any such plan. I am aware of the argument
15 that if you have an evacuation plan you don't know
16 whether it is any good unless you exercise it.

17 Arguments are made that exercising an
18 emergency plan in the absence of an emergency, you
19 may end up causing injury or damage which was a
20 questionable cost benefit.

21 So, I think that my view then remains to be
22 changed until we see a bit more of it from the
23 result of the current efforts; that of the solicitation
24 of public comments and further study about the
25 absolute requirements for an evacuation plan. This is

1 different than an emergency plan.

2 Q What other element would be involved in an
3 emergency plan besides procedures for evacuations?

4 A It could be a number of things such as I
5 say, first of all a licensee ^{is required} ~~element~~ to make sure that
6 the local law enforcement and police, fire departments
7 are informed. Many of these things lead up to the
8 eventual evacuation if that ^{action} ~~effort~~ should become
9 necessary.

10 There should be arrangements made for getting
11 word to the public as to what is going on, what the
12 degree of danger is.

13 There are other things that have to do with
14 dealing with various emergency communications and a
15 number of factors or aspects that are involved in this.
16 I believe ^{that in} ~~this is~~ a State plan, there are some 71
17 elements that are in the guide that lay out the
18 requirements and there are many elements in the
19 ^{regulatory} ~~regulations~~ guide 1.101 that deals with a plan
20 the licensee must have developed and available. He
21 must know, ^{and} ~~when he~~ understands ~~what~~ the conditions ~~is~~,
22 ^{and} ~~the~~ degree of the emergency ^{wherein} ~~where~~ he has to notify
23 people offsite or notify the NRC. It is a fairly
24 detailed guide.

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Q Coming to the 71 elements, you mentioned as being involved in a State plan. That wouldn't be the function of the licensee to demonstrate those are being taken care of?

A No.

Q I think you mentioned the regulatory guide NRC's expression of its views as to such a plan.

A On the part of the licensee.

Q On the part of the licensee. What about the 71 elements you mentioned?

A Those all deal with characteristics of the State plan.

Q Are those elements spelled out in a regulatory guide?

A Yes, they are.

Q Referring to that portion of it, then is it the intent of the regulatory guide in order to assure adequate safety at a nuclear facility that such a plan should be devised by the States and concurred in by the

~~NRC~~
~~NCC?~~

A If I understand your question correctly, is there anything in the guide that connects to the requirements for a state plan? Is that what you asked?

Q No. Let me see. There is a regulatory guide issued by the NCC which spelled out the elements which

1 the NRC feels should be in an emergency plan?

2 A That is not a guide. That is a planning
3 checklist. It is not a regulatory guide as such, it
4 is a document put out by NRC which is a guide, if you
5 will. It is a little different than the
6 regulatory guides that our Standards people issue.

7 Q Does the NRC regard the development of a
8 State plan along the lines set forth in that document
9 you referred to as necessary from the point of view
10 of public safety in the operations of a nuclear power
11 plant?

12 A I think that is the very issue we have been
13 discussing. ^{Up to} ~~At~~ the present time ^{we} ~~they~~ have not ~~taken~~
14 ~~the issues, pointed to them~~ ^{held it to be} as necessary. That is very
15 much the subject of this current ongoing issue.

16 Q That leads me back to my question to you.
17 In December of 1978, did you feel that complete non-
18 compliance by a State with that type of document I
19 just mentioned, that is, the complete absence of
20 any such emergency plan, a State, did you feel that
21 posed an undue risk in the public health and safety
22 in a nuclear power plant under those circumstances?

23 A As I stated before, it was not my feeling
24 that it was mandatory ~~q~~ that we should have such a
25 plan before we would license a plant.

1 Q That is not my question. My question was;
2 in December of 1978, did you feel that there was any
3 undue risk to the public health and safety in the
4 operations of a nuclear power plant in a location where
5 there was no, absolutely no such emergency plan
6 devised by the local or State authorities?

7 A That is a different question than you asked
8 before. Before you asked about the State plan.

9 MR. KANE: (Indicating to reporter). Could
10 you go back to the previous question?
11 (Whereupon, the pending question was read back by the
12 reporter).

13 BY MR. KANE:

14 Q That was a very sloppily worded question.
15 Let me rephrase my prior question to you.

16 In December of 1978 at the time you signed this
17 letter we have been referring to, Exhibit 3, did you
18 feel that the complete absence of any emergency plan
19 by a State posed any undue risk to the public health
20 and safety in the operation of a nuclear power plant
21 within that State?

22 A I did not feel that it posed an undue risk
23 in the absence of a State plan. I want to be careful
24 to add, however, that does not include in my mind,
25 the possible absence of a local plan or local planning

1 or local cooperation with the licensee at least to
2 the extent required by our regulatory requirements
3 where there be a plan that the licensee has where he
4 can interface with and call on local authorities. That,
5 I do consider as necessary for the public health and
6 safety.

7 Q That has been required with the ---

8 A None of that would be included in the 71
9 elements. That would be a different guide.

10 Q That the NRC encourages to develop?

11 A That's correct.

12 Q Do you still feel that way today?

13 A My mind is certainly open to some reconsid-
14 eration of this as a result of TMI. I don't know that
15 I have made up my mind one way or the other on this. I
16 want to see the results of the ongoing process that we
17 have launched. I think that the rulemaking process
18 that we will go through may bring out a number of
19 elements that I have not been aware of, that we have
20 not addressed before, that could change my mind, yes.

21 Q As far as evacuation plans go, you are not
22 convinced one way or the other as to whether or not
23 those should be required?

24 A That's correct.

25 Q Why did you prepare--you didn't prepare it;

1 why did you sign this response we have marked as
2 Exhibit No. 3 dated December 18, 1978?

3 A Why did I sign it?

4 Q Yes.

5 A Because it has been standard policy for
6 any response to a GAO report at the staff level to be
7 signed out by the Executive Director of Operations as
8 opposed to any particular staff office, and particularly,
9 in a matter that involved several staff offices. Our
10 standard practice, regardless of the subject, ^{for it} is _{to}
11 be signed out in my office.

12 Q We mentioned before the fact that there are
13 several different offices within the NRC that report
14 to you and you have those weekly staff meetings with
15 the various divisions within NRC and also, you have
16 this program assessment review about every three or
17 more months. Are you generally familiar with how
18 Inspection and Enforcement conducts on-site inspections
19 of nuclear plants?

20 A I wouldn't say in intimate detail. I have
21 visited plants. I have been there with the inspectors.
22 I have witnessed a few visits where inspections have
23 been carried out but I wouldn't say I am intimately
24 familiar with their checklist and details.

25 Q In the course of these weekly staff meetings

1 or program assessment reviews, does the subject of the
2 conducting of a site inspection by I&E come up?

3 A Only to the extent of whether or not they
4 are meeting the requirements, general requirements of
5 their inspection program; are they performing as
6 many inspections as they had planned with the resources
7 that have been made available to them. If some other
8 event has caused a diversion of resources where they
9 are not completing or staying with a projected program--
10 that is the kind of a matter that would be discussed.

11 Q Is it an approved procedure for conducting an
12 on site inspection for I&E, for the inspector to
13 examine the books and records of the licensee concern-
14 ing repairs to certain parts of the plant like valves,
15 rather than inspecting the actual valve itself?

16 A That is my understanding that, indeed, there
17 is a good bit of their inspection that deals with that
18 inspection of the licensee's documentation of his
19 action and records that he keeps and records of
20 maintenance action and that sort of thing. This is
21 not to say there is not an inspection of the hardware
22 itself, but it is a little bit more the former than
23 the latter.

24 Q Does that hit you as rather unique to inspect
25 it in this manner?

1 A I think, at best, our inspection efforts can
2 only be a sampling audit. The facilities are far too
3 big and complicated for us to ever have enough inspection
4 manpower to check every nut and bolt and component.
5 However, it is coordinated to the system whereby the
6 licensee in his own self inspection or examination
7 of his equipment and procedure, that the documentation
8 and recording of his actions is something that our
9 inspector can look at to see whether or not the
10 program is being carried out in accordance with our
11 requirements. It is a mixture of both, but I don't
12 think it is, first of all, possible and I don't think,
13 necessary, that our own inspectors check every compon-
14 ent or every piece of hardware hands on. We would like
15 to be able to do more of that and some of our new
16 thinking with regard to inspection techniques will
17 get us part way in that direction.

18 Q There is some thinking now that I&E will
19 increase the hands on inspection?

20 A Yes.

21 Q Is that being done within the confines of
22 the resources and personnel that I&E currently has?

23 A No, there ^{are} ~~is~~ some ~~additional--the details~~
24 ~~have just been included,~~ additional resources that we
25 have discussed with the Commission on applying additional

1 forms of inspection, what we call a unit inspector. If
2 these resources are, in fact, made available, we will
3 put additional people at the plant at each unit.

4 Q A resident inspector program?

5 A In addition to the resident inspector program.
6 For the details you will have to talk to Mr. ^{Stello.} ~~(Shaper)~~.
7 This is a level of inspection that will be more in the
8 context of what you just described, actual examination
9 of the safety system, valve alignments...

10 Q What was the thinking previously, that it was
11 more desirable in some instances to check the docu-
12 mentation of the licensee as to a particular item
13 rather than to check the item itself?

14 A I think that the rationale is, if you can only
15 do one or the other, you better be sure that his
16 own system is working, that there is some way of
17 gaining assurance ⁱⁿ his own record keeping ~~is~~ on inspections
18 and recording of actions on the part of maintenance or
19 operator personnel, that those records are being
20 kept and being accurately put down so that there is
21 some check on the activities as opposed to an inspector
22 just going on in and looking only at the hardware.

23 As I say, there is some of that that has gone
24 on in the past, not as much as we would like, but it
25 has been a matter of resources, primarily.

1 Q I am not sure I still understand. Is your
2 testimony to the effect that it was considered to be
3 more desirable to be sure that the licensee was
4 adequately maintaining its' records rather than--

5 A With a spot check against actual things to
6 see whether the records are correct. The normal pro-
7 cedure would be to check the licensee's records
8 that this maintenance action has been taken, ^{that valves &} ~~the~~
9 ^{such} things have been set in the ^{proper} ~~following~~ fashion, ^{followed by} ~~an~~
10 ^{a sample} audit of ^a ~~that~~ particular component to see whether or
11 not that is a current entry and correct entry. Ther
12 ^{is} ~~was~~ a combination of looking at hardware as well as
13 looking at the records.

14 Q I am approaching this as a layman, so perhaps
15 you will forgive me if I don't understand. In this
16 context, we have spent some time in depositions,
17 Donald Haverkamp being one. We went through a number
18 of specific instances with him of items that had been
19 inspected. I was surprised because I had assumed he
20 had gone out and actually looked at the item, but in
21 a large number of instances he reported that this was
22 not the case, that he had looked at the document. I
23 have no reason to cast aspersions on Metropolitan
24 Edison, but in effect, you are putting the licensee
25 on the honor system; you are assuming documentation

1 reflects what, in fact, was done. I am a layman. If
 2 I had to chose between the licensee having proper
 3 documentation and having proper hardware, I would
 4 rather he have proper hardware. It can't be that
 5 important what the records show if, in fact, he has
 6 done it.

7 A You really should talk to our inspection
 8 people on this, ~~Mr. Thompson or Mr.~~ *Stello, or Mr. Thompson*, the
 9 Acting Deputy Director. It isn't one or the other in
 10 my view. I think that the philosophy of inspection
 11 that we followed up to this point has placed a consid-
 12 erable reliance on our ^{inspection program} being sort of at the tip of a
 13 pyramid, ~~where below~~ ^{with} ~~them this goes all the way back~~ ^{it a broad based organization on the}
 14 ~~part of the licensee, his vendors, constructors and architect & engineering~~
 15 ~~to construction where there is a very broad based~~
 16 ~~groups. The NRC inspections must aim at assuring the proper~~
 17 ~~organization and because of resources that go into~~
 18 ~~functioning at all levels of activity of inspections and~~
 19 ~~the checking of quality control,~~ ^{and} ~~the keeping of~~
 20 records. You can go look at the hardware but if you
 21 do not provide a history of it or who has looked at it
 22 in the past, it may not be very meaningful.

20 Some of the audits are done just by looking
 21 at the records of the licensee. However, it is my
 22 understanding that this ^{is} ~~was~~ coupled with some spot
 23 check of at least some portion of the ^{hardware & activity} ~~kind of things~~
 24 ~~as well as the related records,~~
 25 ~~they looked at on paper.~~

25 Q Let me give you an example. The auxiliary

1 feed water valves that were closed at the time of the
2 accident, it is our understanding that at that point
3 in time that that was a testing procedure in which the
4 licensee would close those, open and close and opening
5 those valves was a procedure they had been following
6 for approximately nine months before the accident, the
7 middle of 1978 on. It is also our understanding that
8 that was a violation of the technical specifications
9 of those valves and the way they were manipulating them
10 should not have been done in that fashion. The paper
11 work in conjunction with that did not reflect this
12 procedure at all. It reflected the testing of the
13 eleven valves upstream and not the one being used.

14 Obviously, if the inspector had been there
15 to observe the testing being done, he would have seen
16 the documentation was misleading in that regard.

17 Doesn't it indicate that it is better to
18 have the inspector physically there to watch it, rather
19 than documentation?

20 A Yes, certainly.

21 Q You have mentioned before several efforts
22 being made to, in effect, beef up the inspection
23 and enforcement efforts which has lead to the feeling
24 that it does, indeed, need to be beefed up.

25 A I think the realization that the events at

1 Three Mile Island could and did happen, ^{and} that further
 2 than that, perhaps, there were indications from
 3 past inspections or past reports from operating
 4 reactors ^{of problems} that ~~it~~ should have been looked at more
 5 carefully. This simply leads us to the conclusion
 6 that more is needed in the way of inspections on site
 7 where~~ver~~ possible; inspection, full time, as opposed
 8 to occasional visits.

9 I think it a natural reaction to a situation
 10 such as this where you learn by experience and conclude
 11 possibly more is necessary in order to give you
 12 additional assurances.

13 Q What was the specific highlight about the
 14 accident on March 28, 1979 that has indicated that
 15 inspection and enforcement should be "beefed up" ?

16 A I believe it has been said, and it is ⁱⁿ the
 17 ~~center of the~~ NRC ^{ITC investigation} report, ^{that} ~~putting~~ the operator ^{was} as a
 18 principal, ^{OR A} ~~very~~ very significant factor ⁱⁿ of the
 19 accident. That doesn't sound like it would be some-
 20 thing subject to inspection and enforcement. That
 21 would be training.

22 Q What is it about the accident that suggests
 23 that inspection and enforcement needs to be strengthened?

24 A Perhaps, --it is difficult to put it on any
 25 one factor that has led to this thinking, but I believe
 that part of it has been response to all kinds of

1 requests that we want permanent, full-time resident
2 inspectors in our plants. It is part of the public
3 and Congressional interest in feeling that they want
4 the addition of a resident inspector. We have been
5 working ^{on} ~~for~~ a resident inspector program for some
6 time. It has been limited by the availability of
7 resources, but I think it has been generally felt
8 this does have merit, that we want to go ahead and
9 complete the so-called resident program as quickly
10 as possible and there has been this additional idea
11 of more direct hands-on inspection--direct measurement,
12 if you will. It has been the subject of studies that
13 I&E have conducted over the past three or four years
14 now and they have already concluded there was more
15 of this looking at hardware, actual measurement,
16 that was desired from the standpoint of the best
17 possible assurance that the licensee was carrying out
18 his licensing conditions, his responsibility in a
19 proper fashion. This means more people.

20 Q That decision had been reached prior to
21 March, prior to this accident?

22 A It had indeed.

23 Q Has that been document?

24 A Yes, there were a series of---

25 Q Under the circumstances, with the recognition

1 more hands on type of inspection that had to be
2 performed, why wasn't it the situation that the duties
3 of the licensee were more hands on inspections and
4 less document review?

5 A Here again, I think the argument was you can't
6 give up auditing and lose the recording in order to
7 spend all of your time looking at hardware. It is
8 a balance; it is a judgement call. Our inspection
9 staff, I think, felt that you just couldn't give up
10 the inspection of records in order to provide all of
11 the hand-on equipment inspection. Both were necessary
12 and to do both, we simply had to have additional
13 inspection resources.

14 Q In deposing Mr. Haverkamp, we also explored
15 the question of operating procedures. Was it
16 recognized before March 28, 1979 that the manner in
17 which the operator went about manipulating the machin-
18 ery relating to the primary system was a matter of
19 safety concern?

20 A Are you talking in general terms or specific-
21 ally?

22 Q I am talking in general terms--operating
23 procedures.

24 A I can't recall any specific concern about the
25 operators. Any issue that arose--are you speaking

1 of their qualifications, training and licensing the
2 operator?

3 Q I am talking about of their procedure in
4 actually manipulating the machinery.

5 A If there was, I am not aware of it. It may
6 have been addressed in the licensee's^{ing} staff or
7 elsewhere, but I am not familiar with it.

8 Q That relates to a larger question which I
9 did ask Dr. Matson the other day; whether or not
10 there was any division within NRC that which, in the
11 past had addressed machine interfacing, interplanning
12 to the operator to machines that were being licensed
13 for their use. Dr. Matson's comment was, no, there
14 was no such division. I would like your opinion and
15 if it is the same, I would like to know why there was
16 no such division.

17 A I am not aware^{OF} very much in the way of
18 studies or research work addressing the^{MAN-} machine inter-
19 facing^e. I think there have been some individual
20 inquiries expressed on control room design. I believe
21 Dr. Hanauer at one time, either rendered a report or
22 somehow addressed the subject, but I don't recall
23 exactly when or in what form.

24 Q Things relating to control room design?

25 A Yes. I think, in retrospect, certainly it

1 would have been desirable had more attention been
2 paid to this subject.

3 Q Why do you feel that is the case, when you
4 say "in retrospect"?

5 A I think, in looking at it and understanding
6 as I do the problems faced by the operator, I think it
7 ^{IS CLEAR THAT IN} the Three Mile Island event ~~there were opportunities,~~
8 ~~not only opportunities,~~ but there was confusion over
9 the meaning of the ^{WATER} level ^{IN THE} of ^{pressurizer,} and ^{THAT THERE WERE} many
10 warning lights and ^{bells} ~~belts~~ that were going off, and I
11 think that it ^{IS} ~~made it~~ rather clear that the operator
12 was placed under very difficult circumstances.

13 Q How do you explain the fact that prior to
14 March 28, it was not approached within the NRC that
15 the operator would be faced with such difficulties?
16 If you feel it was approached prior to March 28, 1979,
17 please tell me.

