## UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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1 + UNITED STATES OF AMERICA 2 NUCLEAR REGULATORY COMMISSION 3 \* \* \* 4 BRIEFING ON THE STATUS OF GENERIC ISSUES 5 \* \* \* 6 PUBLIC MEETING 7 \* \* \* 8 Nuclear Regulatory Commission 9 One White Flint North 10 Rockville, Maryland 11 12 Tuesday, April 25, 1989 13 14 The Commission met in open session, pursuant to 15 notice, at 10:00 a.m., the Honorable LANDO W. ZECH, JR., 16 Chairman of the Commission, presiding. 17 18 COMMISSIONERS PRESENT: 19 LANDO W. ZECH, JR., Chairman of the Commission 20 THOMAS M. ROBERTS, Member of the Commission 21 KENNETH C. ROGERS, Member of the Commission 22 JAMES R. CURTISS, Member of the Commission 23 24 25 (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

1	STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:
2	SAMUEL J. CHILK, Secretary
3	MARY WAGNER, General Counsel's Office
4	JAMES TAYLOR, Deputy Executive Director, Operations
5	THEMIS SPEIS, RES
6	WARREN MINNERS, RES
7	FRANK GILLESPIE, NRR
8	WALT SCHWINK, NRR
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1	PROCEEDINGS
2	(10:02 a.m.)
3	CHAIRMAN ZECH: Good morning, ladies and
4	gentlemen.
5	Today the Commission will be briefed by the
6	NRC's Office of Research and the Nuclear Reactor
7	Regulation Office concerning the status of the Generic
8	Safety Issues Program.
9	We last heard from the staff on this subject in
10	a public meeting in October, October 21, 1987. At that
11	time, the staff's briefing focused on the process and
12	potential improvements plan for resolving generic safety
13	issues.
14	And, subsequent to that meeting, the Commission
15	specifically requested that the staff provide a progress
16	report to the Commission, concerning improvements in
17	processing and resolving the unresolved and generic safety
18	issues, including the status of each remaining unresolved
19	safety issue.
20	The resolution of generic safety issues is an
21	important aspect of NRC's overall program, to assure the
22	continuing safety of nuclear power plants.
23	The Commission reviews the staff's progress in
24	resolving these issues on a quarterly basis, and today's
25	information briefing will provide us an opportunity to
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hear from the staff concerning the effectiveness of the 1 2 improvements instituted in 1987. I understand that copies of the staff slides are 3 4 available at the entrance to the meeting room. 5 Do any of my fellow Commissioners have any 6 opening comments to make? 7 (No response.) If not, Mr. Taylor, you may proceed. 8 9 MR. TAYLOR: Good morning, sir. 10 CHAIRMAN ZECH: Good morning. 11 MR. TAYLOR: At the table with me are Mr. 12 Schwink and Mr. Gillespie from NRR, and Mr. Minners and 13 Mr. Speis from the Office of Research. 14 The briefing will be in two parts. The areas of 15 identification, prioritization and resolution will be 16 given by the Office of Research, and then the areas 17 covering imposition, implementation and verification will 18 be provided by NRR. Mr. Speis will start the briefing. 19 20 CHAIRMAN ZECH: All right. Thank you very much. 21 You may proceed. 22 DR. SPEIS: Mr. Chairman, Commissioners. 23 The first Vu-Graph, please? (Slide) The 24 Basically, in today's presentation, I will contents. briefly go over the history of the generic issue program, 25 (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600

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including the process and its key parts, and also
 summarize the progress made since the October 21st, '87
 briefing that you mentioned, Mr. Chairman.

Also, I will provide a status of the remaining unresolved safety issues and a selected number of generic issues; discuss our other activities involving a re-review of low-priority issues, and share with you some reasons for occasional schedule slippages and, of course, as Mr. Taylor mentioned, the later part of the briefing will be provided by NRR.

The first Vu-Graph -- (slide) -- I have provided 11 12 to you a graphic illustration of the generic issues 13 You see the number of steps identified in the process. Vu-Graph, the step which involves the identification, 14 15 pricritization and resolution. These are the three parts of the process which are done in the Office of Research, 16 and then the imposition, implementation and verification 17 18 by the Office of NRR and the regions.

The identification of the process is the first part, of course. This is where the issues are identified, based on concerns raised by ACRS, staff operating experience, technical reviews, risk assessment studies. Also, once in a while, we have some issues from the public. In fact, the last four or five years, two issues have been raised by the public, which I'll mention them

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1 || later on.

The step involving the prioritization -- this is where an assessment is made of the potential safety significance of these issues. Basically, this process is mostly risk-based, but also it involves different and distinct overviews.

7 The resolution part of the process -- this is where the resolution is developed. 8 Potential 9 identification of improvements are made at this stage of 10 the process. Also, any potential requirements are This is a very intensive effort. developed here. It 11 12 involves, in addition to the staff, the CRGR, the ACRS 13 and, if the process leads to a rule, the Commission, of course, gets involved. So, the approval -- this stage 14 15 also involves regulatory analysis.

Then, once this process has been completed, if, as a result of the resolution, something has to be done in a power plant, then the process proceeds and the implementation is implemented by rules, or generic letters, or changes into the standard review plant, regulatory guides, and so on and so forth.

This whole process is struck by SIMS, which NRR people will be discussed later. In addition to the SIMS, we in the Office of Research would have a document called NUREG 0933, which -- it's a kind of a depository. Every

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1	issue has been identified. Even issues that turn out to
2	be of no safety significance, they are documented there.
3	The prioritization of the process is described in NUREG
4	0933. So, we have a very well documented system where
5	every issue any issue has been raised the last 10 or 15
6	years can be found in those two documents, especially in
7	NUREG 0933.
8	So, with this brief overview of the process
9	COMMISSIONER ROGERS: Just before you leave
10	that.
11	DR. SPEIS: Yes.
12	COMMISSIONER ROGERS: I assume that there really
13	is that it is as you've said, that it's a much more
14	complex interactive situation than this little line
15	diagram implies, that in any one of these areas, general
16	areas of responsibility other parts of the organization
17	are called upon and is consulted and so on.
18	DR. SPEIS: Of course, let me no question
19	about it. The prioritization, for example. We take we
20	in the Office of Research, take the lead in prioritizing
21	an issue, and then every issue is sent to NRR for their
22	review. Also, the ACRS participates in the
23	prioritization. And, of course, in the resolution, the
24	process is much more compact.
25	COMMISSIONER ROGERS: There's a certain amount
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1 of cycling back and forth.

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DR. SPEIS: Yes, this is too linear. This is for presentational purposes, yes, sir.

CHAIRMAN ZECH: Let's proceed, please.

5 DR. SPEIS: On Vu-Graph number two -- (slide)--6 I have summarized the process, the accumulation of the 7 issues from the beginning of the process. The formal 8 program start in 1981, with 511 issues identified to be 9 Three hundred sixty-nine of those issues prioritized. 10 came from TMI-related reviews, and the remaining 142 came from a number of other documents that the staff had put 11 12 together.

For example, the TMI-related issues, if you recall, came from the Rogovin Commission, from the Presidential Commission, and from other internal staff reviews related to the TMI accident.

So, if we go to the next Vu-Graph -- (slide)-in addition to the 511 mentioned already, we had an additional 224 issues, including human factors issues that have been identified in the past eight years. So, that gives us a total of 735 issues. In fact, these are four more since the briefing we made to you back in October of -- 21, 1987.

> CHAIRMAN ZECH: Four more? DR. SPEIS: Yes, sir.

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1	CHAIRMAN ZECH: We had 220
2	DR. SPEIS: We had 731. We had 731 in 10-21-87,
3	and now we have 735 issues. So, we have added four more
4	issues since October.
5	CHAIRMAN ZECH: Thank you.
6	DR. SPEIS: So, as I said earlier, every one of
7	these issues can be found documented in NUREG 0933, and
8	their disposition.
9	For your information, these additional 224
10	issues, the large majority of them came from reviews done
11	by the Office of Nuclear Reactor Regulation, as well as
12	from programs directed by the Office of Research. The
13	AEOD provided 31 issues, the ACRS 12, and the public came
14	up with two issues and, also, the regions provided one
15	issue. So, that's kind of a
16	On page number 4 (slide) I have
17	summarized the progress we have made since the November
18	21, '87 briefing. I guess I can address some of this.
19	For example, the subtotal in '87, we had resolved 610.
20	When we briefed you on the progress of the program back in
21	May 12, '88, we had resolved 628, and today's briefing we
22	can report that we have completed the resolution of 655
23	issues.
24	You see here that when I say resolution, they
25	fall under a spectrum of categories, some of them
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1 prioritized low, some issues have been integrated with 2 other issues, some issues turned out to be non-safety 3 issues -- for example, what we characterize as licensing 4 issues, regulatory improvements, environmental. For 5 example, licensing issues are issues that involve getting knowledge and expertise in the staff itself, to be able to 6 7 review the submittals -- you know, like having depend capability for audits, either calculational or otherwise. 8 9 So, on the next Vu-Graph -- (slide) -- I have 10 summarized the issues still to be resolved. The most 11 important category of unresolved safety issues, you see that we have reduced the number to three and, as I will 12 address each one of them shortly, hopefully, those issues 13 will be finished within the next four or five months. 14 15 So, we have three USIs to complete. We have 20 16 high generic issues, we have 13 medium. So, we have a 17 total --COMMISSIONER ROGERS: Just a second. I'm a 18 little confused about the distinction there between those 19 20 top three. 21 DR. SPEIS: Yes. Actually, in practice, we 22 really have three categories. We have high, mediums and 23 low -- okay -- generic issues, but earlier on, by 24 congressional mandate, the number of high priority generic 25 issues assumed more importance and they were designated as

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1 USIs. This was at the beginning of the program. So, we 2 have to report progress made on the resolution of USIs to 3 Congress, and we do that now via the NRC's annual report.