18 A I suspect that the answer--I am not an expert
19 in the reactor business or an operator of a reactor,
20 but I suspect that the training and simulation and
21 general approach toward the operator's ^{dealt} ~~interfaced~~ with
22 the machine had ~~dealt~~ with preconceived emergency
23 situations--loss of coolant ^{SITUATIONS,} For example, that fell
24 ~~perhaps,~~ short ^{OF} in fact ~~of~~ the actual circumstances
25 where so many things happened ^{IN A SHORT} ~~over such~~ a period of

1 time. ~~that it made~~ It ^{was} far more complex to deal with
2 than a simulated event such as ~~this~~ would ^{have been presented} appear to
3 the operator on a simulator. I think it was a matter
4 of degree to which our thinking had been influenced
5 with the possibility or probability of such an
6 event. I think some people had sort of ~~that~~ ^{the} kind of
7 thinking, that this can't happen.

8 Q Multiple failure?

9 A But it did, and it presented a situation that
10 I think showed us there were certainly some problems
11 that needed to be worked on, ~~here~~.

12 Q Those kind of comments I have heard before
13 relating to a single failure, versus multiple. It
14 is my understanding that up until the time, March
15 28, 1979, single failure analysis was the "law of the
16 land"- according to depositions. Equipment was
17 designed for single failure analysis; operator training
18 was set up along the line of single failure analysis
19 and multiple kinds of failures that occurred on March
20 28 was not anticipated.

21 I have also been assured that after March 28,
22 multiple failures will become "the law of the land".
23 However, one of the reasons why multiple failure was
24 not considered credible was because of the problem
25 of where to draw the line. You keep piling failure

1 upon failure and you can reach a point where there can
2 be no---How does the NRC propose to draw the line if
3 it is pulling away from single failure analysis and
4 pulling toward this?

5 A I cannot answer that question.

6 Q Is there any guidance that you are aware of
7 at the present time?

8 A ~~I think there is thinking of our staff,~~ Dr.
9 Matson's group has been looking at this general area.
10 I can't tell you where we are going to be able to draw
11 a line or what the criteria is for any kind of
12 bounding.

13 Q It is obviously a projection--you begin with
14 the number one single analysis, single failure and
15 now you add two or three or four. How can you ever
16 be assured that you have gone far enough in terms of
17 that kind of analysis that you have not still left out
18 a further situation where you have one more failure
19 stacked on top of the multiple failure analysis that
20 you have already done?

21 A I can't answer that question. I don't know
22 if one has been done.

23 (Whereupon, at 3:45 p.m. there was a fifteen minute
24 recess).

25 MR. KANE: Back on the record.

1 BY MR. KANE:

2 Q Mr. Gossick, there has been quite a bit of
3 focus in the course of the investigation by the Pres-
4 ident's Commission upon a transient which occurred
5 at the Davis Besse plant, which occurred September 24,
6 1977. Are you familiar with that transient which
7 occurred on that date?

8 A I am now. I was not at the time of the
9 incident.

10 Q When did you first become aware of that
11 transient at Davis Besse?

12 A I can't exactly be sure, but it was within
13 the next day or few days after the 28 March accident
14 that it became known or reported that there was some
15 similar kind of event up there that apparently ~~myself~~^I
16 and many others didn't know about.

17 Q Did someone tell you about it?

18 A If I am not mistaken, there was some reference
19 to it very early on in connection with our briefing
20 to Mr. Udall and his committee on the Hill on the 28th.
21 At that point there was somebody, whether a reporter
22 or a Congressional staff member, but there was some
23 word that there had been something like this before,
24 but it wasn't until several days later that I heard
25 what it was.

1 Q When you heard about it, did you make any
2 attempt to determine how that even came up and how
3 it had been treated within the NRC?

4 A It came up during the roughly two week
5 period we were manning the emergency response
6 center and we had the senior staff people there. Some-
7 body was there around the clock and in the course of
8 our discussions over there, yes, the matter did come
9 up and the inspection people, Mr. Davis, had directed
10 his inspectors to look into it, find out where the
11 report had gone, the licensing staff started looking
12 at who had been made aware of this and so forth, and
13 I believe that there is somewhere around, a full
14 report on the treatment of that thing. I have not
15 yet seen it.

16 Q You believe there is a report as to how the
17 Davis Besse transient was treated within the NRC?

18 A I believe there is. I am not sure. It hasn't
19 been completed but I know there was a review between
20 NRR and I&E.

21 Q That transient involved a PORV staying open
22 at Davis Besse and that the pressurizer level went
23 into an increasing mode although it did not go off
24 scale high, and based on the pressurizer reading, the
25 operator, about four and a half minutes after that

1 event, interrupted the high pressure ^{INSERTION.} engine. At
2 about twenty minutes he realized it was stuck open
3 and he opened the block valve and from that point,
4 found out it was over. Does that refresh your
5 memory of this incident?

6 A More or less.

7 Q On the basis of what you know today, was that
8 a highly unusual transient, was that an unusual
9 behaviour level for the pressurizer level?

10 A As seen from today's perspective?

11 Q Yes.

12 A I think it is surely something that had signi-
13 ficance. I think the degree of significance, perhaps,
14 wasn't recognized to the degree it should have been.
15 I am not in a position, not being a nuclear reactor
16 engineer any more than you are, to see how significant
17 it was, but later, an event at TMI led to similar
18 circumstances because of actions taken by the
19 operator. Whether this is of great significance, I
20 can't say, but ~~perhaps I~~ our people say it is something
21 we should have paid more attention to.

22 Q Based on the information that existed
23 within NRC prior to March, was a situation in which
24 pressure within a primary system ^{IS FALLING} and the level in the
25 pressurizer is rising in a pressurized water reactor

1 --is that an unusual or unanticipated event?

2 A Again, not being an operator or an engineer,
3 I don't really want to answer that question. It
4 doesn't sound right to me, but---

5 Q If somebody had brought that situation to your
6 attention prior to March 28 as something that had
7 occurred or something that raised a question mark as
8 to the way it was following, where would you have gone?

9 A To NRR; the license^{ing} people.

10 Q Would you have gone to the Division of Systems
11 Safety?

12 A I would have gone to the Director^{OF NRR.} I think
13 Systems Safety would have been the logical ^{Division.} ~~place.~~

14 Q Would that be where you think you would have
15 found the technical skills necessary to analyze that
16 event?

17 A I should think so.

18 Q Do you recognize the name, James Cresswell?

19 A I recognize the name.

20 Q When did you first hear of the name, James
21 Cresswell?

22 A I guess, again, it was sometime in the period,
23 a week, two weeks after the events at the
24 emergency center and I became aware that he, ~~I believe,~~
25 was an inspector that was familiar with ^{THE} ~~this~~ Davis

1 Besse event.

2 Q And it came to your attention that he had been
3 involved with the Davis Besse incident and he was
4 aware of it?

5 A I think that was it. ^{I WAS AWARE THAT} ~~Somehow~~ the Davis Besse
6 event ^{INVOLVED SOME REPORT BY} ~~and the name~~ Cresswell--he was involved with the
7 report and I was aware that he had reported it.

8 Q Did it come to your attention that Mr. Cresswell
9 had been attempting to focus the incident of Region 3
10 Inspection and Enforcement on the significance of
11 that transient?

12 A No, it did not.

13 Q Did it come to your attention that Mr.
14 Cresswell, during 1978, had been submitting a report
15 known as an 008 for Davis Besse plants concerning the
16 lack of resolution of the interruption of high pressure
17 engines during that transient?

18 A I am not aware ^{of} of it.

19 Q As of today, you are not aware of it except
20 for my saying it?

21 A I had heard he had been pressing this subject
22 but as of the time---

23 Q When did you hear that?

24 A What?

25 Q That he had been pushing the subject?

1 A Again, this was only indirectly though our
2 inspection people--yes, he had reported it but I
3 guess I am not--I have no idea as to the number of
4 times, dates or to what degree he had pressed the matter.

5 Q Did you make any determination as to how
6 Region 3 of the NRC I&E office, Region 3 or how I&E
7 here in region headquarters had handled the matter?

8 A I did not.

9 Q Did you feel that what you had been hearing
10 as to how it was handled, did it raise any questions
11 as to the quality and performance as to the quality
12 of the question in response to his questions?

13 You did hear about Mr. Cresswell and you did
14 hear about his concern over the Davis Besse transient
15 and the fact he had attempted to push the matter. Did
16 what you have heard up until today suggest to you
17 any questions about the quality and performance of
18 I&E concerning the responses to his concerns?

19 A I think it does express some--

20 Q What is there about the treatment of Mr.
21 Cresswell's concerns that raises some questions about
22 the adequacy of the performance of I&E?

23 A Again, this is with the benefit of hindsight
24 in knowing about the significance of this thing in
25 light of testimony, but it would appear that there

1 was a concern on his part that ~~had~~^{the matter had} not been sufficiently
2 pushed through the system to get the attention of
3 the appropriate people, analyze it, find out was there
4 something more here that needed to be done to get a
5 resolution.

6 Q It is my understanding that Mr. Cresswell
7 brought his concerns initially to his immediate super-
8 visor, Mr. Keppler of Region 3. Why wasn't that suff-
9 icient to have the concern properly addressed?

10 A One would think it should be sufficient,
11 that it should have been alleviated, ~~and~~ I am not sure
12 as to what happened after he talked to Mr. Keppler, but
13 I believe that the event was made known to our I&E
14 staff and whether it was properly handled there or
15 not, I am not sure.

16 Q Do you think I&E was the appropriate place to
17 resolve Mr. Cresswell's concerns?

18 A Not necessarily to resolve it, but get it
19 up to where it would be addressed ~~to~~^{by} the licensing
20 peop' .

21 Q Based on what you know today about this,
22 do you think it was appropriate to have left those
23 concerns with I&E without any technical evaluations
24 by NRR?

25 A At this point in time I am not sure that I know

1 completely to what extent NRR was or was not concerned.
2 I would agree it should not have been left lying in
3 I&E. It should have been addressed by our licensing
4 people.

5 Q Again, that would be where you would expect
6 the technical expertise to be to fully deal with this?

7 A That's correct.

8 Q If you would have been in a position to assign
9 it to one or the other, your inclination would be
10 to assign it to NRR?

11 A If I had been aware that there was this concern,
12 that it was smoldering somewhere in I&E without it
13 being addressed and had I understood it to the
14 extent I understand it now, I would have felt it
15 necessary to get NRR's attention to it.

16 Q To the extent NRR might have felt there was
17 some follow up needed by I&E, do you feel it would
18 have been necessary to follow up with I&E to see what
19 was being done?

20 A Yes.

21 Q Are you aware that Mr. Cresswell was also
22 aware of another transient?

23 1977--I think that was a transient in which
24 there was a lot of pressurizer indication off the low
25 end of the scale rather than going high?

1 A I am not familiar with that one.

2 Q Are you aware that Region 3 conducted an
3 investigation as to Mr. Cresswell's concerns as to the
4 Davis Besse incident?

5 A I believe I have heard that, but I have not
6 seen the written report.

7 Q Would you have heard about Region Three's
8 investigation of Mr. Cresswell's concerns?

9 A Nothing specific. I just understood they
10 have looked into his concerns. I am not sure whether
11 it was post or prior.

12 Q Do the names Collier and Foster ring a bell?

13 A No.

14 Q Are you aware there was a meeting on February
15 14, 1979 at the headquarters of Babcock and Wilcox in
16 Lynchburg, Virginia to deal with the subject of loss
17 of pressurizer indication off the low end of the scale?

18 A I am not aware of it. I can't say it is some-
19 thing our people participated in.

20 Q Yes, there was a meeting called by Region Three
21 people in connection with their evaluation of Mr.
22 Cresswell's concerns.

23 Are you aware that Mr. Cresswell attempted to
24 have the license^{ing} board for the Midland and Davis
25 Besse unit two and/or three plants notified as to

1 his concerns of the Davis Besse one transient?

2 A Somehow I do believe I have heard that there
3 was an interest on his part in getting boards notified,
4 but I can't say I am able to add anything further on
5 that.

6 Q We have previously taken the deposition of
7 Mr. Moseley and we have discussed with him at length,
8 the writing of memoranda which were submitted to Mr.
9 Moseley for transmission to the licensing board. What
10 is involved here for transmission to the licensing
11 board and why is that done?

12 A There have been instances in the past where
13 the Board became aware after having made a decision
14 on a license case of some matter that dealt with the
15 case that they had just decided upon, and clearly,
16 where that material is relevant to the issue that they
17 are addressing, they should be made aware of it.

18 The general procedure is for any action,
19 issue, any information that comes to the attention of
20 the NRC, the I&E staff, or the NRR staff or anyone
21 for that matter, it is routed to ELD for a determination
22 as to the relevancy of this particular piece of
23 information with any of the board activities that are
24 currently underway. Their responsibility is to review
25 it and to decide whether or not it is relevant.

1 If the original writer or the person of the staff
2 that sends it forward says; "we insist it is relevant
3 and it must go", I believe the procedure is that ELD
4 will still review it but sends it on regardless. In
5 some cases they would be asked to review the matter and
6 give their advice as to whether it should go forward
7 or not.

8 Q If the original writer states that what he
9 is identifying is, in his view, a generic safety issue
10 and insists that it be transmitted to the hearing board
11 for their consideration, is that considered a high
12 priority item?

13 A In my view, it should be.

14 Q How long should it take from the time the
15 attention is called from I&E until it gets to the
16 licensing board?

17 A I shouldn't think it should take all that long;
18 a few days or a week or two should be sufficient for
19 the review.

20 Q Are you aware that I&E has an in-house rule
21 of ten days for notification to licensing boards
22 from the time it receives this type of request?

23 A It sounds roughly right. I don't know the
24 exact number.

25 Q Are you aware ELD has an in-house rule for

1 improving these things?

2 A I know they have tightened it up.

3 Q Do you know if they have a maximum period of
4 time?

5 A I think there is, but I can't give you the
6 number offhand.

7 Q Something rings in the back of my mind that
8 it is a three day rule.

9 A It may be.

10 Q In any event it is supposed to be just a few
11 days.

12 We have gone over with Mr. Moseley the
13 handling of a request by Mr. Cresswell that he see his
14 file related to Davis Besse. In that regard,
15 Mr. Moseley provided us with a series of documents that
16 have "Cresswell Package" at the top and it has a list
17 of the collection of documents. Let me show you that
18 collection of documents and ask if you have seen it
19 before?

20 A (Examining the above-mentioned document).
21 Not specifically the documents in the package, ^{NOT} ~~but~~
22 this collection of documents, the way it is set up.
23 (Examination of documents). I have no --I can't recall
24 having seen any of this.

25 Q Mr. Moseley has testified that this package

1 contains the documentation relating to the transmittal
2 of Mr. Cresswell's concern to the hearing board on
3 Midland and Davis Besse units two and three. There
4 are some ten memoranda or letters that appear in the
5 chain here. They begin with a memorandum dated
6 January 19, 1979 from Mr. Keppler from Region Three
7 to Mr. Moseley and Mr. Thornberg. What division is Mr.
8 Thornberg in?

9 A He is in headquarters staff, I&E. I can give
10 you his title.

11 Q He is in I&E?

12 A Yes. Division Director. Moseley, he is I&E.

13 Q The next one, February 28, 1979 from Mr.
14 Moseley to Mr. Thompson relates to the same subject
15 matter. It appears they had the document until
16 February 28, 1979. Would that be a normal period
17 of time to hold on to those things rather than
18 moving it along?

19 A I would have to say depending on the complex-
20 ity of the subject, it might not have been. Certainly
21 it doesn't meet their ten day rule, but some of these
22 things are --speaking in general terms-- are not at all
23 clear-cut. They might not, even if the originator
24 insists it go, there may be individuals who need to
25 know more about it. I am not making excuses, but I

1 won't say flatly there are not circumstances that
2 might require it.

3 Q Certainly, as it is forty-days between January
4 19 and February 28. This memorandum was addressed to
5 Mr. Thompson. What division is he in?

6 A He is currently Deputy Director of I&E.
7 Before that he was Executive Officer for Operations,^s
8 I believe, under the Director of I&E. ^{t,}

9 Q Within I&E?

10 A Yes.

11 Q So as of February 28, 1979--

12 A The concerns were still within I&E.

13 Q The next one is dated March 1 from Mr. Thompson
14 to Mr. Vastallo. What division is Mr. Vastallo in?

15 A He is with Operating Reactors, NRR.

16 Q This would have been from I&E to NRR as of
17 March 1, 1979, approximately 45 days or so after it
18 was received?

19 A Right.

20 Q Is it customary for those kinds of concerns
21 to be sent from I&E to NRR?

22 A I think that would be in order.

23 Q The next one is dated March 6 from Mr.
24 Vastallo to Mr. Christenberry. What division is he
25 in?

1 A He is in our office of Legal Director. ELD.

2 Q The next one is dated March 7, 1979, the next
3 day , and that is from Mr. Moseley to Mr. Thompson
4 in proposing the -- evaluation.

5 A I am not certain of that one.

6 Q The next one is a memo dated March 7 from
7 Mr. Moseley to Mr. Thompson which states that "discussions
8 and evaluations with regard to Mr. Cresswell's concerns
9 will be sent on within six days." Again, Mr. Moseley
10 had received this matter January 19, 1979. As of March
11 7, 1979 there had still been no evaluation. Is that
12 a timely and proper handling of these requests for
13 notification to the licensee board?

14 A I would not think it would be.

15 Q The next is dated March 12, 1979 from Mr.
16 Thompson to Mr. Vasallo, NRR, transmitting
17 the memorandum of March 6, the fourth one. The next
18 one is dated March 28, 1979; again from Mr. Moseley,
19 I&E to Mr. Thompson concerning the evaluation.

20 The next one is the date of March 29, 1979 from
21 Mr. Moseley to Mr. Thompson advising that the evaluation
22 of the concerns may have to be changed due to TMI-II.

23 The next one is also dated March 9, from Mr.
24 Thompson to Mr. Vasillo and the last one is again
25 dated March 29, 1979 from Mr. Sinto. What division is

1 he in?

2 A He is in the Office of the Executive Legal
3 Director.

4 Q That is the one that is directed to receive
5 lists concerning the Davis Besse Midland plant and
6 a number of other hearing boards. It appears it took
7 from January 19, 1979 to March 29, 1979 for this matter
8 to reach the hearing board; some ^{two?} ~~ten~~ months. Is that
9 the way in which these matters should be handled for
10 notification to the licensee?