## COMMISSIONER ROGERS: Okay.

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5 DR. SPEIS: For your information, we had 29 USIs on the books, and now we have, as I say here, three 6 7 Last time -- once in a while -- not remaining. Okay. 8 once in a while -- we go through the process of distilling important issues that rise above the thresholds of highs 9 10 and mediums, and put them into the category of the USIs. 11 The last time we did that was, I guess, a few years ago, 12 but as far as we are concerned, the issues that are 13 designated high, they received the same effort as USIs, 14 you know, except for these mandated -- congressional 15 mandate to report.

Our schedule calls for resolving 80 percent of the remaining highs by the end of next year, and the remaining the following year. There is a number here which is said to be prioritized -- you see at the last column, right at the bottom of the last column, which says 36 issues to be prioritized.

Now, because of our concern that maybe among those issues there could be some very important ones, we don't wait for the full process to reach its conclusion. We go through a screening process to make sure that there

are no important safety issues hiding in this column of To 1 2 Be Prioritized and, for example, we have done that, and we 3 have found out that we didn't identify any high issues. We identified nine medium, and the remaining 27 were 4 5 either low or subsumed or in the other categories. So, even though, you know, it's still on the 6 7 books, you know, as far as we, the staff, are concerned, 8 as far as assessing the safety significance of issues that 9 come in front of us, you know, we pursue an expedited 10 process and, unfortunately, sometimes, the numbers don't 11 tell the gain, don't tell the --COMMISSIONER CURTISS: 12 Does that mean you have 13 taken what amounts to a rough cut at priority? 14 DR. SPEIS: Yes, sir. Yes, sir. 15 MR. TAYLOR: Yes, that's what it does. 16 DR. SPEIS: Yes, sir. Yes. And most of the --17 COMMISSIONER CURTISS: You further refine them. DR. SPEIS: We further refine, but so far, most 18 19 of the times, we have been -- I don't think we have changed any. Maybe one -- once a rough cut was changed, 20 21 you know, from the more erudite process itself, you know. 22 COMMISSIONER CURTISS: And the purpose of that 23 is to ensure that we don't have any high priority issues 24 that have to be prioritized. 25 DR. SPEIS: Yes, sir, that's right. Yes. Yes.

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1	Yes. Yes. That's very important to us.
2	So, since the October '87 briefing, we have
3	completed the resolution of 45 issues.
4	On page 6 (slide) I have a summary. It's
5	basically the same numbers. The issues Resolved and To Be
6	Resolved, and the percentage, and you see that we have
7	Resolved 89 percent, and To Be Resolved 11 percent and,
8	again, as I mentioned, that 11 percent includes the issues
9	that we already have taken through a preliminary risk
10	evaluation.
11	I would like to focus on the remaining USIs now.
12	(Slide) On page 7, we have three USIs remaining the
13	A-17, Systems Interaction in Nuclear Power Plants; A-40,
14	Seismic Design Criteria; and A-47, Safety Implications of
15	Control Systems, and I will discuss the status of each USI
16	separately.
17	On page 8 (slide) I will start with the
18	USI A-17. We have completed the technical work on this
19	USI and have developed a proposed resolution. If you
20	recall, the purpose of this USI was to investigate the
21	potential that there could be some unrecognized subtle
22	dependencies among structural systems and components that
23	could have remained hidden, and that could lead to safety
24	significant events.
25	In fact, in the past, we have noticed from our
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1 scrutiny of the LERs, a number of events that have 2 involved unintended or unrecognized dependence among the 3 systems that I mentioned earlier.

As I said, we have concluded that certain actions should be taken by NRC and licensees, and we have -- the issue has been reviewed by CRGR, the ACRS, and we're in the final process of putting the issue resolution together.

9 The most important thing that has come out of it 10 is the issue of flooding, to make sure that at least some 11 older plants have examined their plant for some flooding 12 vulnerabilities. And because the IPE process involves 13 explicitly an examination of flooding, we are going in the 14 direction of including this -- the resolution of this 15 issue in the IPE system, in the IPE process.

A number of other things have come out, mostly for information, which we'll be providing to the utilities for their information, via generic letter.

The next issue, number 9 -- (slide) -- USI A-40, Seismic Design Criteria. It basically involves future plants. It involves only four existing facilities, and it has to do with taking another look at some tanks above ground, where we have revised the standard review plan to provide guidance for future plants, and the specific issues deal with seismic design parameters, seismic system

1 analysis, and vibratory ground section.

2 So, we will be finishing this issue in the next 3 few months, as is indicated on this slide here.

4 The last, remaining USI A-47 -- (slide) --5 Safety Implications of Control Systems. The issue-again, this concerns -- there may be failures initiated or 6 7 aggravated by non-safety systems, and we want to make sure 8 that the design basis events that have been analyzed don't lead to significant -- don't change the evaluation as a 9 10 result of these failures initiated by the non-safety 11 systems.

We have completed, again, the technical work to resolve this issue. A small number of limited requirements have come out of it. For your information, because of the variety of plants, the resolution has varied considerably.

17 For example, we will be recommending over-fill 18 protection for over plants -- for all plants, steam 19 generator over-fill. For some plants like Oconee, we're 20 talking about providing diverse automatic initiation of 21 emergency feedwater. For some other plants involving 22 combustion engineering design plants, which have low head pumps, we're talking about improving the emergency 23 24 procedures involving low break -- small break lock 25 accidents.

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COMMISSIONER ROGERS: Are those related to this 2 control systems, or to the other --

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3 DR. SPEIS: Yes, to the control systems -- A-47, 4 Safety Implications of Control Systems. So, the reason I 5 went into some detail is to show you that, you know, we come up with a generic resolution, but then when we start 6 7 looking at the large variety of plants, that resolution has to be tailored very specific. So, we have to do the 8 9 work ahead of time to make sure that some safety 10 enhancements can be justified on a plant-specific basis or 11 on a class of plants. And here is an example where this issue had to be tailored to the specifics of the plants or 12 13 to the class of plants.

14 CHAIRMAN ZECH: What's your confidence in your 15 ability to meet the schedules that you've given us for these unresolved safety issues? 16

17 DR. SPEIS: Oh, it's 99.9 on these three issues. 18 There's no question about it that we're going to meet them the next time. 19

20 CHAIRMAN ZECH: Can you predict how long it might be required to implement and verify the actions on 21 22 these remaining USIs? In other words, does the resolve 23 mean that you've finished your work, or does the resolve 24 mean they are implemented?

> No, it means that we have finished DR. SPEIS:

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1	our work, and then the next stage involves notifying the
2	licensees of actions that they have to take.
3	CHAIRMAN ZECH: Well, when are they going to
4	finish implementation?
5	MR. TAYLOR: He's not 99.9 percent
6	DR. SPEIS: I'm talking about resolution. I'm
7	sorry, Mr. Chairman. I withdraw the 99. It's only for
8	the resolution part.
9	MR. GILLESPIE: It depends on what we're asking
10	a licensee to do. A typical time would be two outage
11	periods, to give them enough time to plan and do any
12	engineering that might be required, if engineering is
13	required. Two outage periods can approximate about three
14	years.
15	CHAIRMAN ZECH: Well, if they are really safety
16	issues, it seems to me that's a long time. First of all,
17	we're taking a long time to address them. I recognize
18	that if there are urgent safety issues, that you act on
19	them more promptly, but it still seems to me that when
20	you've finished your work, that when and you call them
21	resolved I appreciate the fact that means you've
22	resolved them, but that doesn't mean they're implemented
23	by the plant. And maybe two outages is reasonable. I
24	suppose it would depend on the
25	MR. TAYLOR: What the fix is; what procurement,

1 || if procurement is involved.