11 A It would appear to be an unusually long period
12 of time. I would say, however, that there may be
13 circumstances whereby further inquiry on the part of
14 the people who are reviewing the matter might cause
15 matters to drag out longer than the ordinary schedule
16 that we discussed earlier. I am not trying to make
17 excuses for this particular matter. I don't know
18 what the investigation entailed in the processing of
19 it. On the face of it, it would appear it took far
20 too long.

21 Q Prior to my going through this exercise with
22 you today, were you aware of this situation?

23 A No, I was not.

24 Q Noone has brought to your attention that it
25 required 270 days?

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A I know it was an unduly long period of time.

Q How did you become aware of that?

A There had been discussions between Mr. Davis and the lawyers and myself, just saying there is a problem here. This thing didn't move as quickly as it should have.

Q John Davis? He was the Acting Director?

A Yes.

Q At the time you became aware of this situation, you spoke to Mr. Davis about why this occurred?

A No, not in particular. I knew they were interested in how the thing had progressed and my understanding was that they and the lawyers had been reviewing the handling of this matter. I had spoken to Mr. Shapar about a proposed change in procedure that had been the subject of discussion between Mr. Shapar and Mr. Denton.

Q Are you looking into this matter to determine why the delay occurred?

A I am not. I am sure it is being looked at not only by the Commission but by Mr. Rogovin and his group.

Q In light of being what we discussed before, did you regard it as a function of your job to provide the adequacy of the performance of I&E?

1 A I think that is a fair statement. The whole
2 system is a proper concern of mine and here is an
3 example of one that didn't proceed in a proper fashion
4 and it does require attention.

5 Q Do you intend to look into this?

6 A Yes, indeed.

7 Q But you have not done so yet?

8 A No, I have not.

9 Q Are you aware, Mr. Gossick, of a general
10 practice by the licensing personnel within NRC to
11 issue operating licenses to facilities when there are
12 still open, unresolved safety items?

13 A I am aware that that has been done, yes.

14 Q How does that situation come about? In
15 other words, normally one would expect that all safety
16 questions would be resolved before a nuclear power
17 facility would be able to begin operations. I am
18 now informed it is a fairly regular practice for a
19 license to be issued with a number of open items being
20 attached.

21 A With the condition they be done by some par-
22 ticular time.

23 Q Right.

24 A This is a judgement that has been made by
25 our licensing staff that while these matters must be

1 taken care of, it is not essential, or required that
2 they be done prior to their actually licensing the
3 plant for operation.

4 Q How is that judgement reached?

5 A It is a combination of our staff review and
6 staff judgement, coupled with the review by the ACRS
7 which is an independent review. It is a matter dealt
8 primarily with NRR and ACRS and of course, to some
9 extent, by the hearing board.

10 Q If you have an open safety item, that means
11 there is some safety aspect of the plant that hasn't
12 been fully resolved yet, is that correct?

13 A That is a fair description.

14 Q So I can understand the process, is it a
15 situation that the determination is made although the
16 item is not resolved, it does not pose an undue risk
17 along with it?

18 A It poses some risk. It is certainly within
19 the judgement made that this plant be allowed to
20 operate without undue risk to the public health and
21 safety.

22 Q Who makes that determination in connection
23 with the issuance of an operating license?

24 A The actual license is signed off by the Director
25 of Project Management in NRR.

1 Q Director of Project Management?

2 A Yes. He would have been the one who would
3 have made that judgement based on input from his staff
4 and comments by the hearing board, by the ACRS.

5 Q Do you ever review those determinations to
6 determine whether or not the process has concluded
7 that the operating license is appropriate not with-
8 standing an open safety item?

9 A I have not, no. ^{THAT RESPONSIBILITY} ~~I heard it~~ is delegated to
10 the Director of NRR by the Commission, the authority
11 for making that licensing ^{decision} ~~condition~~.

12 Q Do you ever inquire of the Director, Mr.
13 Denton, as to the extent to which that kind of
14 activity is going on and the circumstances as to
15 whether or not it is appropriate?

16 A No, not specifically I have not. ^{THERE IS THE} ~~The~~ matter
17 of ^{exemptions, however,} ~~exceptions~~ that have been granted for an operating
18 license, ^{THIS} ~~as has been the subject,~~ which is a little
19 different matter.

20 Q ^{Exemptions} ~~Exceptions~~?

21 A This is where an operating plant has been
22 given an ^{EXEMPTION} ~~exception~~ from some particular licensing
23 condition to allow him to operate while certain things
24 are being done, as opposed to closing down. About
25 a year ago, I think it was, this matter came to the

1 attention of the Commission which resulted in the
 2 Commission reviewing the matter of granting of ~~exceptions~~ ^{EXEMPTIONS}
 3 in connection with the delegation ^{To} of the Director of
 4 NRR and as a result of that ~~situation, someone,~~ ^{review} there
 5 is now a procedure that ~~which carries that~~ ^{requires} all ~~exceptions~~ ^{EXEMPTIONS}
 6 ^{to} be identified and announced to the Commission so that
 7 they will know: prior to the granting of the ~~exception~~ ^{EXEMPTION} the
 8 intention of the Director of NRR to do so.

9 Q Do you regularly become involved in the
 10 judging of the propriety of granting those ~~exceptions~~ ^{EXEMPTIONS}?

11 A I don't. I am not in a position to really
 12 add or take away from the technical judgement made by
 13 the licensing staff and Director of NRR as such. The
 14 Director occasionally will discuss with me his thoughts
 15 with regard to how an ~~exception~~ ^{EXEMPTION} could be handled,
 16 perhaps, but as far as the technical judgement as to
 17 safety aspects, I have to rely on the licensing staff
 18 and Director of NRR.

19 Q Do you regularly inquire of Mr. Denton as to
 20 the basis for having granted certain ~~exceptions~~ ^{EXEMPTIONS} for
 21 licensing?

22 A I don't regularly inquire because as I say,
 23 all ~~exceptions~~ ^{EXEMPTIONS} that we are granting now are routinely
 24 processed up through me to the Commission for their
 25 review prior to actually granting the ~~exception.~~ ^{EXEMPTION.}

1 Q Was that the situation prior to March 28,
2 1979?

3 A Yes. This has been in operation over a year
4 now.

5 Q Prior to that, they would not regularly send
6 through---

7 A No.

8 Q Was that simply a matter that should have
9 been handled by NRR without your involvement?

10 A Yes.

11 Q Why was that changed?

12 A Why was that changed? It was a reactor in
13 Vermont. I don't remember the particular circumstance,
14 but there was some ^{EXEMPTION} ~~exception~~ that was granted. Anyway,
15 it came to the Commission's attention and they asked
16 for a review of this entire area and as I say, the
17 result of that review was this system now where they
18 are informed of ^{EXEMPTIONS} ~~exceptions~~ beforehand, or given the
19 opportunity to override the intent to grant ^{THE} ~~an~~
20 ^{EXEMPTION} ~~exception~~.

21 Q Before that change was made, were you aware
22 that NRR was granting ^{EXEMPTIONS} ~~exceptions~~ to licensing require-
23 ments?

24 A Yes, in a general sense I knew there were
25 times they would ^{GRANT} ~~want~~ an ^{EXEMPTION} ~~exception~~.

1 Q Did you inquire during that time as to
2 why that practice was being followed?

3 A Not specifically. ~~but from the previous~~
4 ~~connection with their observation of the licensing, It~~
5 was my understanding that it was, ~~again,~~ a matter
6 where it was a judgement of the licensing staff that
7 this could be done, ~~and~~ still, with the provision of
8 adequate protection of the health and safety of the
9 public while the plant was allowed to continue to
10 operate while some action was being taken to address
11 the requirement.

12 Q Do you know how many operating licenses have
13 been granted with ~~exceptions~~ ^{EXEMPTIONS} from certain licensing
14 requirements?

15 A I don't know the number but I suspect it is
16 a fairly sizeable number at the time the determination
17 was made that that procedure should change.

18 Q Was there any determination made that the
19 ~~exceptions~~ ^{EXEMPTIONS} already granted previously for previous
20 plants should also be reviewed in that fashion?

21 A I don't believe so. I don't recall any
22 retrospective requirements.

23 Q Let's come back to the open safety item.
24 If I understand your testimony, you do not regularly
25 review with Mr. Denton the reason why a specific

1 operation license is being issued with open, unresolved
2 safety items in connection with it?

3 A No, I don't .

4 Q You rely upon the determination by NRR that
5 the operating license is appropriate, notwithstanding
6 those open items?

7 A That's correct.

8 Q Have you reviewed the operating license for
9 TMI-II as to open items that existed prior to the
10 accident?

11 A No, I have not.

12 Q To the extent that NRR was improperly
13 granting licenses with open safety items that should
14 have been resolved before the issue of granting the
15 license, would that be a concern for you, in your
16 function as Executive Director of Operations?

17 A Yes. If I had any reason to believe they
18 were improperly granted or ~~alluded~~^{allowed}, that would be a
19 matter of concern.

20 Q How would that come to your attention if
21 you don't regularly inquire into that subject matter?

22 A Primarily through the result of our inspection
23 and enforcement activity; they might take issue with it.
24 The ACRS could possibly, conceivably make an issue
25 of such a matter although it isn't likely. Normally

1 their action would enter earlier on, before the actual
2 granting of the license.

3 Q So, through ACRS or I&E?

4 A Primarily, yes, or the Board might possibly
5 raise an issue ~~saying that~~ ^{WITH} a license ^{THAT} was granted
6 although they ~~have~~ ^{had} made their decision and referred it
7 to NRR with an open item, it is possible.

8 Q To your recollection, has any such incident
9 ever arisen?

10 A I am not sure. There ^{MAY HAVE} ~~was one~~, but I just
11 don't recall.

12 Q Are you familiar with the concept of what
13 equipment in the nuclear power facility is safety
14 related and what is not safety related?

15 A In a general sense.

16 Q It is my understanding that the only judgement,
17 when NRC takes a close look, is the safety--in terms
18 of licensing and inspection--is safety related.

19 A That is generally correct.

20 Q Operation procedures have never been considered
21 under the title of "Safety related", have they?

22 A I hate to say yes in a blanket way.

23 Q To your knowledge?

24 A I thought, perhaps, certain procedures
25 were considered to be safety related but I can't answer

1 specifically.

2 Q Are there some procedures that you have in
3 mind that would be, as far as you know, safety related?

4 A No, other than, perhaps, emergency measures
5 or procedures dealing with certain postulated events
6 that would require operating actions out of the
7 ordinary.

8 Q Are you aware of at least one definition of
9 what is safety related?

10 A It is whatever constitutes the boundary
11 of the primary pressure system. This is my general
12 definition.

13 Q Does the PORV constitute the boundary of the
14 pressurized system?

15 A It would seem to me that it would. I
16 don't know the arguments ^{REGARDING} ~~of~~ the blocked ~~valve~~ valve problem.

17 Q Has the PORV been considered in the past to
18 be a safety related item?

19 A I cannot answer that question. It is my
20 impression that ^{IN} ~~the~~ TMI situation, it was not classified
21 as a safety related item and I must say that I am not
22 sure I understand why that was so, but--

23 Q Have you discussed with anyone in the NRC
24 whether or not the PORV is a safety related item and
25 if not, why not?

1 A No, I have not.

2 Q In assessing the quality of the performance
3 of the licensing personnel contained within the NRR,
4 isn't the treatment of the subject of what is and
5 what is not safety related a source of concern to you?

6 A In a general sense, I believe that is correct.
7 However, again, the determination as to what is safety
8 related and what is not safety related, I must simply
9 rely and depend on the Director of that office to deal
10 with those determinations. I must say I just simply
11 cannot get into that, the details across the board in
12 the operations here. I must rely on delegation of
13 responsibility to people who do have the qualifications
14 to judge whether or not that is a correct judgment,
15 if it is right or not.

16 Q If it came to your attention that the
17 Division of Project Management in licensing nuclear
18 facilities was proceeding on the basis that the ECC
19 was not a safety related item, would that give you
20 some concern?

21 A That would raise my eyebrows, indeed.

22 Q You would talk to Mr. Denton?

23 A I think I would.

24 Q If it was also brought to your attention
25 that the PORV was not considered a safety related

1 item and because i had a blocked valve upstream from
2 it--and it was also brought to your attention that
3 the blocked valve was not considered a safety related
4 item because it had a PORV in front it it, would that
5 give you some concern?

6 A I am not sure. How many valves do we have
7 in this line, three?

8 Q Two.

9 A We have a PORV and a blocked valve behind
10 it?

11 Q It is my understanding that the PORV was
12 not considered safety related because it had a
13 blocked valve behind it to back it up and the block
14 valve was not considered safety related because it had
15 a PORV in front of it. Would that give you some kind
16 of concern to know the licensing people were proceeding
17 on that basis?

18 A I would have to think about that and perhaps
19 get an explanation.

20 Q Do you think that needs an explanation?

21 A Yes I would. I was not of that understanding.

22 Q You haven't heard that point of view before
23 today?

24 A I don't believe so.

25 Q Have you discussed with anyone within the

1 NRC how the PORV has been treated in terms of safety
2 relatedness in the past and why?

3 A No, I have not.

4 Q In lite of TMI-II, do you feel that it is
5 necessary to determine whether or not a PORV should be
6 reported as safety related?

7 A I think that is certainly a matter that the
8 licensing staff should look at carefully in conjunction
9 with such other bodies as the ACRS and address the
10 question of whether or not that is the proper judgement.

11 Q Do you feel that is a proper function of
12 your office to determine the propriety or adequacy of
13 whatever decision is made in that regard?

14 A To pass on a judgement made by the technical
15 staff within NRR, supported by such advice as they
16 may get from the ACRS or whoever else, I would not
17 presume I am in a position to override or to judge
18 the adequacy or propriety of that judgement. That is
19 really not provided for in the way this Commission is
20 structured, organized. The delegation and responsibil-
21 ity down from the Commission directly to the Director
22 of NRR--not through me, but directly to him as well
23 as other Directors of the major offices simply, in
24 my view, puts them in the position of having a respon-
25 sibility for certain technical judgements such as

1 that. I can question, I suppose, if I felt strongly
2 enough about it, but from a technical standpoint, with
3 the other things I am responsible for ~~from~~^{IN} the day
4 to day operations, I can not get into it.

5 Q Have you ever questioned Mr. Denton about
6 the adequacy of a technical judgement made by
7 NRR?

8 A I am trying to recall, not necessarily Mr.
9 Denton, but any of the Directors of NRR past or present?

10 Q Sure.

11 A I can't give you a specific time. I can
12 generally state from time to time my technical advisor
13 who I no longer have, his position is currently
14 vacant, has come to me th something he has been con-
15 cerned about which I then ask that he follow up on
16 with the appropriate people at NRR, and I think on
17 some occasions, perhaps, those matters have elevated
18 to a discussion between the Director of NRR and myself.

19 I don't recall any specific subject ~~of~~^{FROM}
20 memory----In connection with the Browns Ferry Fire,
21 there was a host of things that had to do with fire
22 protection, but I can't give you a specific item.

23 Q Who was your technical assistant?

24 A Dr. Hanauer, and he ~~took~~^{has TAKEN} a job with NRR
25 as Assistant Director.

1 Q Do you have a technical assistant now?

2 A No, I have not. The position is vacant.

3 Q How long had Dr. Hanauer been your technical
4 assistant?

5 A Since the formation of the NRC.

6 Q So, since 1975?

7 A Right.

8 Q Did you have any other technical advisor
9 besides Dr. Hanauer?

10 A No, he was my technical advisor from the
11 beginning.

12 Q Has he ever called to your attention,
13 technical problems or objections in connection with the
14 specific decisions being made in the licensing projects?

15 A One area, generally, that Dr. Hanauer has
16 been very much involved in and has followed and in
17 fact, with my support, has pushed forth is ATWS-- *THE*
18 Anticipated Transient Without Scram issue. He felt
19 it was absolutely necessary that that issue be pressed
20 and pressed and pressed until it could finally be
21 resolved. He spent a great deal of time working on that.

22 Q Did Dr. Hanauer bring your attention to
23 what he was doing in that regard?

24 A Yes.

25 Q Do you generally understand what was involved

1 in that?

2 A Only in a general non-technical sense. I
3 knew there were generally different classes of plants
4 requiring different things. It was a matter that
5 strongly revolved around ^{ONE VIEW} ~~a course~~ by industry, ^{ANOTHER} ~~the~~ ^{by}
6 staff and then Dr. Hanauer felt it was necessary to
7 go ahead and get this area resolved and if it is not
8 resolved, it is very close to, mainly, being put to
9 bed.

10 Q Did Dr. Hanauer bring to your attention the
11 fact that at B&W it was a standard feature that upon
12 inspection of loss of feedwater and turbine trip, there
13 would be no reactor scram, there would not be an
14 automatic reactor scram?

15 A I can't recall specifically him discussing
16 that matter with me.

17 Q Do you know if that was a feature of the
18 ATWS program?

19 A It may well have been.

20 Q What did you understand the ATWS program to
21 be?

22 A Well, the ATWS program or the problem is
23 simply a matter where some transient occurred which
24 would have not resulted in the activation of safety
25 features which would have scrambled the reactor. As

1 I understand it, there are more than one, there are
2 some number of such events that have been of concern,
3 have been designed around or against in various plants
4 differing somewhat on their vintage; but as far as
5 the technical details as to such as the example you
6 gave, or others like that, I don't recall. I think at
7 one time I read the list and have been through the
8 matter, but I don't recall now.

9 Q How does the NRC go about learning about the
10 operational history of various devices in plants which
11 it licenses?

12 A There is, first of all, Licensee Event
13 Reports, a system where the conditions of the license
14 are that the events specified have to be reported,
15 either on an immediate basis, which in effect means
16 within twenty-four hours or long-term basis, within
17 30 days.

18 Q That is, report to I&E?

19 A That's correct. This means minor items or
20 items of major significance. Those are combined and
21 put together in reports by our MPA staff--Management,
22 Planning Analysis.

23 Q Those are transmitted to them from I&E?

24 A They are looked at by I&E and at the same
25 time they go into the collection system. They are

1 used by inspectors who the next time he goes, will
 2 take the list of LERs and go and say, "how about those"?
 3 Those are routinely provided to NRR and the licensing
 4 staff as well.

5 In addition to the LER system there is an
 6 Abnormal Occurrence Report. This is a screening of
 7 items of more significance which are required by the
 8 Energy Reorganization Act to be reported to Congress
 9 on an every six month basis.

10 Q That would be a report prepared by the licensee,
 11 sent to I&E and they evaluate it and send it on to
 12 other areas?