2 CHAIRMAN ZECH: Certainly. But it seems to me 3 that if we really do conclude that there are unresolved 4 safety issues, that we should put some fair amount of good 5 judgment into scheduling their implementation because 6 that's really what we are talking about. 7 So, I hope you'll take a good hard look at that. 8 It does seem to me that perhaps two outages might be 9 reasonable, but it may not be either. That's a very important call, and NRR makes that, is that right? 10 11 DR. SPEIS: Yes, sir. 12 MR. GILLESPIE: Yes, sir. 13 CHAIRMAN ZECH: After Research has completed 14 their part of the program. So, we're hearing --15 That agency interacts. MR. TAYLOR: 16 CHAIRMAN ZECH: Yes, NRR is going to tell us a 17 little bit about this. When you come on the program, will 18 you elaborate on this point a little bit, please? 19 MR. GILLESPIE: We will. All right. Fine. 20 CHAIRMAN ZECH: Let's proceed. 21 22 DR. SPEIS: The next Vu-Graph, please? (Slide) 23 At the last briefing we mentioned some important generic 24 issues that we were in the process of resolving, and I 25 thought I'll bring you up-to-date, Mr. Chairman. In fact, (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

1 this specific issue -- and Mr. Commissioners -- this issue 2 here on page 11, which discusses the Loss of RHR 3 Capability in PWRs -- in fact, the letter has gone out 4 from NRR, and the implementation process is underway 5 because we consider this to be an important issue.

6 This issue involves, broadly speaking, the loss 7 of core cooling during cold shutdown, but the most 8 significant part of the issue involves the air binding of 9 RHR pumps during mid-loop operation. This is the time 10 where the containment could be open and you are in the 11 process of performing operations in the steam generator 12 itself.

So, in fact, when we started this issue, we 13 14 focused early on the second part of the item shown on the 15 Vu-Graph here, the loss of RHR pump suction due to autoclosure interlock-related -- but then, from 16 operational experience, we found out that the most 17 important part of this issue had to do with the operations 18 during mid-loop -- during mid-loop operations, and we 19 focused on this issue, and we have completed the work on 20 this issue. 21

In fact, I understand that Tom Murley, of NRR, felt so strongly about this issue that he personally sent a letter to every CEO and operator of the plant, and the type of actions that have taken place are on page 12, the

1 next Vu-Graph. 2 CHAIRMAN ZECH: Well, before you go off that one 3 4 DR. SPEIS: Yes. CHAIRMAN ZECH: I understand that the ACRS 5 essentially agreed with the position that staff took in 6 7 that regard. is that right? They had some questions about 8 DR. SPEIS: Yes. 9 the -- they want to review the procedures for containment 10 closure, you know, if you have one of those events --CHAIRMAN ZECH: Yes, and it seems like --11 12 DR. SPEIS: -- plus the resolution. But they made a broader 13 CHAIRMAN ZECH: 14 statement, I think, that -- where they stated that they 15 didn't believe there's any well-defined policy direction 16 from the Commission concerning the regulatory approach 17 that should be taken. If the staff feels that way, then the Commission 18 19 needs to consider such guidance. So. I believe the ACRS 20 had such a comment. Would you check on that --21 DR. SPEIS: Yes. 22 CHAIRMAN ZECH: -- and, if so, we need to hear 23 from the staff as to whether you agree and, if you need any guidance from the Commission, please let the 24 25 Commission be informed by some kind of a written response. (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

1 MR. MINNERS: Are you talking about their recent 2 letter about the integration of issues? 3 CHAIRMAN ZECH: Yes, right. 4 MR. MINNERS: Uh-huh. 5 Okay. Yes, Mr. Chairman. DR. SPEIS: So, on 6 the --7 CHAIRMAN ZECH: But there might have been an 8 earlier comment, too, on this specific issue. I recognize 9 there is a very recent letter on integration, but I think 10 there might have been one earlier on this particular 11 issue, too. 12 DR. SPEIS: When we discussed farther with the 13 ACRS, one of the concerns was the procedures for closing 14 the containment during the degradation in decay heat 15 removal. So, that was the specific -- but we will check 16 farther, Mr. Chairman. 17 CHAIRMAN ZECH: Okay. If I recall, I was 18 informed that the staff was going to respond to that ACR 19 comment here in the next month or so and, of course, the 20 ACRS is going come before the Commission here in early May 21 and, at that time, we will discuss that with them, as well 22 as their latest letter, but it is an important area. The 23 integration of all of these major issues involving severe 24 accidents, the safety goal, MARK I containment, and all 25 the rest of it, but this particular one, I agree with Tom

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1	Murley's approach to it. I think he did exactly the right
2	thing. And as I recall, you certainly acted responsibly,
3	but I do think the ACRS comment, kind of implying on this
4	particular issue that you may need more direction from the
5	Commission, I'd ask you to look specifically at that.
6	It may be that it is, indeed, part of the more
7	recent letter, but I'd ask the staff to look and give us
8	your comments, if you would.
9	DR. SPEIS: Okay. We will.
10	MR. TAYLOR: I might say, on this one, sir, that
11	the action of the staff came by virtue of the occurrence
12	of loss of RHR and, in all cases, recovery took place, but
13	it was just happening, and because of the conditions
14	usually being in the service condition and so on, this
15	clearly needed attention, and that's why staff proceeded
16	to point that out.
17	CHAIRMAN ZECH: All right. Thank you. You may
18	proceed.
19	DR. SPEIS: The next slide, please. (Slide) As
20	we said. we have issued the generic letter back in October
21	of '88. It was issued to all PWRs because this involves,
22	of course, only PWRs, and the staff's guidance focused on
23	actions to reduce the likelihood and consequences of the
24	loss of decay heat removal. It addressed improvement in
25	procedures and instrumentation to help operator prevent
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1 || and mitigate loss of decay heat removal.

2 On the next Vu-Graph, page 13 -- (slide)--3 development of procedures that will permit timely closing 4 of containment during a degradation in decay heat removal. 5 CHAIRMAN ZECH: I understand that the staff is 6 planning to conduct inspections on this particular item--7 DR. SPEIS: Yes.

8 CHAIRMAN ZECH: -- and on the effectiveness of 9 the proposed containment closure procedures. When are you 10 going to do this? When is the inspection scheduled to 11 take place?

We'll be starting in about two 12 MR. GILLESPIE: 13 months, and then -- some of these have actually already been done in developing the inspection procedure itself. 14 15 And, normally, when we issue a temporary instruction like that, inspection procedure, it normally spans about two 16 17 years because you're going to be hitting -- trying to hit these facilities during shutdown periods. So, we'd 18 19 anticipate that we would be completed inspections at all facilities within two years. 20

Now, the exception will be that facility which, for some reason, has been shutdown and not started up and not gone into this condition, but that would be the rare exception.

25

CHAIRMAN ZECH: All right. Let's proceed.

DR. SPEIS: The next slide, please. (Slide) The next issue that I would like to say a few things is the B-56, which involves the Diesel Generator Reliability. This is an issue that has been -- was coupled with the station blackout rule.

6 If you recall, the station blackout set some 7 goals for reliability of the systems and, for example, for 8 the diesel, it set a goal of somewhere between .95 and 9 .97, and the effort here involves defining a -- developing 10 and defining a program that addresses the principal 11 elements of a good reliability program, to make sure that 12 the -- indeed, the diesels perform well.

We're working with industry on this issue here, with NUMARC, and we hope to adopt the reliability program into one of our reg guides and, as you see here, we hope to finalize this issue this September.

On page 15 -- (slide) -- which, basically, I have said that already. It's the coupling of this issue to the station blackout issue, A-44.

And on page 16, the next Vu-Graph -- (slide)-again, our efforts are directed at defining the principal elements of a good emergency diesel generator reliability program and technical guidelines for use in revising a number of reg guides that deal with diesels as well as in revising the standard review plan and developing

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1 || appropriate inspection modules.

So, as I said, we are working with NUMARC to develop these and, hopefully, we'll reach agreement that we'll be able to use the information that is developed and adopt it into one of our reg guides.

On page 17 -- (slide) -- I want to say a few 6 7 things about review of low priority issues. The Commission mentioned that at the last briefing. It's part 8 9 of the process. In addition to having a -- I think we 10 have said many times in the past that when information comes that is relevant to an issue that has been 11 12 prioritized low in the past, then we revisit the issue and we go through the process again, and we have done it on 13 the issue involving reactor vessel supports, which could 14 degrade as a result of embrittlement -- that's the issue 15 16 GSI 15 -- we worked on this issue a long time ago and, at 17 that time, we gave it a category of low priority, but then, as a result of research information that has come to 18 19 our attention from programs that we conduct at Oak Ridge involving radiation, then we find out that the information 20 was very important, and when we utilized it in the 21 reprioritization, we found out that this issue is, indeed, 22 23 important, so we have to work on it.

24 COMMISSIONER ROGERS: Have you got a tentative 25 schedule for closing?

DR. SPEIS: Do we have one? 1 We're working on a task 2 MR. MINNERS: No. action plan, but there is ongoing work at the moment, it's 3 not just sitting there. We just have not fleshed out 4 5 everything to complete the issues. 6 CHAIRMAN ZECH: Let me just commend the staff for the action you took to raise the priority on this. 7 Ι think you did the right thing. 8 Could you tell us very simply about the 9 significance of GSI 15, with respect to the safety of 10 11 nuclear power plants? Could you just briefly describe it 12 because I think I understand it, but I think it's a very 13 important issue, and it certainly deserves a high 14 priority, in my judgment. 15 DR. SPEIS: The information came to us from 16 experiments done at one of the experimental reactors at 17 Oak Ridge. We saw that there was a large amount of 18 embrittlement at low flux and low temperatures, and it wasn't -- it was a little bit unexpected. 19 20 So, then the issue itself involves the potential 21 failure of the supports. If you have a flow to start with, then if you have an earthquake or some other forces 22 23 applied to it, then this flow could propagate as a result 24 of the material having been embrittled as a result of the 25 radiation.