13 A It goes to MPA and they make the original
 14 determination, ^{THAT THE EVENT} ~~say, this is such a situation sure,~~
 15 ~~it is an abnormal occurrence, and~~ It is put out ~~for~~
 16 ~~comment~~ along with a paper that explains in more
 17 detail the rationale for classifying it as an abnormal
 18 occurrence, for comments by the staff, and once that is
 19 established, it is the Commission who makes a deter-
 20 mination as to whether or not it is an abnormal
 21 occurrence or not.

22 There is a nuclear plant reliability system.
 23 This is a voluntary program on the part of the licensee.
 24 It is sponsored ^{by the industry, HOWEVER} ~~we~~ put money into running the system.
 25 It is run by ~~I&E~~ --EPRI ~~rather~~, where there is a

1 collection of operational information.

2 Q Is that the operational information collected
3 by the licensee?

4 A Yes, it is ~~first of all~~ submitted by the
5 licensee, ~~after he has~~ -- Some licensees are participating
6 fully, others are participating hardly at all; but I
7 would say on the average, fifty percent of the industry
8 is participating in this system. The ~~attempt there~~ ^{purpose}
9 is to provide an added level of detailed information
10 getting down to literally, the name, plant component
11 and characteristic of a given item.

12 Q The licensee gathers the information and
13 submits it in a report again to I&E?

14 A NRC's information comes in. Actually, it
15 is received by MPA and then submitted to I&E.

16 Q Collected by the licensee and transmitted
17 to MPA?

18 A Actually, yes. It is collected by, or
19 submitted by the licensee. There is a Southwest
20 Research Institute that has a contract with the
21 industry for putting this stuff on tapes and getting
22 it into a useable format that is then provided to NRC.
23 Those are the principal systems plus, of course, the
24 collection of information through ~~the~~ inspection reports.

25 Q This strikes me as a very intensive program,

that it takes a lot of time and a lot of personnel?

2 A Yes.

3 Q I have had concerns reported in the course
4 of many depositions to the fact that NRC personnel
5 in these areas are overworked and understaffed.

6 A There is a lot of work to do with LERs.

7 Q I have heard it suggested that there are
8 too many LERs being submitted to all be properly
9 evaluated. It becomes a system of sampling to fully
10 evaluate it.

11 A There may be something in that.

12 Q I have also been informed through these
13 depositions that there is no requirement for the
14 applicant at the time he submits an application for a
15 permit to submit an ^{OPERATIONAL} ~~optional~~ history of the devices to
16 be used in the plant. Given the amount of time and
17 the amount of resources that the NRC is being called
18 upon to devote to compiling this operational history,
19 why not put that obligation on the applicant in the
20 course of the learning process?

21 A I am not sure I completely understand the
22 suggested requirement. At the time of licensing that
23 the licensee provide NRC with an operational history
24 of performance Line A and B, because it is a type "x"
25 valve?

1 Q For instance, providing in conjunction with
2 an application for an LER, listing the history of
3 a PORV --

4 A Of all PORVs c the kind he is using? A
5 PORV can be defined in a number of ways.

6 Q It is my understanding there has been no
7 such requirement at all. It sounds like the NRC is
8 assuming the obligation to provide this synopsis of
9 how this is devised rather than putting that obligation
10 on the applicant.

11 A We can put it on the applicant, I suppose.
12 This, however, still would leave us with the situation
13 that the plants you see now in operation, and
14 regardless of what he told us about the fine perfor-
15 mance of whatever it was he was putting into his plant,
16 we still want to know how it actually performed and
17 to be able to catch any indication that what is in
18 there really isn't working as it should.

19 Q Don't you think it would help if you had a
20 document submitted by the applicant that recites a
21 past history rather than counts LERs?

22 A It would give a history of past components
23 on which a history had been accumulated. I don't
24 think ~~what it does for you, on say,~~ ^{would help} ^{for example,} where you now have
25 a supposedly new, a better valve that has been provided

1 by somebody on which there is no experience; that
2 is one problem.

3 Q In that particular case, don't you think the
4 applicant should be called upon to submit an application
5 of prototype testing?

6 A That is one of the things the Commission
7 is looking at; what further do we need to do with
8 regard to qualification testing.

9 Q This other point about operational history
10 of known devices. Coincident logic ECCS activation.
11 Do you know what that is?

12 A I know generally the principle it ~~takes~~ ^{involves.}

13 Q Do you think it would be of assistance to
14 have the applicant submit a history of problems that
15 have existed with coincident logic activation if the
16 applicant desires to have that included in the plant
17 design?

18 A I guess I would have to think about that
19 and I am not sure one ~~would~~ ^{could} be involved in the
20 collation of all this information to the degree ^{you} ~~of~~
21 ~~which one~~ ^{suggest.}; We would be inclined to accept the licensee's
22 report that I am going to use this valve, and here
23 is the history of the uses of this valve in all such
24 plants and it has been ~~relying on~~ ^{reliable to} a level of such and
25 such.

1 Q I wasn't suggesting that requiring that would
2 be a situation where NRC could eliminate its own
3 efforts. It strikes me as a good beginning point, and
4 much more effective, shifting the burden in this regard,
5 at least as an initial matter.

6 To your knowledge, that that idea ever been
7 considered?

8 A Not that I am aware of. It may well be
9 worth further consideration.

10 Q Mr. Gossick, it has come to my attention
11 that there is one very basic distinction between the
12 B&W design and the design of the Westinghouse plant
13 and GE plant and specifically, in the area of the steam
14 generator design. Are you familiar with the difference
15 between the once through steam generator system--
16 re-circulating steam?

17 A Generally, I am familiar with the difference.

18 Q Are you familiar with the difference in
19 boil-dry times for the two kinds of generators in the
20 event of loss of all feedwater?

21 A Yes, in the sense there is a larger inventory
22 of water in the Westinghouse unit ^{THAN} ~~as~~ there is in the
23 B&W plant.

24 Q Prior to March I have been informed in the
25 event of the loss of all feedwater, the once through

1 steam generators boil dry in about two minutes and
2 the others boil dry in an average of thirty minutes,
3 is that correct?

4 A Generally.

5 Q There have now been some adjustments made
6 on the once through system and I am now informed by
7 Mr. Denton that that has now led to the boil out time
8 of once through steam generator being raised to as
9 much as five minutes. However, even with those
10 adjustments it is clear there is a substantial diff-
11 erence in the amount of time such as twenty minutes,
12 twenty-five minutes. Does that strike you as a
13 dangerous situation in the case of the once through
14 steam generator?

15 A I don't think I could just say yes without
16 adding there may well be other features or provisions
17 coupled with the straight through generator that in
18 some way compensate. I am not claiming there are.
19 I don't want to agree to your premise without saying
20 there may not be some other reason.

21 Q I didn't have a premise. I am curious as
22 to what technical evaluation has been done to determine
23 whether or not the once through steam generator is
24 a justified unit. Are you aware of anything that
25 justifies utilizing a device which has such a

1 significantly shorter time fuse in the event of loss
2 of water?

3 A All of these designs, B&W design, Westinghouse
4 design and so forth all become a subject of review
5 by our technical staff and experts that deal in those
6 areas. I am sure they are well aware of the differences
7 and the conveniences and advantages and disadvantages
8 of one versus the other. So, I am quite confident
9 this is not just something that happened; ^{that} We suddenly
10 realized there was a difference. ^{THERE} ~~It~~ has been an
11 evaluation. There have been later model evaluations.
12 It is not something we sort of had happen to us without
13 our knowing of it. It has been a deliberate judgement.

14 Q You are confident it has been fully evaluated?

15 A I am confident it has been evaluated. If
16 there is something new that comes out of this Three
17 Mile Island situation that calls for a new insight,
18 certainly we should benefit by it.

19 Q Are you aware of anything about TMI that
20 suggests there should be some new insight about it?

21 A Other than anything you have suggested that
22 it can boil dry more quickly?

23 Q That insight was known all along?

24 A That is not new. No, ^{NOTHING} ~~not~~ more ~~simply~~ than
25 the other thing about the uncertainty or confusion that

1 you mentioned earlier about the pressurizer level in
2 reference to the water level within the vessel.

3 Q That doesn't relate to the once through
4 steam generator?

5 A Not really.

6 Q Are you aware of why the once through steam
7 generator was felt to be a justified and acceptable
8 aspect of the B&W design from the point of view of the
9 NRC?

10 A I can't give you the basis.

11 Q Have you made any attempt to inform yourself
12 on that subject?

13 A No I haven't, no.

14 Q I don't mean to ask you questions that fall
15 outside of the scope of your position, but I had the
16 impression that your office is called upon as the
17 final evaluation, short of the Commission itself,
18 to evaluate the performance of other areas such as
19 I&E and all those other to the extent those areas are
20 not properly performing their job, it is your position
21 to look into that, isn't it?

22 A Yes, however, I think in reality, you can
23 only take that so far. This is an extremely technical
24 operation. There are delegations of responsibility
25 to the Office ~~of the~~ Directors depending on their area

1 of responsibility for making decisions on such things
 2 as licenses. The fact that a license is not issued
 3 on some reasonable schedule in the past or the fact
 4 that certain actions have not been accomplished on
 5 schedule in the general programatic sense has ~~since~~
 6 been the areas of my concern.

7 For example ~~For~~ ^{ARE} the ^{resources} ~~reverse~~, we are putting into, ~~for~~
 8 ~~example~~, NRR ^{to handle} the numbers of backlogged license
 9 amendments being ^{effectively applied,} ~~addressed~~ ^{and are the actions} ~~are a fair approximation~~
 10 ~~for such thing as~~ falling out of the Browns Ferry fire--
 11 ^{being accomplished? whether or not we are} ~~are we~~ meeting our schedule and getting things done
 12 on schedule is, in a more broad ^{PROGRAMATIC} ~~pragmatic~~ sense, my
 13 scope of review.

14 Q Does your scope of review include technical
 15 judgements made by NRR which are not sound judgements?

16 A I have to say I have no way of ^{JUDGING THAT} ~~knowing~~.

17 Q Who within the NRC is called upon to address
 18 improper technical judgements made by NRR?

19 A Principally through the ACRS which is our
 20 technical body of independent advisory review and
 21 criticisms of things that they see being done in the
 22 licensing process which may have technical shortcomings.

23 Q Who would be called upon to bring to the
 24 attention of the ACRS a technical judgement which was
 25 felt to be unsound?

A Any number of people; a staff person. I,

1 if so inclined. Any member of the staff who thinks
2 there has been some improper treatment of a safety
3 concern or some lack of action on the part of not
4 only NRR but ^{NMSS}~~NSS~~ or I&E, depending on the subject.
5 There is a written policy that they are permitted to
6 go to ACRS to present this concern.

7 Q How often does the ACRS meet?

8 A Every month.

9 Q How many days?

10 A Normally, over a weekend. There are various
11 subcommittees on which ACRS members spend practically
12 half of ^{THEIR}~~the~~ full time.

13 Q Is it true each member of the ACRS has its
14 own specific interest in pursuing safety questions and
15 do not pursue them in a body but each individual
16 pursues his own interest in relation to safety questions?

17 A When they are acting as individuals,
18 even a subcommittee has to come together with some sort
19 of a subcommittee finding, and the final recommendations
20 are presented as a committee.

21 Q We have deposed Mr. Jesse Ebersole. He is
22 a member of the ACRS. We discussed with him the
23 situation related to Pebble Springs licensing. Are you
24 familiar with that?

25 A Vaguely.

1 Q Have you ever received a copy of the
2 Michaelson report which appears as Question No. 6
3 in the Pebble Springs licensing process. It addresses
4 Mr. Michaelson's concern in his report. That question
5 was submitted to the applicant through the auspices
6 of the ACRS in writing. The applicant responded in
7 writing. There was a two part question. The second
8 part of the question was not answered by the applicant
9 at all--completely, no response and no further follow
10 up was done by the ACRS or, to our knowledge, anyone
11 else to seek a further response by the applicant. We
12 asked Mr. Ebersole about that. He explained that
13 at the time it was submitted, he had personal problems
14 and health problems and was not able to attend to his
15 duties and the situation within the ACRS is that each
16 member has his own concern, and if there is a matter
17 in which one member thinks is significant and others
18 don't and that one member doesn't pursue it, the others
19 don't. Based on your experience with the ACRS, is
20 that an accurate characterization of how it works?

21 A I wouldn't say that is a complete character-
22 ization but I would guess that is only natural and
23 that it is probably natural of any organization that
24 different people have different interests and unless
25 they can get some help or support it could well get

1 ~~get~~ dropped out.

2 Q The unfortunate aspect of the situation is
3 that the portion of the question that was not answered
4 was what did they propose to advise the applicant in
5 the event of a pressurizer level going high and
6 pressure in the primary system going low, which probably
7 would have borne on the TMI-II situation.

8 Your testimony is to the effect that for
9 those more technical matters you would defer to the
10 judgement of NRR?

11 If you felt there was some general problem
12 with the judgement of the NRR you would go to the
13 ACRS?

14 A Yes, I think so.

15 Q Is there anyplace else you would go?

16 A Depending on the subject. There are
17 possibly other resources within the staff, the research
18 staff, depending on the matter. It could well be
19 there is a body of expertise in ^{N/MS}~~MS~~ I might go to, or
20 ^{OFFICE OF STANDARDS DEVELOPMENT}
in our ~~standard office~~ where there is certain expertise.
21 (Whereupon, at 5:05 p.m., there was a brief recess.)

22 MR. KANE: Back on the record.

23 BY MR. KANE:

24 Q Mr. Gossick, are you familiar with the work
25 of the International Programs Office?

1 A Yes.

2 Q As I understand it--we have taken the
3 deposition of Mr. LeFleur from the International Programs
4 office and he has confirmed that the international
5 programs office issued export licenses. Are you aware
6 of that?

7 A Yes.

8 Q He also confirmed to us that there is no
9 requirement that a foreign recipient of a nuclear
10 reactor, that country, as a condition of an export
11 license being issued to a vendor that is to supply
12 that reactor, that as a condition, the foreign country
13 agrees to provide information concerning that facil-
14 ity as to its operational experience history. Are
15 you aware that there is no such requirement?

16 A Q Yes, I am.

17 Q Do you feel there should be such a requirement?

18 A As a matter of fact, he probably also
19 discussed with you the bilateral agreements that we
20 have with sixteen, eighteen countries, that we
21 have this agreement for exchanging operation^{al} information.

22 Q It was my understanding from Mr. LeFleur
23 that this is a voluntary situation and that a country
24 may or may not choose to enter into that.

25 A It has been considered that that might be

1 advisable rather than to impose a requirement that a
2 country agree to such a bilateral agreement. I am
3 not aware that such a situation has arisen. The only
4 reactors that have been the subject of an export
5 license in recent years, I believe, ^{have been to} ~~are all the~~ countries
6 with which we do have the agreement.

7 Q Are you aware of any instances in which any
8 of these countries have failed to report significant
9 transients and NRC has only found out about them after
10 the fact?

11 A There have been instances where yes, after
12 the fact, we have learned they have had some sort of
13 an event. Generally, however, under the agreement
14 that I have just spoken of, the notification has, to
15 the best of our knowledge, has been reasonably prompt.
16 If they have ~~not~~ had something happen and not report
17 it to us, then obviously--

18 Q I was wondering as to a situation to a
19 transient occurred and it was not reported to NRC and
20 NRC found out about it several months or years there-
21 after.

22 A To my knowledge there is one such case. It
23 even, I believe, occurred prior to the time we had
24 this agreement in effect, and I don't think the
25 agreement dealt with ^{a requirement that they} ~~we have the agreement you must~~

1 report to us all past events of such a nature. But
2 here again, Dr. LeFleur may have told you the difficul-
3 ties we have had under those agreements in dealing
4 with some countries who treat this information as
5 proprietary or as classified information. They will
6 give it to us only if we agree to protect it from
7 public distribution until they ^{decide on} ~~initiate~~ such a time
8 to disclose such a fact.

9 Q My conversation with Mr. LeFleur has concerned
10 me. There are difficult and sensitive situations
11 with some countries that regard this as classified.

12 A They don't have the Sunshine Act.

13 Q What about the vendors that are involved?
14 Can't the NRC require, for example, that Westinghouse
15 sell a plant to a foreign purchaser. Can't the NRC
16 require Westinghouse to report the transients that
17 occur at that plant overseas?

18 A That is a different problem. You are no
19 longer dealing with a foreign government. If it
20 deals with a safety issue, I believe Part 21 would
21 still cover it, wouldn't it? (Indicating to Mr.
22 Trubatch). Part 21 of the Energy Reorganization Act
23 which requires any vendor or licensee to report any
24 safety matter to NRC. I guess it is a legal question.
25 I can't address whether or not there is any problem

1 with, say, Westinghouse reporting to us their knowledge
2 of it. I know they have done it in the past in some
3 circumstances. There was a matter in Japan, a channel
4 box ^{VIBRATION} situation. We learned of it through Westinghouse.

5 Q Rather than the foreign government.

6 A Yes, the Japanese government later told us
7 about it but they wanted to tell us after they had
8 fixed the problem. We want to get the information so
9 our licensing staff can deal with it and if the only way
10 we can get it is by promising protection of that
11 information under certain reasonable grounds, we will
12 do so.

13 Q This one situation that you mentioned of
14 a transient which was not reported until many years
15 thereafter. Why wasn't that reported by the vendor
16 that was involved?

17 A I don't know. I can't tell you why.

18 Q Is any investigation being done in that
19 regard?

20 A There is an effort currently, as I understand
21 it, looking into that but I don't know exactly where.

22 Q Who in the NRC would be handling that effort.

23 A Well, at last count as I understand it,
24 our technical staff is still reviewing what we have
25 gotten in the way of information about the transient

1 itself and I think, depending on the conclusions they
2 come to as to the nature of the transient, possible
3 implications and the matter of why the vendor didn't
4 report it to us is something we may wish to address.
5 I don't think we have addressed that yet.

6 Q That is not being investigated at this time?

7 A I don't think so.

8 Q Has any determination been made as to where
9 the vendor learned of that?

10 A Not to my knowledge.

11 Q Has any determination been made as to
12 what degree the vendor was involved in the ongoing
13 operation of that nuclear facility?

14 A I am not aware that has been done. It may
15 have been.

16 Q Customarily, when a vendor sells a nuclear
17 reactor system to a foreign customer, is the vendor
18 called upon to involve himself in the same kind of
19 cooperative efforts as they do in the United States?