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1 In fact, even though we haven't developed a firm 2 schedule, we're already looking at potential solutions to 3 this issue. For example, we can heat the supports, application of local heaters and insulation to maintain 4 temperatures above the so-called nil ductility transition 5 6 temperature. So, we have an intensive effort underway 7 right now, that involves both the Office of Research and the NRR. 8 9 CHAIRMAN ZECH: Let me just say, in your best judgment, is there any safety concern in this regard, on 10 11 this issue, as far as any current operating plants are concerned? 12 13 DR. SPEIS: There is no immediate safety 14 concern. 15 CHAIRMAN ZECH: Well, if there's no immediate 16 safety concern, that's very important. It seems to me, 17 though, that there certainly might be concern on this issue as far as plant life extension and license renewal 18 19 is concerned. 20 DR. SPEIS: That's an important point, and no 21 question about it, and that's the part that we're 22 addressing very carefully. CHAIRMAN ZECH: Have the ACRS been involved in 23 24 this particular issue yet, do you know? 25 DR. SPEIS: Yes, the ACRS has been involved. In (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

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1	fact, if you recall a year and a half ago, they had some
2	concerns, and they were not in total agreement with the
3	staff, but subsequent to that the actions that we have
4	taken, we have worked the program together with ACRS, and
5	the last letter we got from the ACRS on this subject, they
6	are in total agreement with us on the course and direction
7	that we're taking.
8	MR. MINNERS: They were just briefed on this
9	issue last month.
10	CHAIRMAN ZECH: All right. Fine. And they are
11	in total agreement now, with the approach that's being
12	taken?
13	DR. SPEIS: Yes, they are in total agreement,
14	yes.
15	CHAIRMAN ZECH: All right. Commissioner Rogers
16	asked you about, you know, you're working on a current
17	schedule, I guess, and you're trying to do that now. Is
18	there anything a little more specific you can give us in
19	that regard?
20	MR. MINNERS: Well, we're supposed to have a
21	final test action plan approved by the Division of Safety
22	Issue Resolution in August of this year, and that's the
23	schedule.
24	CHAIRMAN ZECH: In August of this year to do
25	what?
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	29
1	MR. MINNERS: To have a approved task action
2	plan, which would set out what work would be done, and the
3	schedule and the final completion dates.
4	CHAIRMAN ZECH: So, you'll have the plan laid
5	out in August of this year?
6	MR. MINNERS: Correct.
7	DR. SPEIS: But at the same time, in parallel,
8	our Office of Engineering our Division of Engineering
9	is looking at potential solutions, as well as categorizing
10	plants because, as all plants don't have the same
11	supports, and even if there is a failure or partial
12	failure, it doesn't mean that as a consequence this would
13	be severe, so it depends on the types of plants and the
14	types of other supports that exist. So, we in
15	parallel, we are looking at all these things, and we'll
16	have all these things together in August.
17	CHAIRMAN ZECH: Okay. Well, it seems to me, if
18	I understand what you're saying, that's extremely
19	important because it could well be that even though you've
20	determined that there are no immediate safety concerns,
21	that between now and the time that perhaps certain plants
22	that might have this concern and not all plants have
23	it, as I understand.
24	DR. SPEIS: That's right.
25	CHAIRMAN ZECH: How many have it, do you know?
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1	DR. SPEIS: I'm sorry, Mr. Chairman, I cannot
2	give you that information. We will provide that.
3	CHAIRMAN ZECH: It's not all; it's a certain
4	design, as I understand, that has it.
5	DR. SPEIS: Yes.
6	CHAIRMAN ZECH: Well, in any case, I hope you'll
7	look at every plant that does have this particular design
8	and might have this concern, and recognize that if there's
9	no immediate safety concern, that's very important, but
10	between now and the time you might be looking at it for
11	plant life extension or for license renewal, it seems to
12	me that that could be a considerable period of time, and
13	you need to make a judgment as to whether there's anything
14	that should be looked into more carefully, at any one of
15	the plants that has this particular design, between now
16	and that time.
17	So we shouldn't wait, in my judgment, until too
18	far into the future, to make a confident determination
19	that it's not only safe at this time, but it will be safe
20	for a period of time. So, Research will be involved in
21	that kind of a decision, to assist the NRR, but I think
22	that's a very important issue, and I hope you're looking
23	at that.
24	DR. SPEIS: We are looking into, each one of us,
25	highest priority. In fact, I see here I have some notes

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that we already have categorized the type of supports that 1 2 exist. I understand that we have put them into five 3 categories, and the thing that we're looking very 4 carefully is that each one of these -- the susceptibility of each one of these varies because of its location and 5 because of distance from the core and other things like 6 7 that. CHAIRMAN ZECH: 8 Yes. DR. SPEIS: But the work is progressing. It is 9 10 underway and --Are we involving the utilities 11 CHAIRMAN ZECH: themselves in this issue? Are they aware of our concern 12 13 that the plants effect that? They are aware, and I think when we 14 DR. SPEIS: define more what has to be done, we're going to get them 15 16 more involved in that. 17 CHAIRMAN ZECH: Yes. It seems to me we should 18 at least alert them to this issue because it's something 19 that they may be able to contribute to. 20 DR. SPEIS: Yes. I'm sorry I don't have the--Serpin, who is the branch chief, who is the real expert in 21 this area, to address some additional information. 22 23 CHAIRMAN ZECH: Perhaps when you get that, you 24 might send the Commission a paper. This, to me, is an 25 extremely important matter, and I know you're working on 26 it, it's a high priority, I appreciate that. (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

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1	MR. TAYLOR: We can update you on that.
2	DR. SPEIS: Yes, we can update you. We can send
3	you all the information that we have developed
4	CHAIRMAN ZECH: That would be helpful.
5	DR. SPEIS: we can relay it to you so that
6	you will have it.
7	MR. TAYLOR: We'll do that.
8	CHAIRMAN ZECH: Thank you very much. You may
9	proceed.
10	DR. SPEIS: My last Vu-Graph (slide)
11	summarizes some occasional problems that we encounter, and
12	I don't want to, you know, give excuses for them, but the
13	type of things that appear once in a while when we go
14	through the process of resolving issues I have listed
15	two things, one of them having to do with some delays from
16	a cooperative effort with industry; the other one involves
17	testing that has to be done to different valve materials
18	and before that testing is that testing has to be
19	complete before we decide that, you know, the proper
20	material has been selected. So, I don't want to say
21	anymore on that, basically, but, again, I don't want to
22	use this as excuses, you know.
23	COMMISSIONER CURTISS: On GSI-29, the first one,
24	that says "the resolution of this issue is dependent upon
25	certain industry actions".

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1	DR. SPEIS: Yes.
2	COMMISSIONER CURTISS: What is it that we're
3	waiting for there?
4	DR. SPEIS: Well, they have basically, we had
5	work underway, contractual work, and then we stopped it
6	because the industry told us that they would assume the
7	effort, and then it just took them longer, you know, two-
8	two and a half years or so, than anticipated in the
9	original schedule.
10	Now, we have gotten their technical information,
11	and we are in the process of integrating into the
12	resolution, okay? So, that's what that issue is.
13	COMMISSIONER CURTISS: You do have the
14	information?
15	DR. SPEIS: Now we have the information, yes.
16	COMMISSIONER CURTISS: And we're in the process
17	of integrating that.
18	DR. SPEIS: Yes, we got it from EPR, yes, sir.
19	COMMISSIONER CURTISS: Okay.
20	DR. SPEIS: The second issue involves
21	COMMISSIONER ROGERS: Excuse me but just as
22	an example of how this whole schedule works
23	DR. SPEIS: Yes.
24	COMMISSIONER ROGERS: Even when that is done,
25	this so-called resolution still is not implementation.
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1	34
1	DR. SPEIS: No, it's not implementation, sir,
2	no.
3	The second issue, we are getting good
4	cooperation from industry. It involves testing well,
5	the issue arose as a result of pilot valves sticking, you
6	know, if I want to use that word, and we're testing new
7	materials to make sure that the valves don't stick, okay?
8	And those have to be done in plants themselves, and we
9	expect that information to be developed in about another
10	year, and then we'll make a decision at that time, if,
11	indeed, you know, this is the appropriate material for
12	future usage in these valves, basically.
13	So, with that, Mr. Chairman, I complete my part
14	of the presentation, and NRR can discuss now the
15	implementation of the some of these issues.
16	CHAIRMAN ZECH: Thank you very much.
17	You may proceed.
18	MR. GILLESPIE: Let me sketch out the process of
19	the pathing of the work that comes from Research to NRR,
20	so you can see how it gets in our chain because this
21	becomes a part of our MPA program and, in fact, this tends
22	to be a smaller part of the overall multi-plan action
23	program itself.
24	Generally, a package gets prepared. The
25	technical resolution then goes to CRGR. One of the pieces
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that goes to CRGR is normally the technical resolution in the implementation vehicle. In the majority of cases, the implementation vehicle is a generic letter, be that generic letter for information purposes -- and I'll give some examples of the different kinds -- or a request for information, or something that's telling someone to do something.