20 A ^{Providing}
~~Set up~~ operational testing personnel to
21 achieve commercial operations--all of these things the
22 vendor would have some involvement in. After the
23 commercial operations, they still keep some degree of
24 involvement in it. If there was a major transient
25 at the time at the plant, it would be unlikely that

1 the vendor would not know about it.

2 Q Are you aware of any transient that has
3 occurred at any foreign location that involved a PORV
4 sticking open?

5 A Not specifically. I don't recall the case we
6 were just speaking of--if it had that characteristic
7 or not.

8 Q Do you recall if that case involved the
9 situation of the pressurizer level going high?

10 A The only thing I can tell you, my understanding
11 is that it had some of the same characteristics as
12 the Three Mile Island incident; something approximating
13 that. But, as I understand, it was not the same vendor
14 involved so it is a little different.

15 Q Is that because that is all you know?

16 A Really. Really.

17 Q You haven't been informed of what aspects of
18 TMI-II were in common with this transient?

19 A I don't have a detailed report on that.

20 Q Were you informed this event involved a
21 facility that had coincident logic ECCS actuation?

22 A No, I do not know that.

23 Q What is the reason for coincident logic
24 ECCS actuation?

25 A In my own understanding it is a design

1 feature which would require ^{the sensing of} ~~certain things to~~ certain
 2 different events or measurements or activations ~~to~~ THAT
 3 occur that are common to an event or transient, ~~or some~~
 4 ~~sort of accounting, so that you aren't~~ ^{THE PURPOSE IS TO AVOID} constantly
 5 having a shutdown on a single item which in ^{ITSELF} ~~particular~~
 6 could be of no consequence, ^{BUT RATHER TO REQUIRE} ~~but~~ a combination of things
 7 that ~~occur. Yes, it says there enough signs or~~ ^{THAT PROVIDE POSITIVE INDICATION THAT THINGS ARE}
 8 ~~enough investigations, if you will, of things being~~
 9 out of their normal condition ^{and} that ~~the following~~ ^{CERTAIN}
 10 safety functions should happen.

11 Q I take it the reason for that is to minimize
 12 the number of ECCS actuations you have, in a term,
 13 to insure you do activate it or automatically it is,
 14 in fact, needed.

15 A Yes. Some of the factors may not happen
 16 together and yet ECCS may be needed. Theoretically,
 17 I guess--again, I believe that has to be addressed
 18 in the degree of sophistication in the design of the
 19 coincident logic actuation. I remember Dr. Hanauer
 20 explaining to me a problem he was pursuing where
 21 literally, the logic could be defied because of the way
 22 the system was being proposed. It is a very complicated
 23 design process and I am not going to try to tell you
 24 I understand fully what is involved, but I think,
 25 on the other hand there is a danger or undesirability

1 to have unnecessary actuations that are based on things
2 that can, in fact, not indicate surely that things
3 are requiring an ECCS actuation. In other words, having
4 it happen more often when not needed is certainly not
5 a desirable event.

6 Q Is that because it puts a strain on the
7 system?

8 A Well, possibly. I think that you just don't
9 want it to operate when it is not necessary in that
10 it may possibly introduce other problems that may
11 in themselves be undesirable.

12 Q In other words, ^{IF} it the choice is between
13 that and not having the ECCS actuate readily, not in
14 order, you would obviously opt for the accident?

15 A ~~I believe that is probably right.~~
I WOULD NOT OPT FOR AN ACCIDENT.

16 Q When you want the ECCS, you want it. There
17 are no other considerations are there?

18 A No.

19 Q Let me give you a more concrete example
20 because it is the reason for my question. It is my
21 understanding that until March 23, 1979 there were
22 possibly 23 Westinghouse units which had coincident
23 logic tied to both pressurizer levels and pressure in
24 the primary system. In other words, unless both
25 levels and pressures fell to a requisite point, the

1 ECCS would not automatically operate. Under the
2 circumstances, the TMI--that is an undesirable situation
3 because as indicated, you can have pressurizer levels
4 stay high and pressure drop at the point you would want
5 high pressure ^{INJECTION} ~~engines~~ and ECCS. However, given the
6 coincident logic ^{ACTUATION} ~~actually~~, that would not automatically
7 come on. It is my impression that has been changed.
8 Doesn't that situation then suggest that it might not
9 be possible to accurately predict the consequences of
10 coincident logic ECCS actuation into a given design
11 since, I take it, this design was approved again and
12 again prior to March 28, 1979?

13 A I think that requires some new information
14 based on experience which requires going back and
15 making a judgement, in effect, on a prior decision.

16 Q I would be prepared to accept that answer
17 if we were talking about anything in the nuclear power
18 system except ECCS. As I understand it, ECCS is the
19 basic safety system. There is no system that is more
20 geared to safety of a nuclear power plant than ECCS, is
21 there?

22 A Yes it is certainly very important, and
23 to have ECCS that would work.

24 Q And to have it work, to make a choice, you
25 would want it to fall on the side of more reliable

1 than less?

2 A Yes.

3 Q Have you ever heard of the Michaelson report?

4 A Yes.

5 Q When did you first hear of the Michaelson
6 report?

7 A Again, very shortly after the Three Mile
8 Island accident; early April.

9 Q To your knowledge, did the Michaelson report
10 in any form, find its way within the NRC at any point
11 prior to March 28, 1979?

12 A It is my understanding that there was a
13 handwritten document that at least, contained the
14 thrust of Michaelson's concerns or analysis of the
15 B&W problem that we have been addressing. It was
16 given to one of the staff members in NRR by ^{some}one, I
17 believe an ACRS member, Mr. Ebersole.

18 Q Have you seen that handwritten report?

19 A I have seen it. I have only scanned it. I
20 have not studied it in detail.

21 Q Have you read any portion of the handwritten
22 portion of it?

23 A The handwritten--no, I have not.

24 Q There were two handwritten versions and one
25 typed version, to my knowledge. Are you aware that

1 that is the case?

2 A I am aware there are these reports. As I
3 say, I have not read through them or spent any time
4 studying them but I know there has been this question
5 of how it was handled within the staff, how far did
6 it get up within the NRR staff, how was it treated
7 as far as other licensing activities and so forth.

8 Q Are you aware there were two handwritten
9 versions?

10 A I am trying to recall. ~~I recall,~~ As I
11 recall the first handwritten one was handed to, I
12 believe Mr. Israel and I don't recall the facts of a
13 second handwritten report. There was a question about
14 whether or not he returned this report to Mr. Ebersole
15 or not. There was a later written report as I seem
16 to remember, but I don't remember the chronology of
17 this.

18 Q There was also a third version of it which
19 was typed. Have you ever seen a typed version of the
20 Michaelson report?

21 A I don't have it on my desk. I haven't read
22 it in detail. I think I may have seen it but I
23 have not studied it.

24 Q Why is there such a stir within the NRC
25 about who saw that report and where it went?

1 A I think, very properly, a matter of concern
2 was; was there something more? A couple of things
3 like the Davis Besse transient. Was there something
4 more that should have given us an insight to the problem
5 with the B&W design that we didn't pick up on properly?

6 Q Was there?

7 A I think, in all candor, that there was. I
8 think there was something ~~here~~ in it. It is easy to
9 make this judgement in retrospect. It is harder to
10 say, had you been there as a qualified nuclear
11 engineer , would you have reacted in the same way our
12 man did or not? In hindsight, it is a combination of
13 the Davis Besse transient and Michaelson's concerns
14 which very closely parallel^{led} the set of circumstances
15 that were involved in the Three Mile Island incident.
16 As I understand it, it is something that would have
17 been far better if we had recognized and done something
18 about it sooner rather than later.

19 Q Do you know Mr. Sandy Israel?

20 A I know he is in Mr. Novack's branch, NRR.
21 I don't know the man personally.

22 Q Do you know what his background it generally?

23 A Nuclear engineer. I don't know precisely
24 his degree or background or experience.

25 Q Do you know what he does in Mr. Novack's
branch?

1 A He is one of the reviewers, as I recall.

2 Q Are you aware that he "specializes", has
3 a strong background in ECCS analysis?

4 A I think I have been made aware of that.

5 Q Do you think he would have been an appropriate
6 person to evaluate the Michaelson report and what it
7 addressed?

8 A I would think so.

9 Q Are you aware of the document called; "The
10 Novack Memorandum"?

11 A Yes.

12 Q Are you aware that was prepared by Sandy
13 Israel in approximately January, 1978?

14 A I don't think so.

15 Q It is my understanding it was issued over
16 the signature of Novack and circulated to all the
17 branches. It did not go beyond the reactor systems
18 branch. Do you know any different?

19 A I have only been made to understand that a
20 copy was provided to Mr. Denny Ross.

21 Q Right.

22 Q Denny Ross is not in the reactor systems
23 branch?

24 A He is above. He was an assistant Director.

25 Q It is my understanding that in each case

1 individual who received it read it, reviewed it,
2 scanned it and placed it in their files and it didn't
3 go any further. Should it have gone any further?

4 A In retrospect I believe we can conclude it
5 should have. I don't know on what basis without the
6 benefit of hindsight.

7 Q Is it your understanding that the Michaelson
8 report addressed the prospect of operator-based on
9 pressurizer level.

10 A It is my understanding that there is the
11 possibility of ^{MISLEADING} ~~mis~~information, ~~as you would~~, for the
12 operator based on pressurizer level--I believe that
13 is a matter that he did recognize---

14 Q Have you questioned any of the recipients
15 of the Novack or Mr. Israel, the recipient of the
16 Michaelson report, whether or not they recognized that
17 that was what was being addressed in those documents?

18 A I have not. There has been an investigation
19 undertaken by I&E, a request of I&E on the handling
20 of the Michaelson report. I have not seen the report
21 as yet but I have not questioned these people.

22 Q You have not seen the Michaelson report
23 on the routing?

24 A Yes I have, ^{THAT IS THE OIA report.} ~~I see it the left crack.~~

25 Q Have you reviewed that report?

1 A I have been through it but not in great
2 detail.

3 Q Is it your impression that the investigation
4 adequately addressed the concerns of what happened to
5 the Michaelson report and why it wasn't appreciated
6 for what it happened to be addressing?

7 A Here again, I think the conclusion ~~that~~
8 ^{WAS THAT}
9 they reached [^] without the benefit of hindsight--it is
10 very difficult to judge whether or not these people
acted improperly or inadequately.

11 Q I didn't mean to focus on that. What I
12 meant was have you made any determination as to
13 whether or not the ~~I&E~~ ^{OIA} investigation properly addressed
14 the subject of why some action was not taken, and the
15 action that was taken, was that reasonable or not
16 reasonable?

17 A No, I have not reached any such conclusion.

18 Q Do you feel the answer to that question
19 relates at least potentially to the adequacy of the
20 performance of the reactor systems branch in this
21 regard?

22 A I suppose it does.

23 Q Do you feel to that extent then, that it
24 falls within the scope and authority and responsibility
25 of your office?

1 A Well, the investigation report I have not
2 yet had the opportunity to get comments on the report
3 by Mr. Denton and other people that were involved in
4 the inquiry, but that is something that should be
5 addressed, ~~I agree~~, and will be by NRC's special Inquiry
6 ~~of TMI~~, of THE TMI accident.

7 Q I am looking at Page 13 of that report,
8 that which is dated July 30, 1979. It is in the form
9 of a memorandum from Mr. Cummings, the Director of the
10 Office of Inspector and Auditor. The subject being
11 the Michaelson report Event and Level of Review. On
12 page 13, the investigation report--to summarize:
13 An interview with Roger Matson concerning the attitude
14 toward the Michaelson Report. The following statement,
15 Mr. Matson said that it was his firm belief that normal
16 evaluations of the Michaelson report would not have
17 prevented TMI. Do you agree with that statement?

18 A I guess I would have to know the basis for
19 his statement. I don't know that I can disagree with
20 it or necessarily agree with it.

21 Q Let me ask you this. Do you think if the
22 Michaelson report had come to your attention in the
23 beginning of 1978 that prior to March 28, 1979 it
24 would have been officially realized within the NRC
25 that certain considerations of the situation could
occur where pressurizer level would go high, pressure

1 would go low and the operator would be deceived as
2 to the state of inventory in the core?

3 A I would not claim that. If I did become
4 aware of the report my first action would be to get it
5 into the hands of our NRR staff and very likely, with
6 ~~the~~ results that perhaps, ~~are~~ no different than what
7 happened in this case.

8 Q Let me read you some language from one of
9 the handwritten versions. It is the handwritten
10 version dated in September of 1977. It is the version,
11 as I said, that was transmitted to Sandy Israel.

12 On Page 9, Mr. Michaelson suggests one of the
13 modes of operation that he speaks about in his
14 report and he states; "Operations in mode four appears
15 reasonable to achieve although the reactor operator
16 will be unaware of what is happening to the reactor
17 vessel level. Note, the presence of pressurizer level
18 is not an indication that adequate core coverage is
19 being achieved."

20 If you had read that language in January of
21 1978, would you have understood that Mr. Michaelson
22 was addressing the problem of many operators being
23 deceived by the pressurizer level as to the state
24 of inventory in the core?

25 A I think that follows from the words you just

1 quoted, it indicates there is a deception of some
2 kind.

3 Q Page 16. (Reading from document). "Adding
4 to this concern is the uncertainty associated with
5 unknown vessel level, adequacy of emergency operations,
6 instruction and operator training for this event and
7 the consequence of the unstable sludge flow conditions
8 which are predicted to develop in the piping and safety
9 valve as it concerns operation situation."

10 If you read that do you think you would have
11 understood Mr. Michaelson was addressing the problem
12 of possibly inadequate emergency operation instructions
13 and possibly inadequate operator training to deal with
14 these kinds of sections?

15 A It is hard to say what I would have read into
16 that without the benefit of Three Mile Island
17 behind us and all the attention to this particular
18 problem, but certainly it would appear it was a concern
19 that ought to be thoroughly looked at. As I say, I
20 have no way of knowing the same kind of review might ~~have~~
21 have ended up with the same conclusion.

22 Q I am asking, would reading that language
23 in the Michaelson report have caused you to inquire as
24 to what the operating procedures were and what the
25 training was for operators under those kinds of sections?

1 A I don't know if it would have made me do
 2 specifically those things, but had someone on the
 3 street handed me this report and if it was something NOT
 4 known to the rest of NRC ^{OR} ~~and~~ anybody in NRC, as I
 5 said, having read it, I believe the two items would
 6 have caused me to say I think this is something that
 7 the experts in NRR should carefully look at and consider
 8 whether or not this is a real problem or not.

9 Q Would you have asked NRR for an answer on
 10 that basis?

11 A Yes, I would have.

12 Q If you sent it over to NRR and didn't get
 13 any response, would you have followed up to say, "where
 14 is my response"?

15 A That is normal practice.

16 Q Would you have done the same if the Davis
 17 Besse transient had come to your attention?

18 A Yes, I think we would have ^{PUT} ~~tucked~~ it in
 19 our system for action items. We have literally
 20 thousands of action items and these two were not of
 21 such a nature that got into our system. Even if they
 22 had been in the system I am not guaranteeing we
 23 would have--

24 Q All I am asking is given the information
 25 relating to the Davis Besse transient, you would have

1 referred it to the technical people you felt were
2 capable to evaluate and follow up to be sure you got
3 an adequate response?

4 A Right.

5 Q I would like to get some information on
6 your role in TMI itself. On March 28, 1979, when were
7 you informed there was a problem?

8 A A few minutes after eight o'clock in the
9 morning. I was here in the morning. I was here in
10 the office. I was in a meeting. Anyway, a conver-
11 sation with Mr. Davis who was then the Acting Director, D
12 resulted in my immediately going over to the Emergency
13 Response Center. It was, I guess, about eight forty--
14 I don't know the exact time--I arrived over there
15 with Mr. Case, ^{DEPUTY DIRECTOR OF} ~~at~~ ^{NRR.}

16 Q Were you designated to become part of the
17 Emergency Management team?

18 A The procedure is that under those circum-
19 stances the Director of I&E or whoever becomes aware
20 of any kind of emergency notifies other office
21 Directors who are involved. We convene over there,
22 ~~physically, a complexion~~ ^{in a physical COMPRESSION} of the staff so that we
23 can be together, ~~and~~ ^{My} role was the Director of the
24 Executive Management team as we call it, which is
25 spelled out in the ^{MANUAL} chapter you have been provided.

1 Q What were your responsibilities as Director
2 of the EMT?

3 A This is something that is completely and
4 imperfectly laid out in our incident response chapter
5 and something we are in the process of retooling in
6 the light of actual experience.

7 Generally, my role is to go and see that the
8 appropriate people are on ~~site~~ ^{hand, and that}. Proper notification
9 to people who should be informed is made, ^{and} that the
10 procedures that have been laid out beforehand on
11 notification of other agencies, ^{IN} ~~of~~ establishing contact
12 with the regions, with the licensee itself--that
13 those things are happening.

14 The role of the EMT at large, the entire
15 headquarters function in the past has been one,
16 literally, of following an event and seeing whether
17 or not the actions taken by the licensee conform
18 to the requirements of his emergency action plan. Is
19 he doing what he has committed to do ^{under his license?} ~~in the past?~~

20 ~~This~~ ^{TMI} was certainly a departure from any prior kind of
21 event which necessitated the evacuation of the ~~ABEM~~ ^{EMT}.

22 Q Did you feel it was incumbent upon yourself
23 to keep yourself as timely informed as possible of the
24 conditions of the plant?

25 A Yes.

1 Q At the time you first became involved at
2 the Incident Response Center dealing with this situ-
3 ation, what was your understanding of the plant
4 condition?

5 A The understanding that I had was based on
6 the interpretation given me by the other members of
7 the team and that was that there had been some sort
8 of a transient or some sort of event that ~~really still~~
9 had ^{EXISTED} for a considerable period of time, ^{There were} ~~the~~ questions
10 about why were the plant parameters, ~~why were they~~
11 behaving the way they were--hot leg, cold leg--

12 Q That was very desperate?

13 A Right, right.

14 Q So, were you informed as to what that meant ?

15 A It meant it was an undesirable situation
16 and we weren't on natural recirculation cooling which
17 was a mode they had hoped to get to. The first couple
18 of days was involved primarily in planning for contin-
19 gency ^{ies} or ^{seeing} ~~saying~~ contingencies were being taken into
20 account, making sure the aerial measurement systems,
21 ~~aerial radiation radial system was that~~ ^{and resources of} the other
22 ~~resources of the~~ agencies such as D OE were being
23 brought to bear.

24 Q Were you involved in determining the state
25 of the core when you arrived on Wednesday?

1 A No, I don't think so. I don't think we had
2 any information as to the state of the core early on.

3 Q Did you have any information from Mr. ^{STELLO} ~~Selle~~
4 about the presence of super heated steam in the
5 core?

6 A I don't recall exactly the time which this
7 supposition or thought surfaced.

8 Q I have some notes here from an interview
9 that we had with you, Mr. Gossick, prior to your
10 deposition today and there are some notes to the effect
11 you had a discussion on Thursday morning, March 29
12 on the way to a session with the Udall Committee
13 relating to core damage. What was this discussion?

14 A There was a discussion during that briefing
15 as it was called, to the Udall Committee and other
16 members of Congress about the extent of core damage.
17 I believe we had some discussion on the way down or
18 somewhere in the course of the day leading up to that.
19 And there were varying views. I think, as I recall--
20 and I don't recall exactly the details now, but Mr.
21 ^{STELLO} ~~Selle~~ wasn't even in the car with us. He wasn't at
22 that briefing. It was Mr. Eisenhut and ^{ED} ~~John~~ Jordan
23 from I&E who accompanied us to the meeting downtown
24 ^{WITH} ~~and~~ the Commission and later with the ^{UDALL} ~~A~~ Committee.

25 The reference to the discussion was with

1 Mr. Stello according to your notes?

2 Q My notes don't indicate with whom the
3 discussion was.

4 A I misunderstood you.

5 Q Mr. Stello has told us that on Wednesday,
6 March 28 he had realized there was some ~~permeated~~^{SUPERHEATED} steam
7 in the core and that to him meant there was core damage
8 and I believe he has also testified he spoke to Mr.
9 Eisenhut about that.

10 A I see.

11 Q What were the views of Mr. Jordan and Mr.
12 Eisenhut on that Thursday, March 29 as you were driving
13 downtown?

14 A The impression that I had is, as nearly
15 as I can recall, it was based more on a conversation
16 with Mr. Case, I guess, Wednesday night on the subject
17 of core damage. I believe this was in keeping with the
18 discussion I had as best I can recall with Mr.
19 Eisenhut or Jordan, I don't really recall the extent
20 this was discussed. But Mr. Case's feeling was that
21 the core probably had been uncovered for some period
22 of time. We didn't know how long or how much, ~~that~~
23 ~~there was possibly~~ Because of the radioactivity
24 measured in the coolant water ^{it was concluded} that there had been some
25 leakage from the fuel. We didn't know whether it was

1 split fuel rods or more severe damage.

2 I recall during the briefing at eleven
3 o'clock that morning with Mr. Udall and the Congressmen
4 ~~that Chairman HENDRIE~~ ^{HENDRIE} ~~the Chairman~~ was asked specifically by Mr. Weaver;
5 "Do you think there is any fuel that has been melted",
6 and then more precisely, "What extent or what per-
7 centage of the core do you think is damaged"? As I
8 remember, ^{he answered} ~~again, it was largely~~ that we don't know
9 ~~but~~ ^{but} and didn't think there was any fuel ~~that was~~ melted
10 as such, but the extent of the core damage was just
11 unknown. I believe there were numbers like maybe,
12 ten percent--fifteen--I would have to ^{CHECK THE TRANSCRIPT.} ~~look.~~

13 Q It was felt that then there had been some
14 core uncovering?

15 A I believe that is correct.

16 Q And there had been some core damage but it
17 was unknown how much?

18 A Right, it was unknown and I think by that
19 time we didn't anticipate. ^{THE} ~~There was~~ a degree of damage
20 that we later on Friday concluded ~~it~~ was more likely ~~to be~~
21 the case.

22 Q Had you been called on at that point prior
23 to that briefing with the Udall Committee to brief
24 the Commissioners as to the status of the plant?

25 A The way we handled this was in a conference

1 call that I had arranged with the Commission at their
2 location downtown and they would gather around a speaker
3 phone and I would give whatever general and more or
4 less non-technical information that was pertinent and
5 then asked Mr. Case to relate to the Commissioners
6 the technical aspect of the ^{reactor} ~~reactivator~~ itself.

7 Q Did you do that on Thursday morning, March
8 29 before you went downtown?

9 A I don't think so because on March 29 we
10 went down at the beginning of the day and met with
11 the Commissioner and briefed them there.

12 Q Directly?

13 A Right.

14 Q And at that time did Mr. Case---

15 A Mr. Case was not there. He stayed at the
16 center. We were trying to keep the center manned as
17 best we could and we decided we shouldn't take all
18 the senior people out of the center. There was a very
19 minimum number who went down to the briefing.

20 Q That was--

21 A Jordan, Eisenhut and myself. At the meeting
22 with the Committee, Mr. Denton joined us. He had
23 been at the center the night before, Wednesday night.
24 He came over late Wednesday afternoon as I recall.

25 Q Mr. Jordan, Eisenhutt and yourself went

1 downtown to brief the Commission before the Udall
2 hearing?

3 A That's correct.

4 Q At that time you discussed the whole plant
5 situation and the state of the core.

6 A And there wasn't much we knew about the state
7 of the core, but the state of the reactor, the prior
8 day's history of finally getting the ^{recirculation} ~~research~~ pump
9 going.

10 Q In terms of damage to the core, you knew
11 there had been some core uncovering and some damage.

12 A We concluded there must have been some core
13 uncovering. We weren't sure it was just a little or
14 more. We were confident, however, that there had been
15 some fuel damage by the increased level of radioactivity
16 being seen.

17 Q You briefed the Commission on that?

18 A Mr. Eisenhut did, and Mr. Jordan.

19 Q We are running short on time. I would like
20 to get some feel as to the problem you perceived in
21 terms of the operation of the incident response center
22 and/or all the NRC responses to the incident.

23 A Well, I think clearly, our number one
24 problem starting with the fact that at the licensee
25 level himself in the plant, there was lack of

1 understanding as to what the situation ^{WAS} or what the
 2 problem was with that situation. Even with our own
 3 inspectors arriving on the scene up there around
 4 ten o'clock, ten-o-five as I recall, it was not
 5 possible for them to immediately step in and say
 6 look, we perceived the problem. It was not possible
 7 under the circumstances.

8 The first day or two, literally, we suffered
 9 from a lack of information upon which to either give
 10 advice or take further action. ~~On Thursday,~~ On
 11 Wednesday we decided we would send, in addition to the
 12 inspector force from Region II ~~and elsewhere where it~~
 13 ~~was convenient on the scene up there,~~ we would send
 14 a group from NRR to go up and assist. I believe as
 15 of Wednesday night, and perhaps even Thursday morning
 16 there was a general feeling that we didn't completely
 17 understand anything. We had a stable situation which
 18 was under control and which you know, didn't ^{SEEM TO} pose any
 19 particular threat. So, I think it was primarily an
 20 information problem and wasn't just a matter of
 21 communication\$. We had communication problems too. I
 22 am not ^{JUST} talking about hard lines or ^{availability of} ~~physical~~ telephones.

23 I think that the other problem that we were
 24 dealing with was one that ~~clearly~~ ^{THIS} was ~~a~~ ^{clearly the} first major
 25 event of its kind that had occurred. The planning that

1 we had done, I think was useful and ~~I don't think that~~
2 while it perhaps was not complete enough, it worked
3 reasonably well. But the fundamental question of
4 what the NRC's role was immediately came up and
5 Congressional sources were asking why don't you go
6 ~~ever~~ and take over that plant, operate it, do whatever
7 you have to. The role of the staff, until it was ^{WAS NOT CLEAR} ~~clear~~ ^{decided}
8 that we had to have a senior man on the site which
9 ended up being Mr. Denton, ^{after} ~~in~~ which ~~case~~ then the
10 staff ~~became~~ ~~the~~ role became more of a support function
11 to Mr. Denton ^{and} ~~than~~ the people we had up there.

12 I think once we got into that mode, things
13 worked reasonably well, but one can certainly
14 say why didn't we send Mr. Denton there in the first
15 hour? The problem is it really wasn't apparent that
16 we had any ^{ways} near the severe problem that we later
17 realized we had.

18 Q During the first day of the accident do
19 you feel there was a lack of needed information at
20 the incident response center concerning the status of
21 the plant?

22 A Well, I think, certainly, if we had had some
23 of the information that later developed to have been
24 available we may well have reached a conclusion that
25 could have influenced the licensee's activities. I

1 think, in my own judgement, that it still probably
2 would have been too late to have really prevented the
3 core damage that happened. I think ~~those things~~
4 ~~were~~--there was probably some damage already done
5 by the time we first heard about the accident and it
6 was probably aggravated in the early hours of Wed-
7 nesday. I doubt very much more information available
8 quickly to us could have helped that very much.

9 Q As a matter of fact, from what you said by
10 the end of Wednesday, I guess it was pretty evident
11 to you and others that there had been some core
12 uncovering.

13 A Yes.

14 Q Do you recall the effect that this had hours
15 into the event--there was a decision by the licensee
16 to attempt to rapidly depreseurize the primary coolant
17 system?

18 A I don't recall the exact details. I have been
19 through the phone transcripts and everything else.

20 Q That decision has been brought to your
21 attention?

22 A Right.

23 Q Based on 20/20 hindsight was that an approp-
24 riate thing at that time for the licensee to attempt
25 to do?

1 A With the benefit of 20/20 hindsight, I don't
2 know ^{but what} ~~whether~~ we might have resulted in more problems
3 than we already had.

4 Q Given the temperatures which we now know
5 today, that were at that time existing in the core,
6 isn't it true that depressurization was a very bad
7 thing to do?

8 A It seems to me you would have been in a super
9 heat ^{mode above} ~~role past~~ saturization temperature. Yes, very
10 high temperatures that persisted even through Thursday
11 and Friday, so depressurization would have been a
12 bad thing. It would have been a bad thing.

13 Q As I said, and correct me if I am wrong,
14 the reason that was not determined by the NRC and
15 licensee is because you didn't have accurate information
16 at that time concerning temperature in the core?

17 A That's correct.

18 Q The reason you didn't have that information
19 was because at that time the computer programming
20 that was set up for readout of thermocouples
21 in the core were only set to read as high as 700
22 degrees and from that time on all you got were
23 question marks out of the computer?

24 A That's correct but I think even if we had
25 known they were all question marks and thereby

1 presumably all above 700 degrees it still would have
2 led us to some ~~incident~~ ^{insight} because we didn't have any CORE
3 temperature ~~inclusion~~ ^{information}.

4 Q You weren't even aware the computer was
5 printing out question marks?

6 A ~~At the briefing and Mr. Weaver's inquiry,~~

7 Apparently in the first four hours or so there had
8 been some temperature^s taken that went around
9 the question mark and got some numbers ranging all
10 the way from 2,000 down to 200 and they didn't really
11 believe them. Had we known those we might not have
12 believed them either. One can argue had we known
13 anything about the core temperature it certainly would
14 have led us to, I think, different conclusions at an
15 earlier point in time.

16 Q Do you have any idea what the ultimate
17 result would have been if the licensee had insisted
18 upon depressurizing the primary coolant system on
19 Wednesday, March 28, 1979?

20 A Do you know to any particular pressure or
21 just depressurized completely?

22 Q Depressurized completely.

23 A Well, other than the fact that we would
24 probably have created an awful lot more boiling
25 and if there was water around to boil, I think we could

1 have been far worse off because in the depressurizing.
2 ~~system then, we keep it depressurized.~~ I ^{CAN'T} ~~don't want~~
3 ~~to~~ lay out the scenario of what ^{WOULD HAVE} happened. My
4 general understanding is given those temperatures,
5 it would not have ^{cooled} ~~gone~~ down and you probably would have
6 been in a far worse situation, a degree I wouldn't
7 speculate. I don't think I would have liked it,
8 however.

9 Q Are you familiar with the fact that a team
10 of persons or group of persons under the direction
11 of Roger Matson during the incident were called upon
12 to make some calculations concerning a hydrogen
13 bubble in the core.

14 A Yes, I was aware of that.

15 Q In the course of this investigation it has
16 come to our attention that those high calculations
17 were in error even if he admitted that on the grounds
18 that information was available. Were you made aware
19 at the time these were being made that Dr. Matson
20 was recommending an evacuation based on these calcu-
21 lations?

22 A I was aware that the hydrogen calculation and
23 concern over the amount of hydrogen was a very hot
24 issue, at least at the start-- I am trying to remember
25 now the exact ^{TIME.} ~~night,~~ ^{at} ~~most~~ vividly

1 ~~however, on~~ ^{By} Saturday afternoon, ^{OR} ^A sometime Saturday
2 during the day, I don't recall, this subject became
3 more and more of interest and on Sunday morning
4 it sort of started to ~~revolve~~ ^{be resolved} by word that we were
5 getting back from Mr. Denton and Stello who ~~was~~ ^{WERE} then
6 on the scene and who were of a different view, that the
7 hydrogen problem really wasn't as ~~prepared~~ ^{suggested} by those
8 calculations.

9 Q Why weren't hydrogen calculations available
10 from NRC files rather than having to do them on the
11 spot in the middle of an accident?

12 A I can't answer that. ^WWhether one can make a
13 generic hydrogen calculation, whether something like
14 that is available under general conditions; I just
15 don't know.

16 Q Why wouldn't it be possible to have something
17 like hydrogen tables which simply state the amount
18 under a given pressure and temperature condition?

19 A I can't answer your question.

20 Q Has that idea been considered since March
21 28 within NRC to your knowledge?

22 A Not to my knowledge.

23 Q Do you think it would be better to try and
24 pursue that ~~average~~ ^{avenue?} than to have a situation where you
25 have to do it solely on the spot in the middle of

1 an accident?

2 A If it is possible to do so.

3 Q Do you know if that possibility was considered
4 prior to March 28, 1979?

5 A Not that I am aware of.

6 Q Are you aware of any -- calculations
7 that have been done at any time by the NRC?

8 A Not personally, no.

9 Q We mentioned before when we were taking a
10 break, the subject of standarization of nuclear power
11 plants. It is my understanding they are not very much
12 standarized. There are differences in control ^{rooms} ~~roles~~.
13 The balance of plants is particularly varied from plant
14 to plant. Why has the NRC permitted that to occur?

15 A I guess it is primarily a matter of the way
16 this industry has developed. Standardization was just
17 becoming a topic of discussion really, about the
18 time I first joined it, the old AEC and at that time
19 they were trying, if nothing else, to get a standardized
20 upper power limit, ^{which} ~~things~~ had been going ^{steadily & rapidly up.} ~~repeatedly~~.

21 I think that is part of the problem, the fact that
22 they went from very small plants to twice, three or
23 four times the power level. You couldn't have a
24 standardized plant all the way through that.

25 Just the ^{PRESENCE} ~~realization~~ of ^{THIS} ~~the~~ fact, ~~that~~

1 ~~knowledge~~ led to repeatedly changing design situations.
2 Once they fixed the power level to the maximum of ABOUT
3 1300 megawatts, there was some possibility of
4 standardizing design, at least vendor by vendor, and
5 as you probably know, there are now a number of
6 standard preliminary designs that are on the shelf.

7 I guess the question now is whether we will
8 ever use them.

9 Q Does the lack of standardization in nuclear
10 power plants pose problems in NRC?

11 A Yes, I think it does. From an inspection
12 standpoint it poses problems; from the current licensing
13 ^{CASES}
14 ^A still under review being different from one another.

15 Q Does it also restrict the technical capability
16 of the NRC in having to evaluate this different kind,
17 rather than being able to focus on one?

18 A Certainly. It takes additional resources. It
19 is more difficult to deal with changes or amendments
20 that have to be done when you have some problem that
21 has to be taken care of, and there are 70 plants
22 operating and all of them to some degree are different.
23 ~~And, there are 700 different solutions.~~

24 Q Was there an awareness from the time you
25 joined the AEC that there should be a standardization
of plants?

1 A Oh yes, and in fact, two or three years
2 running in our attempt to get licensing legislation
3 passed by Congress, the matter of standardization
4 was a part of that proposal, ~~to try~~ to put additional
5 emphasis on the standardization ^{OF} design.

6 Q Has there been resistance to this standard-
7 ization move?

8 A There has been less than enthusiastic support,
9 not just by the vendors. I must say to a large
10 extent, I think the utilities ^{RESIST IT.} ~~are~~. They want their
11 plant design the way they want it. They are used to a
12 certain kind of control room concept and they insist
13 they are going to have it this way and if the vendor
14 wants to sell them a plant----

15 Q Do you think a National Training Academy
16 for operators would help by uniformizing the way oper-
17 ators are trained?

18 A I think something like that might be very
19 useful. I think it is going to be made more difficult
20 by the fact of a lack of standardization. There are,
21 in fact, many different designs. I think ~~among the~~
22 ~~basic types, BWR and PWR~~ there are probably advantages
23 that would accrue from some sort of a national training
24 institute.

25 Q Has a national training academy been

1 evaluated or is that being considered now?

2 A ~~Obviously,~~ We have not made any intensive
3 study of this. We are, as I understand it, following
4 the activities of the industry who have been suggesting
5 such ^{an approach} ~~a proposal~~ and I don't think that we have
6 ~~enhanced~~ ^{endorsed} any particular proposal or report that they
7 have come up with. But, I know we are aware of what
8 they are doing and are following it.

9 Q You mentioned before the matter of the
10 attempt by AEC to limit the megawattage of these
11 plants as they are growing bigger and bigger. Is it
12 your observation that the utilities were constructing
13 plants too big too fast?

14 A Well ~~I believe that~~ as I recall, the concern
15 was ~~that~~ not ^{JUST WITH} ~~so much~~ the utilities ~~that~~ ^{but WITH} ~~put~~ [^] the people
16 who were designing these plants, ~~were extrapolating~~
17 ^{WAS BEING EXTRAPOLATED} The technology [^] at a rate a little faster than might
18 be desirable and certainly ^{IT} [^] was creating a very diffi-
19 cult problem from a licensing standpoint and raised
20 questions in the minds of the licensing staff that
21 they thought that additional safety considerations
22 were involved and that it would be better to put the
23 lid on it.

24 MR. KANE: Off the record.

25 (Whereupon, there was a five minute recess).

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MR. KANE: Back on the record.

Q Mr. Gossick, we were discussing before, this attempt to limit the megawattage of plants by the AEC. You mentioned the fact there was a movement in that direction. I have spent some time deposing Mr. Robert M. Minogue concerning his position and his thoughts that the system of prototypes of nuclear power plants have grown too big too fast. What are the problems that if you take the technology that relates to -- megawatts of plants, if you multiply it by ten to apply it to--why can't you just extrapolate? Why does that pose problems?