8 We work very closely in the formulation of the 9 generic letter and, in fact, the process has changed in 10 about the last 18 months. In the past, a generic letter 11 would be sent out, might request some action, and it would 12 not always require or ask the licensee to respond back to 13 us when he was complete in his action.

For about the last 18 months, we've been very, very careful with generic letters. Anytime we ask someone to do something, we're asking them to write back and tell us when they've completed it. This has become a very, very important step and, you know, it was a very significant change.

From the CRGR package, we then have a generic letter which is agreed upon and consistent with the technical resolution. That will get then sent out to the applicable licensees. At the same time it's sent out, a decision is made internally as to whether it needs to be verified or not, by the inspection group.

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Every generic letter and every requirement is not necessarily verified. Conscious decisions are sometimes made not to, and many of them are not conducive to verification.

5 At that point, let me give some examples which go either way, and also some examples of some parallel 6 7 programs. We in NRR react to operational events, such as mid-loop operations. In fact, in the past several years, 8 9 going back before the reorganization, there were bulletins put out by the Office of Inspection and Enforcement on 10 mid-loop operations. This has been kind of a continuing 11 12 concern. It also happens to be a generic safety issue.

So, we've got two processes that are coordinated as they're going down, and Tom Murley's reaction was partially a frustration to continued problems coming up over the years in this area, which caused him to write to the CEOs and all the operators.

18 In some cases -- we have a second case very 19 similar to in us reacting to operating events, we are 20 doing something that actually can produce the resolution 21 of an ongoing GSI. In another case that we have one which 22 has an inspection procedure code on it, dealing with 23 flooding of equipment. So, flooding of equipment while 24 also being addressed by A-17, is something, in fact, that 25 the regulatory arm has also been concerned about as an

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1 || operating event.

2 So, indeed, all of the USIs and GSIs that you're 3 seeing, just because they have not been resolved in a broader context, doesn't mean the narrower, immediate 4 5 safety problem is not being addressed. And, in fact, in several cases, we have examples where we are addressing it б 7 in parallel, so that the long-term safety action is somewhat separable from the short-term. 8 So, it's not a 9 three-year or two-year shutdown wait.

10 On the point of issuing a generic letter and 11 then making a decision on whether it's suitable for inspection and whether it's of a level that needs to be 12 13 inspected. the inspection is then kept track of in two parallel systems, which allows us to check back and forth. 14 15 It's kept track of in the 766 and now the master 16 inspection system, and it's also kept track of in SIMS and, in fact, we bounce those against each other on about 17 18 an annual basis, and then we call up the regions and we 19 resolve any differences to ensure that what we thought we 20 looked at and eyeballed, we can go to inspection report 21 and see that it was satisfactorily resolved and there were 22 no outstanding items on it. And that's where it comes 23 together; at the end it's complete.

Now, let me go back and give some examples
because we have different perturbations that seem to occur

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depending on what the requirements are coming out of the
 USI or GSI.

3 Information only. We have information only generic issues -- that is, the resolution ends up being 4 forward looking, so it is a change to the standard review 5 plan, and we send it out for information to licensees. 6 An 7 example would be maximum permissible precipitation. This 8 affects flooding, people with dams upstream. We sent out 9 for information a new NOAA publication that said you need to be aware of this, although we see no immediate problem 10 11 to it and, indeed, in future plants, the standard review plan then was updated so that any future plants that came 12 in would be cognizant of the current information. 13 That was generally sent out information only, we saw no 14 15 immediate problem.

16 SPDS. SPDS -- and I might throw in a little 17 plug for our office. When the reorganization occurred, SPDS was one of 11 items that NRR had cognizance of 18 because of a long history and the staff that was solving 19 20 it was still there. We have, in fact, as of Friday, sent our last two letters to Mr. Stello, saying that we've 21 22 finished our mortgage. So, NRR has now completed all of its assigned USIs and GSIs since the reorganization, and 23 24 that was a push over the last year, to get those 25 resolutions out and complete.

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SPDS is a program where resolution has just been achieved, resolution in the sense of what Themis is saying is technical resolution, but technical resolution has fundamentally also been achieved verse to implementation.

5 There we have a long-standing program where it 6 was intended to be a post-implementation review, after 7 TMI. Utilities went forward, put in systems, the best 8 systems that they thought completed with the requirements, 9 and we never basically caught up with the paper.

We did do several reviews. We did almost 50 reviews, found certain deficiencies in certain systems acceptable, in which case, the resolution now is -- and we've issued the generic letter. We've got a NUREG report, but also basically a -- I'll call it -- it's a checklist, but a list of attributes of what an acceptable system has been found by the staff.

The industry is therefor now being requested to look at those attributes and come back and tell us whether their system fits those attributes and, if not, what are the exceptions to it. This is in lieu of going out and doing some very manpower-intensive efforts to review systems that we basically know are in place, and in place adequately, we believe, in most places.

24 So, what we've got is a cleanup job on that 25 that's going on right now, and we believe that's well on

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II	40				
1	its way to actually being closed off and completely off				
2	the books.				
3	COMMISSIONER ROGERS: Excuse me just on the				
4	SPDS, how plant-specific are the SPDS systems? Is there a				
5	big difference between SPDS systems and different combined				
6	plants?				
7	MR. GILLESPIE: I don't want to say that because				
8	I haven't eyeballed enough of them myself to say that				
9	they're the attributes are generally the same. Now,				
10	what where the wiring goes				
11	COMMISSIONER ROGERS: Oh, yes.				
12	MR. GILLESPIE: That's plant-specific.				
13	COMMISSIONER ROGERS: Of course.				
14	MR. GILLESPIE: But the attributes and what				
15	we're doing now really recognizes that the attributes of a				
16	good system and the parameters you need to control or				
17	understand what's going on in the course of an accident,				
18	are fairly consistent from plant-to-plant.				
19	Now, a plant may choose to put more parameters				
20	in or upgrade the system more than we even desired, and				
21	that's fine, but the general basic requirements are the				
22	same plant-to-plant the types of parameters we want to				
23	see, the pressures, the temperatures, the power supplies				
24	for it.				
25	COMMISSIONER ROGERS: So, your work now has				
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1	really just been to clean up the attributes definitions?			
2	MR. GILLESPIE: Yes.			
3	CHAIRMAN ZECH: Well, what do you mean by the			
4	SPDS status report then? How does it stand?			
5	MR. GILLESPIE: The generic letter			
6	CHAIRMAN ZECH: Is it in all the plants that you			
7	think it's in? Can you say that for sure? Has it been			
8	implemented in all the plants?			
9	MR. GILLESPIE: It has not been implemented in			
10	all the plants, we know			
11	CHAIRMAN ZECH: But your work is finished, is			
12	what you're telling us. In other words, as far as the			
13	attributes or the requirements for the SPDS			
14	MR. GILLESPIE: Yes.			
15	CHAIRMAN ZECH: But you don't know are you			
16	saying that you do know that it is not fully implemented			
17	in all the plants?			
18	MR. GILLESPIE: We do know some plants that do			
19	not have it fully implemented, yes.			
20	CHAIRMAN ZECH: Do all plants have it partially			
21	implemented?			
22	MR. GILLESPIE: I believe there's one plant that			
23	does not.			
24	COMMISSIONER ROGERS: Well, let's see, you had a			
25	didn't you have a kind of tentative approval status for			
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I	42			
1	SPDS systems?			
2	MR. GILLESPIE: Yes.			
3	COMMISSIONER ROGERS: I think maybe the question			
4	is, are all the plants except one operating under that,			
5	with that kind of equipment set?			
6	MR. GILLESPIE: Yes. What we are doing now is,			
7	we're really evaluating consistency with the general			
8	precepts of what it's supposed to be.			
9	CHAIRMAN ZECH: If I recall, a number of plants			
10	that I've visited have the SPDS system installed, and they			
11	have had for sometime.			
12	MR. GILLESPIE: Yes.			
13	CHAIRMAN ZECH: But if we're just getting out			
14	the specific attributes we want of the system, you know,			
15	now, I can understand that there could be some plants out			
16	there that, for some reason or other, don't have or don't			
17	meet all our final requirements but, in any case,			
18	certainly most all the plants I visited, I can recall, do			
19	have some kind of SPDS system installed.			
20	Many of them apparently have it installed it for			
21	sometime, and they've used it.			
22	MR. GILLESPIE: Yes.			
23	CHAIRMAN ZECH: But whether or not it meets the			
24	specific requirements or not that you've just released, I			
25	guess, is what you're telling us now, how are you going to			
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1	check to make sure? Are you going to ask the utilities if				
2	they do if their SPDS is installed and has been				
3	installed for maybe for many years, does meet those				
4	requirements, how are you going to find out about				
5	implementation?				
6	MR. GILLESPIE: We've asked that question.				
7	That's the specific question that's asked in the generic				
8	letter, so that we will have a definitive answer which we				
9	can then go out and choose to verify either completely or				
10	on an audit basis, and that's a definitive answer we've				
11	been lacking, lacking for				
12	CHAIRMAN ZECH: But this is just kind of a				
13	question of general interest. Do you have different				
14	requirements, for example, for a BWR plant as opposed to a				
15	PWR plant?				
16	MR. GILLESPIE: Yes.				
17	CHAIRMAN ZECH: You do have?				
18	MR. GILLESPIE: Yes. The parameters are going				
19	to be different.				
20	CHAIRMAN ZECH: Do you have different parameters				
21	for each particular design plant?				
22	MR. GILLESPIE: Not in general, no.				
23	CHAIRMAN ZECH: But it's generally broken down				
24	into boiling water reactor and pressurized water?				
25	MR. GILLESPIE: Because you're going to have				
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1 || different parameters you're monitoring.