A First of all, Mr. Minogue is in far better shape to answer that question than I am. I can only give you my layman's understanding of this. It is sort of like saying I want a 747 ^{aircraft} and I decided to *get one* by scaling up by a factor of 10 or 15 an old DC-3. ~~multiply an old DC-3, one by 150.~~

Q There are specific factors involved.

A A whole lot of things. The ~~energy~~ ^{power plants} for a 747 won't do if ^{simply} scaled ^{up from} ~~down for~~ a DC-3. The ^{systems considerations} ~~whole systematic action~~ in the design approach for a high power machine ^{are} ~~is~~ quite different than ~~one~~ for a small hundred megawatt plant. I think that Mr. Minogue thought, and we have had some discussions on this, ~~is~~ that we would have been far better off stabilizing

1 it somewhere in between. I don't know what the number
2 is. I don't think Bob nailed it down to a particular
3 number.

4 Q I think he picked 500. You can see there was
5 an arbitrary line you would have to have--

6 A To have matured the technology at that level
7 for some period of time, hopefully, standardization,

8 such as you could around that kind of a power level.

9 ~~The possibility~~ ^{It probably} would have been far less ^{difficult} ~~painful~~ than

10 to have ^{than} gone ^{beyond} ~~from~~ the 500 level with that body of

11 matured technology behind you. I don't know whether

12 we would ~~still not~~ be as far along as we are or

13 whether that is necessarily desirable, but the thought

14 that we ~~would~~ have nothing but a bunch of prototypes

15 is not, in my mind, far from being a fair assessment.

16 They are sufficiently different except for ^{those few} ~~these~~

17 ~~who have been~~ ^{that are} literally, ^{replications of another plant.} ~~more images of one another.~~

18 Q My question in that light is; why wasn't
19 that limit imposed? Why were licensees permitted to
20 build plants bigger than they should have been built?

21 A You have to consider the time and environment
22 in which it was happening. It was during a period

23 of the early seventies, late sixties--in that time

24 period where the nuclear power option was being pushed

25 very strongly by the Atomic Energy Commission. I

1 think I would have to say in a promotional sense,
2 not withstanding its regulatory responsibilities, I
3 think that the Congress in the form of ^{the} a Joint Committee
4 was so inclined. ~~So conveniently~~ ^{Consequently}, any attempt to
5 limit the progress by the regulatory agencies just
6 weren't very practical or possible under those circum-
7 stances.

8 I don't know, personally, what attempts
9 were made to limit it. There were possibly some
10 voices raised but, obviously, they weren't heard.

11 Q You do think the result is that the NRC
12 is now faced with a situation where a good number of
13 plants in excess of whatever megawatts you want to
14 choose at the line are really too big to have a
15 broad base of prior operational experience on which
16 to base regulations, is that right?

17 A Certainly that basis of experience is growing
18 now that we have a number of plants. I think it is
19 fortunate we did put a lid on the power level and it
20 ~~would~~ ^{might} have been better if we had ^{done} it earlier. There
21 certainly was a need for capping the rapid progression
22 ~~inside.~~ ^{IN SIZE.}

23 Q This is a very broad question but it is one
24 that the President's Commission is very interested in
25 evaluating. Should we have the current situation

1 that we do have, that is, a colloquial body of the NRC
 2 Commission. Is that an effective way to manage NRC
 3 or should some changes be made in that regard?

4 A In my own view, and I am talking now about
 5 the policy decision making kind of function of the
 6 Commission with regard to the nuclear power issues ^{and} the
 7 uses of licensed material--I am of the opinion that
 8 in the environment that ^{nuclear energy has} ~~energizers~~ have been brought
 9 along and where it is today, the controversy that
 10 surrounds it, the questions as to how it is to be used
 11 and, indeed, if it is to be used as a continuing part
 12 of our energy picture, it does need to be regulated
 13 by an agency that I think properly ^{has to be} ~~as~~ an independent
 14 regulatory agency free, hopefully, of undue pressures
 15 one way or the other. ~~It is a long term proposition.~~

16 I think that one could not reasonably expect
 17 a single administrator to be able to address the
 18 ^{policy issues} ~~policies~~ that the Commission must face without ~~as much~~
 19 concern on the part of the public, the Congress, and
 20 everyone that ^{THE VIEWS OF A SINGLE INDIVIDUAL} ~~that individual brings to it, his own~~
 21 ~~peculiar or strong held viewpoints and consequently,~~
 22 ^{COULD RESULT IN} ~~depending on who that individual is,~~ decisions ^{THAT MIGHT} ~~may~~
 23 ~~be made that are~~ ^{be} not ^{and} in the best interest of the
 24 country and its economic ~~and~~ energy situation.

25 There are certainly disadvantages to a

1 Commission, a ^{collegial} colloquial approach. There are
 2 inefficiencies. On the other hand, there are at least
 3 opportunities for different viewpoints to be brought
 4 into play, thrashing out of those viewpoints on policy
 5 issues on which the ^{public} ~~country~~ itself is widely ^{diverse} ~~disbursed~~
 6 or spread in their views.

7 So, from the standpoint of the policy kind
 8 of consideration, how are we going to regulate the
 9 waste disposal? What is our role, DOE's part in the
 10 Administration trying to address the waste question?
 11 I think these are probably policy issues that would be
 12 very difficult for a single administrator to deal
 13 with.

14 This is different from the situation of an
 15 operational kind ~~of situation~~ in which we have rarely
 16 found need to get engaged in, specifically, Three
 17 Mile Island. I doubt that anybody who ~~had~~ helped
 18 in writing the Freedom of Information or Sunshine
 19 Act ~~ever~~ envisioned that kind of a situation, where
 20 a ^{collegial} colloquial body of the Commission would try to
 21 deal with ^{such} a situation.

22 I think the Commission has already recognized
 23 that were another Three Mile Island to happen, only
 24 one ^{Commissioner} ~~man~~ would proceed to our operations center and
 25 deal with the situation as promptly as possible

1 and I think that is possibly a realistic way of
 2 handling it. ^{Regarding} ~~the~~ day to day management of the total
 3 Commission, my feeling is that ~~that~~ ^{THE} charter given the
 4 Chairman by ~~its~~ amendments to the Energy Reorganization
 5 Act, gives him the role as Chief Executive Officer
 6 and rather well describing ^{es} certain functions that he is
 7 responsible for ^{and} which the other Commission^{ers} are not.

8 That has not been fully implemented for
 9 a variety of reasons which I am sure you will find
 10 out better in talking with the Commissioners.

11 From the standpoint of the ^{CHAIRMAN'S} Executive role
 12 and the effect ^{ON} of some of our day-to-day routine
 13 activities, certainly I feel it is possible that the
 14 efficiency of ~~the~~ ^{AND THE EFFECTIVENESS WITH} operations, ~~in~~ which certain issues
 15 are addressed could be enhanced by a more complete
 16 carrying out of that role by the Chairman.

17 MR. KANE: I have completed the questions
 18 I have for you.

19 Do you gentlemen have any questions?

20 MR. TRUBATCH: I have no questions.

21 MR. FITZGERALD: I have no questions.

22 MR. KANE: In that case let me just say
 23 this is an ongoing investigation and although I have
 24 completed the questions I have for you today, we may
 25 uncover further facts in the course of the investigation

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which would make it necessary to bring you back for further depositions. We will make every effort to avoid having to do that but if it should develop that it is necessary we will have to bring you back. For that reason, I will recess the deposition rather than terminate it and I will thank you for your time in being here with us today.

(Whereupon, at 6:35 p.m. the deposition was recessed).

I have read the foregoing pages, 1 through 147, inclusive, and, *as corrected,* they are a true and accurate record of my testimony therein recorded.



LEE V. GOSSICK

Subscribed and sworn to before me this _____ day of _____, 1979.

Notary Public

My commission expires: _____

1 which would make it necessary to bring you back for
 2 further depositions. We will make every effort to
 3 avoid having to do that but if it should develop
 4 that it is necessary we will have to bring you back.
 5 For that reason, I will recess the deposition rather
 6 than terminate it and I will thank you for your time
 7 in being here with us today.

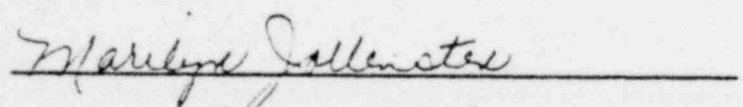
8 (Whereupon, at 6:35 p.m. the deposition was recessed).
 9

10 I have read the foregoing pages,
 11 1 through 147, inclusive, and, ^{as}
 12 *corrected by the attached errata sheets, pages*
 13 *1 thru 24,* they are a true and accurate
 14 record of my testimony therein
 15 recorded.

16 

LEE V. GOSSICK

17 Subscribed and sworn to before
 18 me this 21st day of August,
 19 1979.

20 
 21 Notary Public

22 My commission expires: July 1, 1982
 23
 24
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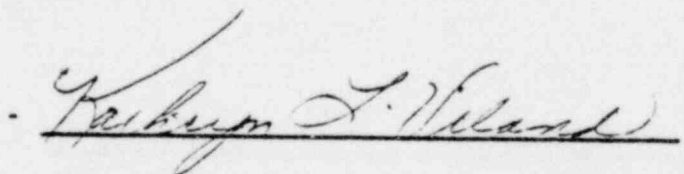
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REPORTER'S CERTIFICATE

DOCKET NUMBER:
CASE TITLE: DEPOSITION OF LEE V. GOSSICK
HEARING DATE: August 9, 1979
LOCATION: Bethesda, Maryland

I hereby certify that the proceedings and evidence herein are contained fully and accurately in the notes taken by me at the hearing in the above case before the PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND and that this is a true and correct transcript of the same.

Date: August 13, 1979


Official Reporter

Acme Reporting Company
1411 K Street, N.W.
Washington, D.C.



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

Exhibit #1
Gossick dep.
3/9/79

LEE VAN GOSSICK

Lee V. Gossick, Executive Director for Operations, United States Nuclear Regulatory Commission, is the coordinating and directive agent for the effective performance of the Commission's day-to-day operational and administrative activities in behalf of the Commission. He is also responsible for coordinating the development of policy options generated by the Directors of the program offices.

Prior to this appointment, which coincided with the NRC's establishment in January 1975, Mr. Gossick had served since February 1973 as Assistant Director of Regulation, U.S. Atomic Energy Commission, assisting in administering the federal regulatory programs under which nuclear power plants, other private nuclear facilities, and the use of radioactive materials were licensed and inspected.

Mr. Gossick retired from the U.S. Air Force in the grade of Major General in 1973. He served as Chief of Staff, Headquarters, Air Force Systems Command (AFSC) at Andrews Air Force Base, Maryland, from 1971 to 1973. Previously, he had been Deputy Chief of Staff/Systems from 1970 to 1971; served as Vice Commander and subsequently, Commander of the Aeronautical Systems Division of the AFSC at Wright-Patterson Air Force Base in Ohio, from 1968 to 1970; F-111 System Program Director, Aeronautical Systems Division, Wright-Patterson AFB, 1967 to 1968; and Commander, Arnold Engineering Development Center from 1964 to 1967. From 1951 to 1964, he served in various Air Force Assignments, predominantly in research and development.

A native of Missouri, Mr. Gossick entered military service in 1941 and was commissioned as an officer in April 1942. During World War II, he was a fighter pilot in the European Theater. He received his Bachelor and Master of Science degrees in aeronautical engineering from Ohio State University. In 1959, he was graduated from the Air War College at Maxwell Air Force Base in Montgomery, Alabama, and in May 1960, he was designated a Distinguished Alumnus by the Ohio State University. Mr. Gossick also attended Harvard University for advanced management studies in 1961.

In April 1967, Mr. Gossick was the recipient of the Arnold Air Society's General Hoyt S. Vandenberg Trophy for "outstanding scientific contributions to aerospace development in the field of science." He was selected a Fellow of the American Institute of Aeronautics and Astronautics in October 1970. He also received the Ohio State University Centennial Achievement Award in December 1970. In December 1974, he was awarded the U.S. Atomic Energy Commission Distinguished Service Award.

Mr. Gossick was born in Meadville, Missouri, on January 23, 1920. He is married to the former Ruth Matter of Mount Clemens, Michigan, and they have two children.

*Exhibit 2
Passive Dep.
5/9/79*

14d

Form NRC-489
(1-75)

U. S. NUCLEAR REGULATORY COMMISSION
NRC MANUAL
TRANSMITTAL NOTICE

CHAPTER NRC-0103 ORGANIZATION AND FUNCTIONS
OFFICE OF THE EXECUTIVE DIRECTOR FOR OPERATIONS

SUPERSEDED:

TRANSMITTED:

Number	Date
Chapter <u>AEC-0115</u>	<u>3/14/74</u>
Page _____	_____
_____	_____
Appendix _____	_____

Number	Date
TN <u>0100-19</u>	_____
Chapter <u>NRC-0103</u>	<u>5/13/77</u>
Page _____	_____
_____	_____
Appendix _____	_____

REMARKS:

This chapter defines the functional assignments and organizational structure of the Office of the Executive Director for Operations.

J.W. MAYNARD
P - 506

H Waters MPA

U. S. NUCLEAR REGULATORY COMMISSION

NRC MANUAL

CHAPTER NRC-0103 ORGANIZATION AND FUNCTIONS
OFFICE OF THE EXECUTIVE DIRECTOR FOR OPERATIONS

Volume: 0000 General Administration
Part: 0100 Organization

NRC-0103
EDO

0103-01 SUPERVISION

The Executive Director for Operations reports to the Commission.

0103-02 FUNCTIONS

The Executive Director for Operations is responsible for supervision and coordination of policy development and operational activities of the following line offices: the Office of Nuclear Reactor Regulation, the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Regulatory Research, the Office of Inspection and Enforcement, the Office of Standards Development, and the following staff offices: the Office of Administration, the Office of International Programs, the Office of State Programs, the Office of the Controller, the Office of the Executive Legal Director, the Office of Planning and Analysis, the Office of Management Information and Program Control, the Office of Equal Employment Opportunity and such other organizational units as shall be assigned by the Commission.

The Executive Director for Operations is also responsible for implementation of the Commission's policy directives pertaining to these offices.

Specifically, the Executive Director for Operations:

021 recommends to the Commission proposed regulations to:

- a. protect public health and safety and the environment from radiological and nonradiological effects associated with the location, design, construction, and operation of nuclear facilities and the possession and use of nuclear materials subject to licensing.

POOR ORIGINAL

Approved: May 13, 1977 / 1

- b. provide for the security of licensed nuclear facilities and safeguarding of licensed radioactive materials.
 - c. assure that activities under facility licenses would not create or maintain a situation inconsistent with the antitrust laws as specified in section 105.a. of the Atomic Energy Act of 1954, as amended.
- 022 coordinates the development of policy options generated by the Directors of program offices and provides the Commission with assistance on policy, management, and operational matters.
- 023 submits to the Commission for approval (except Executive Level Officers who are appointed by the Commission pursuant to sections 203(a), 204(a), 205(a) and 209(c) of the Energy Reorganization Act of 1974, as amended) appointments of the Assistant Executive Director for Operations, Directors and Deputy Directors of Offices reporting to the Executive Director for Operations, Directors of Divisions which are organizational components of the five major program offices, Directors of Regional Offices, and such other appointments as the Commission shall designate; and submits for approval significant changes in the organization.
- 024 reports periodically to the Commission on all significant matters including:
- a. relations with other governmental agencies and the public.
 - b. areas of special interest and responsibility to the Commission.
- 025 performs such other functions as are assigned by the Commission.
- 0103-03 DELEGATION OF AUTHORITY TO THE EXECUTIVE DIRECTOR FOR OPERATIONS
- 031 The Executive Director for Operations shall perform such functions as the Commission may direct except that the Executive Director shall not limit the authority of the director of any component organization as provided in the Energy Reorganization Act of 1974, as amended, to communicate with or report directly to the Commission when such director of a component organization deems it necessary to carry out his responsibilities. The Executive Director shall be appointed by the Commission and shall serve at the pleasure of and be removable by the Commission (ref. section 209(a) and (b) of the Energy Reorganization Act of 1974, as amended).

The Executive Director for Operations is authorized and directed to:

- 032 discharge the operational and administrative functions of the Commission subject to policy guidance of the Commission, except as limited in 031, above.
- 033 issue proposed amendments and amendments or regulations which the Executive Director finds are corrective amendments, or amendments of a minor or nonpolicy nature that do not substantially modify existing regulations affecting the public health and safety, the common defense and security, or substantive or procedural rights, and amendments of regulations in final form if, after expiration of the comment period on the notice of proposed rulemaking, no significant adverse comments or significant questions have been received and no substantive changes in the text of the rule are indicated.

This authority to issue proposed amendments and amendments of regulations may not be redelegated.
- 034 issue proposed rules, and rules in final form, amending the Commission's regulations to incorporate by reference national codes and standards, including revised editions and addenda thereto, if the amendments are routine in nature and represent updating of basic codes and standards previously approved by the Commission for incorporation by reference.
- 035 make for the Commission, after consultation with the Attorney General, the determinations provided for in section 105.c(3) of the Atomic Energy Act of 1954, as amended, in regard to applications for facility construction permits or operating licenses subject to the provision of that section.
- 036 administer the Commission's equal employment opportunity program, including execution of the requirements of Title VI of the Civil Rights Act of 1964 and administration of the requirements of Title IV of the Energy Reorganization Act of 1974, as amended.
- 037 designate facilities, installations, and real property subject to the proprietary jurisdiction or administration, or in the custody of, the Nuclear Regulatory Commission, which shall be subject to the prohibitions of 10 CFR Part 160, "Trespassing on Commission Property."