CHAIRMAN ZECH: I understand that. We have some older plants and some new plants, too. Some of them are quite -- you know, the designs are different. That's part of our regulatory challenge, is to regulate all these custom-built plants.

7

16

MR. GILLESPIE: Right.

8 CHAIRMAN ZECH: I guess I'm trying to figure out 9 when you put out attributes for a SPDS system, it might be 10 quite different for one of our earlier plants than one of 11 our later plants, even though they're both PWR or both 12 BWR.

MR. GILLESPIE: Yes. I think you'll find the report we compiled was based on a review of 50 different plants.

CHAIRMAN ZECH: Yes.

MR. GILLESPIE: And what we've done is taking the acceptable attributes across that sample of plants. We firmly believe that we've covered the broad range of what would be expected at any particular plant that wasn't one of those 50.

CHAIRMAN ZECH: Have you involved the utilities in any of the review process?

24 MR. GILLESPIE: No, they were not involved in 25 the review process.

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	4			
1	CHAIRMAN ZECH: Dr. Speis, have you got			
2	something you want to tell me?			
3	DR. SPEIS: No, I just basically, the			
4	information is generally the same because, you know,			
5	you're focusing on the key parameters and information that			
6	you need to			
7	CHAIRMAN ZECH: Yes. No, I understand that, I			
8	just wanted to know if you'd made any provision for			
9	differences.			
10	DR. SPEIS: So, even between BWRs and PWRs,			
11	it's mostly the same. There are some differences, but			
12	they are essentially are the same.			
13	CHAIRMAN ZECH: So, the utilities shouldn't be			
14	surprised			
15	MR. GILLESPIE: Oh, no, no.			
16	CHAIRMAN ZECH: by the attributes that you're			
17	requiring them to have.			
18	MR. GILLESPIE: No. This was very this was			
19	very well worked within the staff document, to ensure that			
20	we were not putting any new requirements on anybody, and			
21	it's a final step in, actually, the requirements that were			
22	put out for post-implementation review in 0737 Supplement			
23	1 many years ago, and this is promulgating from those			
24	broad requirements, which systems that we reviewed that			
25	looked very, very acceptable to the staff, what were the			
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1 attributes of those systems for other people to compare 2 themselves against, and then let us know what are the 3 results of their comparison, and then we can deal only by 4 exception.

5 So, it is not promulgating any new requirements. 6 It is trying to give examples of what we generally found 7 acceptable for requirements that have been long-standing.

8 CHAIRMAN ZECH: All right. Fine. Thank you.
9 Let's proceed.

10 COMMISSIONER CURTISS: On that point, do the 11 attributes that you've recently identified differ in any 12 significant way from the system that was envisioned right 13 after TMI in 0737? Have we focused on the bells and 14 whistles problem?

MR. GILLESPIE: No, we don't believe we do. If anything, we've taken a step back and taken the more global look, and many, many of the same people involved then, were actually involved with CRGR at this time.

COMMISSIONER CURTISS: So, would it be fair to say that on SPDS, the only real change in direction here is that the -- sort of the burden of proof, if you will, on demonstrating that your system complies with these requirements that have been in place since TMI and that have been expanded upon in this recent attributes document --

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MR. GILLESPIE: Yes.

1

2 COMMISSIONER CURTISS: -- is to say to the 3 utilities, examine your system against this list of attributes, and tell us whether you think your system 4 meets all of these attributes, identify areas where you 5 think there are exceptions to your system -- in other 6 7 words, where you don't comply -- and then based upon that 8 submittal, with the burden being on the utility, we will 9 then evaluate the submittal for purposes of determining whether to conduct selective audits. 10 MR. GILLESPIE: Yes. 11 COMMISSIONER CURTISS: 12 Okay. CHAIRMAN ZECH: All right. Let's proceed. 13 14 MR. GILLESPIE: Proceeding down, let me give an 15 example of one that was resolved with no new requirements 16 -- and this was on steam generators -- three long, long-17 standing issues which were finally brought to conclusion 18 this last year. USIs A-3, 4 and 5 and, in fact, in this case, we 19 20 have the technical resolution. The basic finding was that 21 we had -- in the course of our day-to-day business of 22 operational safety, we had overcome the problem that was 23 originally formulated. We did issue a generic letter, for information 24 only, and we issued it with a closeout report on what the 25 (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600

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specifics were. This is an older issue, again, that has 1 2 been now cleaned up and documented, so if questions ever 3 come up in the future we can go back and reference it. 4 Let me give one last -- maybe one last example, 5 and that's GSI-86. It was issued by generic letter in '88, and it was a long-range plan for dealing with stress 6 7 corrosion cracking in BWR piping and, in fact, in that 8 case, we are going out and we are observing some of the 9 testing and inspections going on, of stainless steel piping in BWRs during shutdowns. 10 11 And, again, that is generally a two-year envelope, and we try to get it all done within two years 12 because many of these tend to be event-oriented, and it 13 14 just takes that long before you get the opportunity to 15 observe it at a plant. 16 That takes me through to inspection closeout. 17 It also, I think, demonstrates certain ones are 18 information only, certain ones are licensee response 19 without an inspection, and that covers -- those are really 20 the three alternative approaches we have. 21 Oh, I didn't focus on the chart. There is a 22 chart with some numbers, which is the status. It's page 23 19 in the handout. (Slide) We are focusing only now on the high priority GSIs for inspection purposes, and we 24 25 totally agree and support Research, and we just focus our (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600

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resources generally in the high area. 1 2 CHAIRMAN ZECH: Well, let me just ask you, if you didn't have any new safety issues coming up, when 3 would all the safety issues that you have identified now, 4 be resolved through implementation and verification, the 5 6 whole way? 7 MR. TAYLOR: I think --8 MR. GILLESPIE: Yes, let me give you -- I would 9 like to --CHAIRMAN ZECH: 10 If no new ones came up. MR. GILLESPIE: If no new ones came up --11 CHAIRMAN ZECH: Just what we're looking at here. 12 -- I would like to be able to 13 MR. GILLESPIE: 14 say within two outages from right now --CHAIRMAN ZECH: Why don't we say it. 15 MR. GILLESPIE: -- or from when the last 16 resolution that we're currently working on is out but, 17 inevitably, there is the exception, and I can give you--18 I've got an exception in front of me, which is reactor 19 20 vessel overpressurization. The last plant to be -- have 21 that implemented in it will be Comanche Peak, and it's 22 actually waiting for down the road, for after it's licensed, and some things that need to go on then. 23 So, there's always going to be that one on 24 25 someone that has an operational reason for being --(202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

1 CHAIRMAN ZECH: No, I agree. Certainly, we 2 understand that there could be exceptions, and for valid 3 reasons, but I guess it would be good to know that we're 4 making significant progress on these generic issues, as it 5 would appear to me we're making on the USIs. Are we?

6 MR. GILLESPIE: Yes. We generally have a two-7 outage envelope that we've been looking at when we 8 promulgate a generic letter.

9 CHAIRMAN ZECH: Well, let me just ask you this 10 then. Do you think the utilities themselves, the 11 licensees, are making reasonable progress towards 12 implementation and resolution both, of these safety 13 issues?

14

MR. GILLESPIE: Yes.

15 CHAIRMAN ZECH: You think they are. And Ι 16 think that's very important. I recognize that, you know, 17 you have a part of the work to put out what's required, but it simply doesn't solve the problem until they're 18 19 implemented and, as long as you feel that they are 20 responsible and responding to your direction, that's very 21 important, so they are making progress and you believe it 22 is reasonable progress.

23 MR. GILLESPIE: Oh, yes. I might give an 24 example where follow-up has caused more work for us, and 25 that was emergency operating procedure inspections which

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we started about a year and a half ago, which actually 1 involved -- it touches upon three different resolutions 2 3 for three different generic issues, and we are going to continue those, and we have a NUREG report being put 4 together right now to give some lessons learned from the 5 initial group of those types of inspections. We will 6 continue those inspections because we were not necessarily 7 8 entirely happy with the way it had been resolved and 9 implemented in the plants, how the procedures were being 10 put in place, so we aggressively pursue -- when we do go 11 out and check on the important ones, we aggressively pursue getting adequate implementation in all facilities. 12 Do you make any requirements on 13 CHAIRMAN ZECH:

14 the licensees, to complete it after one outage or two 15 outage, or whatever might be reasonable?

MR. GILLESPIE: Yes. The way we have been approaching for somewhat over a year now, when we put out a generic letter, we will normally put "Please submit us a schedule not to exceed two outages" right in it, so we know up front what we're dealing with, and that's --

21 CHAIRMAN ZECH: And you can keep track of that 22 and that's a commitment on their part.

23 MR. GILLESPIE: -- and that's a commitment on 24 their part and, if there is an exception, we know about 25 the exception up front. So, our approach to the

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promulgation of the requirements has been very, very much 1 2 refined over about the last year and a half. CHAIRMAN ZECH: Yes. Good. Excellent. 3 COMMISSIONER ROGERS: I wonder if there is any 4 5 kind of a little report that you could give us that 6 doesn't take an enormous amount of effort to prepare, that 7 documents in some way the kind of qualitative answer that you just gave to the Chairman's question of how do you 8 feel that industry is implementing this on a -- I take it, 9 on a rolling basis, that once they get something from us 10 11 and they have two outages to do it, then there's a firm time, but I take it there's activity going on all the 12 13 time, to implement these things, even if we haven't quite 14 completed our work because we have enough dialogue with people that they understand that we're about ready to come 15 out with a something. I mean, is there some kind of a 16 report that you could give us, that in some way gives us 17 18 some picture of how this process is taking place, that 19 indicates what work is already going on in industry, that 20 isn't just waiting for the bell to ring with a generic letter coming out from NRC. Is that possible to do, or is 21 that too difficult to do? 22

23 MR. GILLESPIE: Well, I'm trying to make sure I 24 understand your question.

25

MR. TAYLOR: You'd like to have a periodic

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1 report potentially of a sample across some of the outlying 2 issues that have either been delayed, or are being 3 accomplished, is that --

4 COMMISSIONER ROGERS: Well, I take it that what 5 we're hearing from you is that there's an NRC procedure 6 that's being followed in looking at all these things, that 7 at some point has an end, an end date, and it may be quite 8 far out if it depends on some operational requirement of a 9 particular plant.

10 So, if we look at that as an isolated process, 11 it doesn't give us a true picture of, in fact, what is 12 happening with implementation across the broad industry 13 picture. It may be distorted somewhat just because of 14 maybe one or two outlying plants that something is waiting 15 for that they have to operate to finally close out 16 something.

In other words, I think that what I'm a little uncomfortable about here is that we don't really have a sense of what the impact of the NRC activity is on what is happening in industry, or already has happened in industry, as a result of this.

It looks like we're breaking this into an NRC generic issue resolution program and then industry implementation program, that one follows the other but, in fact, they overlap, is what I see you're saying.

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MR. GILLESPIE: Yes. Okay.

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2 COMMISSIONER ROGERS: And, so, what are the 3 benefits that already have taken place from what we've 4 done in the way of industry implementation, that won't be 5 complete until some later date when the whole, entire 6 program resolution and implementation has been completed, 7 which may be some time.

MR. GILLESPIE: Yes. We have -- at least right 8 9 now within the system, we have a list of items that, in 10 fact, have been completed or implemented before the plantspecific SERs have been issued and they've been imposed. 11 12 The majority of those tend to have been TMI items, where 13 the industry had the broad direction, went out and they did it, and specific SERs, or safety evaluation reports, 14 were issued after the fact. 15

16 That tends not to be the case on most issues 17 that we're dealing with today. So, yes, we --

COMMISSIONER ROGERS: I'm just trying to get a little more quantitative feeling about a qualitative statement that you made that says, well, you feel good about what industry is doing here.

Now, I don't want to seem nitpicking about it, but I'd like to feel that I had a little better handle on what the basis is for your judgment there.

MR. TAYLOR: Why don't we make a commitment to

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1	take a look at a potential report of some type, and we'll
2	come back to the Commission
3	COMMISSIONER ROGERS: I don't think we want to
4	I'm not asking for a major effort, but I need something
5	that
6	MR. TAYLOR: No, I understand, and this is a big
7	program with lots of issues across lots of plants. Why
8	don't we take a commitment from this meeting, to take a
9	look at a type of periodic report, and we'll recommend to
10	the Commission at what periodicity to provide it,
11	depending upon what
12	COMMISSIONER ROGERS: I think that would be
13	good.
14	CHAIRMAN ZECH: Very useful.
15	MR. TAYLOR: let us get a look at that as
16	part of what we take from this meeting, so that you will
17	feel more informed not only that the technical process has
18	gone on, but progress is being made, and at what degree
19	because this is negotiated through outages, through
20	actually, some of these take procurement, and the planned
21	outage work, and outages grow, and people we, of
22	course, put the highest priority on the highest priority
23	generic issues, and that is from a safety standpoint, and
24	that's what we always press on, that some of the other
25	mediums may slip.

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1	So, let us take a commitment to try to formulate				
2	some type of periodic report and come back to the				
3	Commission and at least try at giving you some periodic				
4	staff report.				
5	CHAIRMAN ZECH: All right. Fine. Thank you.				
6	COMMISSIONER ROGERS: Good.				
7	CHAIRMAN ZECH: Does that conclude your				
8	presentation?				
9	MR. GILLESPIE: Yes, it does.				
10	CHAIRMAN ZECH: All right. Questions from my				
11	fellow Commissioners? Commissioner Roberts?				
12	COMMISSIONER ROBERTS: I understand we're going				
13	to hear from the ACRS next week?				
14	CHAIRMAN ZECH: I think it's May 3rd.				
15	COMMISSIONER ROBERTS: I'm not asking for your				
16	response now, but will we get a response from the staff on				
17	the ACRS questions because they had some disagreements				
18	with you.				
19	DR. SPEIS: On the mid-loop operation?				
20	COMMISSIONER ROBERTS: USI A-45 and generic				
21	issue 99, RHR Reliability in Decay Heat.				
22	MR. MINNERS: We have replied to ACRS on A-45,				
23	and I wouldn't characterize that as a disagreement.				
24	DR. SPEIS: We will get the information to the				
25	Commission before you meet with the ACRS.				
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1	CHAIRMAN ZECH: All right. Fine. Thank you.
2	DR. SPEIS: We'll do that.
3	COMMISSIONER ROBERTS: That's all I have.
4	CHAIRMAN ZECH: Commissioner Rogers?
5	COMMISSIONER ROGERS: I don't think so, no.
6	CHAIRMAN ZECH: Commissioner Curtiss?
7	COMMISSIONER CURTISS: Just a couple of things.
8	Going to that last chart, to make sure I understand what
9	those numbers are there. It's labeled Summary of Generic
10	Issue Resolution Status. This really this focuses on
11	the number of actions required to implement the issues
12	that have been resolved?
13	MR. GILLESPIE: Yes.
14	COMMISSIONER CURTISS: So that the 735 issues,
15	655 have been resolved, 80 remain that we talked about in
16	the Research presentation. This is actually the
17	translation of the implementation of those resolved
18	issues? Do I read that correctly?
19	MR. GILLESPIE: Yes.
20	COMMISSIONER CURTISS: Let me go back to the
21	schedule for a minute and ask a couple of questions. If I
22	understood what you've said, all of the three remaining
23	USIs will be resolved by the end of 1989, and 80 percent
24	of the high priority issues will be resolved by the end of
25	next year.

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DR. SPEIS: Yes. 1 2 COMMISSIONER CURTISS: Calendar year? 3 DR. SPEIS: Yes. 4 COMMISSIONER CURTISS: So, 16 of those have been resolved, four remain. At the end of 1990, if we have no 5 new issues, we'd have four high priorities. Do we have a 6 schedule for the 13 medium priorities? 7 DR. SPEIS: We have a schedule for all of them. 8 9 COMMISSIONER CURTISS: Do you have an idea, say, at the end of 1990, where we will be on the medium 10 11 priorities? DR. SPEIS: On the medium -- I have some of my 12 13 notes here -- 70 percent next year. 14 COMMISSIONER CURTISS: By the end of '90? DR. SPEIS: By the end of '90, yes. 15 That's an 16 approximate --17 The question I'm really COMMISSIONER CURTISS: 18 driving at is, under the Part 52 regulations that we put 19 out, where the applicant for a design certification has to 20 propose a solution to, what, the medium and the high 21 priority issues? 22 DR. SPEIS: Yes. Yes. Yes. COMMISSIONER CURTISS: At the end of 1990, those 23 24 will be roughly four high priority and whatever 30 percent 25 of 13 is, that will still be unresolved, that will be the (202)234-4433 NEAL R. GROSS & COMPANY, INC. (202)232-6600 1323 RHODE ISLAND AVENUE, N.W., WASHINGTON, D.C. 20005

pool of issues that would be unresolved that, for the purposes of a design certification, the applicant would have to address?

Yes, that's true, but you have to 4 DR. SPEIS: 5 realize that the resolution of most of these issues is clear -- you know, because we are talking about potential 6 7 enhancements to existing plants, we have to go through the backfit rule, okay, so this is a very easy problem to 8 9 resolve for future plants, where you are starting from scratch, from -- you know -- and the improvements that are 10 called in these issues, it's very easy to accommodate. 11 So, industry has told us that 99 percent of the times 12 13 there's no problem, they know how to resolve, and we agree 14 with them, okay. So, in most instances, again, you know, 15 the difficulty we're having is not a difficulty, the time that it takes us to complete a resolution for existing 16 17 plants is that we'll have a number of options, okay, and we have to go through the backfit and the regulatory 18 19 analysis for that.