POOR ORIGINAL

- 038 administer the contracting activities of the Commission, including contracts and interagency agreements for the conduct of nuclear regulatory research as submitted for execution by the Director, Office of Nuclear Regulatory Research. In this connection, the Executive Director for Operations is authorized to enter into, extend and modify contracts and agreements and settle terminations thereof, provided that the following actions shall be submitted for approval of the Nuclear Regulatory Commission or its authorized representative:
- a. any individual action concerning nuclear regulatory research involving more than \$1,000,000;
 - b. any other contract or agreement in excess of \$250,000; and
 - c. any new or unusual type of transaction which, in the judgment of the Executive Director for Operations, may be of interest to the Commission.
- 039 develop and maintain NRC financial management programs, including policies, procedures, and standards of accounting, budgeting, pricing, contract finance, automatic data processing equipment acquisition, accounting for capitalized property, and related reporting, necessary to NRC direct and contract operations and the safeguarding of NRC funds. This includes development and presentation to the Commission of financial plans and budgets and the distribution of resources, both personnel and financial, within guidelines established by the Commission.
- 0310 approve and process plans for the collection of information and report forms in final form for clearance by the General Accounting Office pursuant to the Federal Reports Act of 1942, as amended, 44 U.S.C. 3512(c) and (d), and the regulations of the General Accounting Office, 4 CFR 10.10(b). The Commission should be notified of significant proposed changes in reporting requirements on or information sought from the public.
- 0311 make determinations pursuant to 10 CFR Parts 30, 40, 50 and 70 that exemptions of individual prime contractors or subcontractors of the Energy Research and Development Administration or the Nuclear Regulatory Commission from NRC licensing requirements are authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

POOR ORIGINAL

- 0312 coordinate for the Commission the international functions and activities of the NRC staff (to include those relative to NRC interest in and support of international organizations' programs of international cooperation, export and import licensing functions and related activities, and interaction with foreign countries, groups and organizations).
- 0313 negotiate and, in accordance with Commission policy and procedures, sign agreements, arrangements, and contracts with representative of foreign countries and international organizations under the following condition: that the Commission be informed of any particular policy considerations and problems and of the expected execution of such documents prior to their being executed on behalf of the NRC.
- 0314 issue, renew and amend such licenses for import and export of all facilities and source, byproduct, and special nuclear materials as required by the Atomic Energy Act of 1954, as amended, including imposition of the appropriate license conditions, in accordance with regulations and Commission policy and procedures and calling upon technical assistance from the Office of Nuclear Material Safety and Safeguards in the areas of material accounting and physical security measures to be applied by recipient countries in export cases.
- 0315 issue, pursuant to 10 CFR Part 2, notices of the denial or the proposed denial of applications for licenses for import or export of facilities and source, byproduct, and special nuclear materials, and applications for amendment or renewal of such licenses, in accordance with Commission policy and procedures.
- 0316 consistent with NRC regulations, grant exemptions from NRC regulations or impose special conditions on import or export licenses, drawing upon advice from other NRC offices as required.
- 0317 direct the program for cooperation with States pursuant to section 274 of the Atomic Energy Act of 1954, as amended, including negotiation of agreements with States, review of the adequacy and compatibility of State programs, and provision of training and technical assistance to States.
- 0318 direct the program for the support of radiological incident emergency response planning, training, and assistance with State and local governments.
- 0319 coordinate the development of plans for NRC's role in maintaining continuity of government and essential functions in a national emergency.

POOR ORIGINAL

Approved: May 13, 1977. 5

0320 act for the Head of the Agency in all determinations and decisions required in administering the NRC labor relations program mandated by Executive Order 11491, "Labor-Management Relations in the Federal Service," as amended.

0321 exercise final determination on appeals under the Privacy Act of 1974, furnish Statements of Disagreement and NRC Statements of Explanation required by the Act and issue revisions of systems of records notices, including routine uses, which are corrective or of a minor or non-policy nature.

0322 exercise final determination on appeals under the Freedom of Information Act except for advisory committees, boards, panels and offices reporting to the Commission, and the Office of the Executive Legal Director.

0323 take such action as is necessary to carry out the functions assigned by this chapter, chapters of subordinate officials or other official directives or communications, subject to the limitations prescribed therein.

0103-04 REDELEGATION OF AUTHORITY BY THE EXECUTIVE DIRECTOR FOR OPERATIONS

The Executive Director for Operations may, except where expressly prohibited, redelegate to others authority delegated by this or other official directives or communications, subject to the limitations stated below and such other stipulations as are deemed necessary.

041 such redelegations must be in writing, with a copy to the Secretary of the Commission, and are to be appropriately reflected in the NRC Management Directive System.

042 the Executive Director for Operations must stipulate any limitations on further redelegations of authority.

0103-05 ORGANIZATION STRUCTURE AND INTERNAL ASSIGNMENTS

The Office of the Executive Director for Operations is a single organizational component with no subdivisions, but with groups designated: Office of Technical Advisor, Applied Statistics Branch; Administrative and Correspondence Branch; and the Special Projects Branch.

POOR ORIGINAL



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

12/18/78

Exhibit #3
General Depts.
9/19/78

Mr. J. Dexter Peach
Director, Energy and Minerals Division
U.S. General Accounting Office
441 G Street, N.W.
Washington, D. C. 20548

Dear Mr. Peach:

We appreciate the opportunity to comment on the draft GAO report "Emergency Preparedness Around Nuclear Facilities Needs Improvement". The report makes several points which are useful to the Nuclear Regulatory Commission and to other Federal agencies involved in this area, and it highlights several areas in which we agree that further work by NRC may be desirable.

The general tone of the report suggests that emergency preparedness by State and local governments around NRC licensed facilities is in disarray. Although we agree that improvements can certainly be made in this area, we believe that the impression left by the report on the capabilities and preparedness of State and local officials may be doing them a disservice. While short of the results we ultimately desire, we believe the level of planning and preparedness is definitely improving due in large part to the support and voluntary cooperation of the State and local personnel.

I would like to comment briefly on each of the key conclusions of your report:

1. NRC should approve license applications for nuclear facilities only in States that have concurred-in plans.

NRC protects public health and safety by giving primary consideration to site characteristics and design features of nuclear facilities. Once we are satisfied that these meet an adequate measure of safety, we evaluate the emergency plans for the facility. From this point of view, State and local emergency plans provide an added margin of protection for the public in the vicinity of a nuclear facility in which we believe that an adequate measure of safety already exists. The Commission's licensing decision process is structured to take into account a wide variety of standards and criteria in the evaluation of proposed or existing nuclear power plants to the end that substantial conservatism exist in design and operating safety margins. To the

extent that proposed or existing plants fail to meet these standards, NRC would not license them or permit them to continue to operate. In this context, State and local plans, while related to the facilities undergoing the licensing process, and to applicant's emergency plans, are not essential in determining whether the plant can be operated without undue risk to public health and safety.

Emergency planning and preparedness efforts by NRC inevitably tend to interact with the legitimate interests of State and local governments. Their authority and responsibility to respond to emergency situations within their jurisdictions have been given explicit recognition in the Commission's regulations. But, NRC does not have statutory authority over State and local governments to require them to develop and to maintain such plans. This fact should not be construed, however, as suggesting that the NRC should not continue to provide guidance, assistance and training for the States, nor even to evaluate their plans and make recommendations for improvement. Such a program continues to be an important NRC objective and is clearly recognized as NRC policy. The improvement of radiological emergency response capabilities by States and local governments is the principal focus of attention of a Federal interagency program in which NRC, through its Office of State Programs, exercises a lead agency role. In its formative stages, this program was predominantly a training program. As it has evolved, the program has placed increasing emphasis upon review of State and local government radiological emergency response plans to determine whether they contain the essential planning elements listed in NRC's primary guidance document for States, NUREG-75/111. As noted above, NRC does not consider concurrence in such plans to be a fundamental prerequisite for licensing nuclear facilities. Through the concurrence approach, we have been able to achieve significant improvements by cooperative means without entering into confrontation with States and local governments over issues of Federal preemption vs. State sovereignty, or Federal competence vs. specialized local knowledge of local capabilities and local intent.

Despite NRC's lack of statutory authority over State and local governments to require them to develop and implement emergency response plans, we believe that we have achieved considerable success through cooperative means. These include such activities as:

- o preparation and issuance of an updated "Guide and Checklist" of 70 planning elements to be incorporated into State and local radiological emergency response plans;
- o development and conduct of training courses as needed for State and local personnel engaged in radiological emergency response activities; more than 1,000 State and local officials have received this training in the last five years;

- o chairing of national and regional advisory committees which provide assistance to States and local governments in developing and testing emergency response plans;
- o review of -- and concurrence in -- eight State and local radiological emergency response plans;
- o coordination of emergency response efforts of NRC applicants and offsite agencies of State and local governments;
- o preparation, with EPA, of a Task Force Report which provides a "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants." Among other recommendations, the Task Force Report calls for the establishment of emergency planning zones on a generic basis around all light water nuclear power facilities.

2. Verify that State and local agencies are capable of effectively implementing their emergency plans.

We believe an explanation of our current activities is in order. Because of the link between State and local government emergency planning and the facilities involved in the licensing process, NRC recognizes the importance of this aspect of emergency preparedness. Section 5.4 of Annex A to Regulatory Guide 1.101 for example, provides that applicants shall submit to the NRC staff "a description for each (offsite) agency of specific response capabilities in terms of expertise of personnel and other organizational resources available." Further, applicants are required to incorporate in their plans provisions for drills and test exercises in which offsite agencies are expected to participate. There is no requirement, however, that the offsite agencies participate and NRC has no power to compel such participation. NRC's Office of Inspection and Enforcement provides a followup with State and local agencies to assure their understanding of their response roles. In addition, the Office of Nuclear Reactor Regulation (NRR) regularly consults with the Office of State Programs (SP) to establish an avenue independent of the applicant for obtaining information regarding State and local agency capability. The provisions of the existing consultation agreement between NRR and OSP include "an assessment of the State and local government emergency preparedness capabilities identified by NRR as necessary to put into place the agreements contemplated by NRC regulations." The specific information requested by the licensing staff includes the qualifications of key officials for each of the responsible State and local agencies, as well as the agency resources available for implementing their response role. But, as a general proposition, we believe that greater testing and exercise of State and local plans is both necessary and desirable.

3. Require formal agreements between license applicants and State and local agencies.

Current regulations already require this, although perhaps not with the specificity suggested in the report. (see page 2 of the attachment for discussion which relates to this).

4. Adopt the idea of an emergency planning zone around NRC licensed facilities.

An NRC/EPA Task Force has recently completed its final report which deals with this subject. (NUREG-0396). It is the subject of a Federal Register Notice inviting public comment. After this 90 day public comment period and the analysis of views presented, the Staff will present its recommendations to the Commission for final action.

In summary, we believe many of the items you discuss are already being addressed by NRC although perhaps not to the extent to which you suggest. We will consider those areas to determine if we can make improvements. In spite of several specific areas of disagreement and emphasis, we are in agreement with the general notion that improvements in State and local government response capabilities can and should be made.

As an enclosure to this letter, we are providing some detailed comments on the report.

Sincerely,

(Signed) Lee V. Gossick

Lee V. Gossick
Executive Director for Operations

- cc: Denton
- David
- Minogue
- Shapar
- Rehm File
- Control No. 04563
- Collins
- DeFayette
- Ryan

NOTE: Comments received as per attached memorandum have been incorporated.

OFFICE	OSP/EP	OSP/EP	OSP/DIR	EDO		
SURNAME	RDeFayette/p	HECollins	RGRyan	LVGossick		
DATE	12/13/78	12/13/78	12/13/78	12/ /78		



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

DEC 11 1978

MEMORANDUM FOR: Harold Denton, Director, NRR
Robert Minogue, Director, SD
John Davis, Acting Director, IE
Howard Shapar, Director, ELD
Ken Pedersen, Director, OPE
James Cummings, Director, OIA

FROM: Robert G. Ryan, Director, OSP

SUBJECT: NRC RESPONSE TO GAO DRAFT REPORT "EMERGENCY
PREPAREDNESS AROUND NUCLEAR FACILITIES NEEDS
IMPROVEMENT"

Attached is the latest draft of the proposed response to the GAO on the subject report. It incorporates changes requested by the Office of Policy Evaluation and has been reviewed by Tom Rehm for the Executive Director of Operations. Please review it for any glaring concerns and telephone your comments to Robert DeFayette (x27210) by close of business Tuesday, December 12. We hope to have a final letter typed and to the EDO for signature on Wednesday. Members of your staff listed below have been working closely with us in preparing this response.

A handwritten signature in black ink, appearing to read "Robert G. Ryan".

Robert G. Ryan, Director
Office of State Programs

Attachment

cc: R. Wayne Houston, NRR
Ray Priebe, NRR
Michael Jamgochian, SD
J. Cunningham, IE
Roy Voegeli, ELD
Joan Aron, OPE
Tracy Binion, OIA

Specific Comments On GAO Report

1. Page 2 - GAO should distinguish its own conclusions from those of the Reactor Safety Study (WASH-1400) in the following statement: "the study concluded that nuclear accidents may happen and would present a potential adverse health consequence that provides a sobering contrast to the estimated risk". The words "in our opinion" should be inserted after the words "...health consequences that, in our opinion, provides..." because the "sobering contrast" statement is the GAO conclusion and is not found in WASH-1400.

2. Page 2 -- The statement "that there will be evacuation of an area 25 miles downwind from the accident site" is misleading since the study assumed that 30% of the population remained in place.

3. Pages 8 and 9 -- The report creates an impression that the offsite supportive services from State and local agencies are taken for granted. The NRC, however, does not take these services for granted. Specific requirements are set forth in Appendix E to 10 CFR Part 50. As an example, licensees' emergency plans are required to provide "agreements reached with local, State and Federal officials and agencies for the early warning of the public and for public evacuation or other protective measures should such warning, evacuation, or other protection measures become necessary or desirable."

4. Page 10 -- The statement that "NRC does not require that emergency plans be developed to respond to an emergency resulting in releases going offsite or that drills be conducted involving offsite personnel" is not true. Such requirements are explicitly imposed on the licensee by Paragraphs III, IV.A, IV.C, IV.D, and IV.I of Appendix E to 10 CFR Part 50. Further amplification of these requirements is discussed in Section B of Regulatory Guide 1.101, with specific recommendations in Sections 4.1.4, 4.1.5, 5.4, 6.1, 6.2, 6.4.1.2, 6.4.3.2, 7.3.2, 8.1.2 and 10 (item 1) of Annex A to the guide.

5. Pages 18 and 19 -- The statements contained in these pages dealing with State and local planning provide an inaccurate and misleading characterization of the NRC position and requirements with respect to the emergency plans required for submittal by a licensee in support of a nuclear power plant. The licensing staff requires that licensees submit on the docket either the appropriate State and local emergency plans or in part, a comprehensive description of each agency's authority, responsibility, duty, and capability which provides a clear concept of their radiological response role. Furthermore, additional assurance that such response will be taken is evidenced in the required written agreements between the licensee and each agency which documents an understanding of their response role and their commitment to take such action.

6. Page 21 -- The observation that "it appears to us that NRC's belief that State and local agencies can effectively respond to nuclear emergencies is without foundation" apparently is based on the GAO review of the initial 5 reports generated as a result of the memorandum of understanding between NRR and the Office of State Programs. We could appreciate the GAO conclusion if this were the sum and substance of the input used by the licensing staff in assessing State and local response capability in support of a licensed nuclear power plant. However, this is not the case. The major input in our assessment is normally derived directly from the information submitted on the docket by the applicant. In addition, historically there is an abundance of evidence that local agencies respond effectively to all kinds of emergencies. An evacuation is an evacuation, regardless of the reason for its need although we acknowledge that local agencies should have a planning basis for knowing when, where, whether, and how fast they should respond in case of an emergency.

Nevertheless, the degree to which State and local governments may be able to effectively respond to a nuclear emergency may, in a practical sense, vary among the various State and local governments. By our count there are more than 150 countries in which nuclear facilities are currently located or immediately adjacent to counties in which nuclear facilities are located. NRC has never made an

inventory of the emergency plans of these counties nor have all of these plans ever been systematically assessed.

7. Pages 26 and 34 -- In the discussion regarding emergency preparedness at the local level we question the validity of the statement "As a result, there is little or no assurance that the health and safety of the public would be protected."

As discussed in our proceeding comments, current licensing practices emphasized coordinated emergency response planning by the licensee, particularly with local agencies and officials having jurisdiction over the immediate environs surrounding a nuclear power plant.

Our emphasis is reflected by the staff requirements for licensees which include identification of local agency authority, responsibility, and capability; criteria for offsite notification and response; assured communication channels; written agreements for local agency response; and annual drills including participation of offsite personnel.

8. Page 27 -- The statement that "such zones (low population zone) are not established based on population" is misleading. While it is true that the LPZ is not solely determined on population considerations, population is definitely one of the factors evaluated to determine the acceptability of the LPZ.

9. Pages 27, 30 and 32 -- The statements that "NRC radiation dose levels for determining low population zones are five times higher than the levels prescribed by EPA as requiring actions to protect the public health and safety" and "DOE officials said ... they were aware that NRC's criteria and EPA's protective action guidelines differed..." are indicative of a serious misunderstanding of NRC siting criteria and the role of EPA protective action guides in emergency planning.

10. Page 36 -- The GAO report states "neither the state nor local emergency service agency near one NRC nuclear facility had plans which considered evacuation even though this procedure was identified by facility operators as the primary offsite emergency protective measures. Local officials in another community were confused about what they should do because the key official for coordinating and initiating nuclear emergency measures was in the hospital undergoing an operation." We consider that experience has shown, and the news media has documented, that public officials are quite capable of dealing with emergencies in their communities and, in fact, we find that evacuations are being effected on almost a weekly basis in the United States, even in the absence of formal, documented plans. It is important to recognize that the role of local officials in effecting an evacuation is essentially independent of the causative agent for initiating such action.

It is also pertinent to cite the finding in a recent publication by the Disaster Research Center based on extensive study of human behavior in disasters. "The assumption that local organizations are unable to cope with disasters is based on both the notion that these organizations and the communities in which they are located are overwhelmed by disaster impact, and also by the fear that the employees of these organizations are so affected by disaster impact that their efficiency is reduced. Neither of these notions stand up well under close observation."

11. Page 38 -- The GAO report states "There does not appear to be a federal policy on providing accident response information to the general public ... the federal response to this lack of direction has generally been to discount the need for distribution of public information. Federal agencies have not required facility operators to include public information as part of their emergency plan except for details on when and how post-accident public information should be presented." We consider that these statements are misleading and provide an incorrect characterization of NRC policies and practices regarding information made available to the public. We believe it is better for evacuation plans to be detailed, communicated and implemented by knowledgeable professionals than to depend on the interpretation and translation of general planning information into specific case actions by members of the general public.

12. Page 43 -- The GAO report states "The warning times for natural disasters can often be measured in days or hours; the warning times for nuclear emergencies often will be measured in minutes." The contrast portrayed by this statement is misleading. To achieve a different perspective, consider other non-nuclear disasters such as transportation accidents, toxic chemical releases, explosions, fires, dam failures, bridge collapses, landslides, flash floods, and earthquakes all of which give little or no warning. Compare these situations to the most severe Class 9 accident release categories which provide time intervals between the onset of the hypothetical accident and the release to the atmosphere of 2 to 30 hours during which warning could be given. The latter contrast, particularly in light of the relative probabilities, should certainly give cause to re-think priorities on the part of those involved in disaster planning as compared to the statement in the GAO report.