20 COMMISSIONER CURTISS: You see a fairly clean 21 process for the new plants.

DR. SPEIS: Much more clean, yes, much more clean, and we have discussed this. In fact, when we started the process of reviewing the EPRI requirements document, okay -- and we worked through every issue, and

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it was clear from those discussions that there was no 1 2 problem resolving most of these issues, okay, for future plants it's much easier. You know, most of them involve, 3 4 for example, a material that we know works versus something that was put into a plant 15 years ago, you 5 It's not very easy to go in and break something 6 know. 7 down, but for a future plant, it's no problem. COMMISSIONER CURTISS: That's all I have. 8 CHAIRMAN ZECH: Well, thank you very much for a 9 10 very useful discussion of the results of your efforts to improve the processing of these generic safety issues. 11 The progress, as far as I'm concerned, that's been made 12 13 since our last meeting is very encouraging, and I'm 14 pleased that all unresolved safety issues are scheduled to 15 be resolved by the end of this year. I commend the staff for this very aggressive 16 17 effort. You've heard from the Commission, I know at least the years that I've been on the Commission, about trying 18 19 to do a better job in resolving these generic issues and 20 unresolved safety issues, and I feel that you have made 21 real progress, significant progress, and I think that we 22 can all be encouraged by the progress you've made, and I certainly commend you for the efforts, and ask you to 23 continue the momentum you've got going and to keep it up. 24 25 You did describe the rigorous process that

1 requires a coordination among your own technical 2 organizations as well as those outside the NRC, and I 3 recognize that that coordination process is a challenge, but I think the significant efforts you've made to 4 5 complete resolution of these issues, and the implementation, too, and the follow-through to make sure 6 that they do get implemented and verified, really, I feel 7 8 that we do have a good handle on this program now, 9 certainly much better than we had a few years ago and, 10 again, I commend you for the progress that you've made, 11 all of you, Research as well as NRR. However, there 12 really does appear to be a lot more work to be done, and 13 the remaining issues are not insignificant, as we know, 14 and as time goes on and we learn more, we may add to the 15 list.

16 So, I would certainly encourage you to press forward and complete the work as efficiently and timely as 17 18 you can, while at the same time maintaining a very high 19 quality of your technical efforts. Safety is our business 20 and that's what it's all about, so we do care about schedules, and we do like to see progress but, again, we 21 count on you mainly to resolve them technically and do the 22 right thing and, certainly, my observation of your efforts 23 24 in that regard is that's exactly what you're doing, but 25 please keep in mind that quality of the work is awfully

1 || important and we appreciate that.

And, so, as far as I'm concerned, I'd rather have you take the time you need to do it right, than to hurry up with a schedule, but it is important we make progress here, and I think we are making progress, and I'm pleased to see that.

7 The Commission will want to continue to monitor 8 the progress that you are making, and I believe it would be helpful for at least another progress report on this 9 10 matter, perhaps sometime not too long after the first of 11 the year, when you expect to finish your unresolved safety issues, it might be appropriate to come to the Commission 12 13 at that time and give us another report on this whole 14 issue.

So, again, I commend the staff for the progressyou're making. It's very encouraging.

17 Any other comments from my fellow Commissioners?
18 (No response.)

19If not, thank you very much.We stand20adjourned.

21 (Whereupon, at 11:23 a.m., the meeting was 22 adjourned.)

23

24

25

### CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting of the United States Nuclear Regulatory Commission entitled: TITLE OF MEETING: BRIEFING ON THE STATUS OF GENERIC ISSUES PLACE OF MEETING: ROCKVILLE, MARYLAND DATE OF MEETING: APRIL 25, 1989 were transcribed by me. I further certify that said transcription is accurate and complete, to the best of my ability, and that the transcript is a true and accurate record of the foregoing events.

Phyllie Young

Reporter's name: Phyllis Young

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Commission Briefing ON The Status of The Generic Issues Program

> T. P. SPEIS RES, X23710 April 25, 1989

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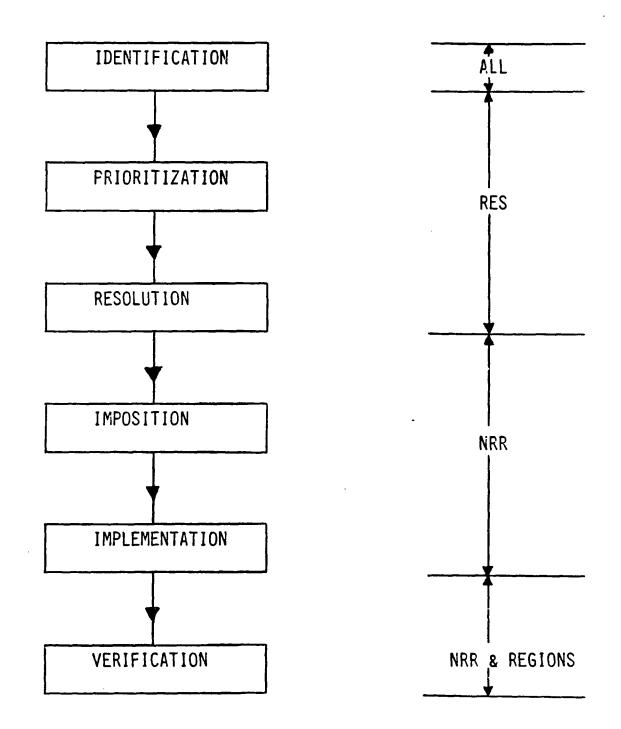


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## GENERIC ISSUE PROCESS

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### Recap

PROGRAM STARTED IN 1981 WITH 511 ISSUES IDENTIFIED TO BE PRIORITIZED:

TMI ITEMS (NUREG 0660	- 369
& 0737)	
NUREGs 0371 & 0471	- <u>142</u>
	<u>511</u>

- ADDITIONAL 224 ISSUES (INCLUDING HUMAN FACTORS ISSUES) IDENTIFIED IN THE PAST 8 YEARS
- TOTAL ISSUES IDENTIFIED AS OF 04/25/89 = 735

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PROGRESS SINCE 10/21/87 BRIEFING					
RESOLVED 1	0/21/87	<u>5/12/88</u>	<u>4/25/89</u>		
PRIORITIZED LOW	25	24	24		
PRIORITIZED DROP	62	66	73		
INTEGRATED					
W/OTHER ISSUES	119	121	122		
RESOLUTION					
DEFINED IN		-			
NUREG-0737	88	88	88		
Resolved	275	285	303		
Non-safety (LI,					
RI, &E)	<u>41</u>	<u>_44</u>	<u>   45</u>		
SUB-TOTAL:	<u>610</u> (+18)	<u>628</u> (+27)	<u>655</u>		

## ISSUES STILL TO BE RESOLVED

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	<u>10/21/87</u>	<u>5/12/88</u>	<u>04/25/89</u>
USIs	9	9	3
HIGH	32	28	20
MEDIUM	16	12	13
NEARLY			
Resolved	12	11	- 8
То ве			
PRIORI.	<u>52</u>	<u>45</u>	<u>36</u>
SUB-TOTAL:	<u>121</u>	<u>105</u>	<u>80</u>

# <u>SUMMARY</u>

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	<u>10/21/87</u>	<u>5/12/88</u>	04/25/89
Resolved	610 (83%)	628 (86%)	655 (89%)
Το βε			
RESOLVED	<u>121</u> (17%)	<u>105</u> (14%)	<u>80</u> (11%)
TOTAL:	<u>731</u>	<u>733</u>	<u>735</u>

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# REMAINING USIS

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A-17 A-40 A-47

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USI A-17: Systems Interaction	<u>ons</u>
5-YR. PLAN RESOLUTION DATE:	12/89
CURRENT RESOLUTION DATE:	12/89
STATUS: CRGR REVIEW OF DTR	10/880
ACRS REVIEW OF DTR	08/880
CRGR REVIEW OF FTR	09/89
ACRS REVIEW OF FTR	09/89
FRN	12/89

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EISMIC DESIGN CR	ITERIA
SOLUTION DATE:	06/89
JTION DATE:	06/89
REVIEW OF DTR	03/88C
Review of DTR	DECLINED
REVIEW OF FTR	04/89
REVIEW OF FTR	04/89
	06/89
	SOLUTION DATE: JTION DATE: REVIEW OF DTR REVIEW OF DTR REVIEW OF FTR

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## USI A-47: SAFETY IMPLICATIONS OF CONTROL SYSTEMS

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5-YR, PL	an Res	SOLUTION	N DA	ATE:	06/89
CURRENT RESOLUTION DATE:				08/89	
Status:	CRGR	Review	0F	DTR	12/870
	ACRS	Review	OF	DTR	11/87C
	CRGR	Review	OF	FTR	03/89
	ACRS	Review	0F	FTR	04/89
	FRN				08/89

### <u>GSI-99</u>, "Loss of RHR CAPABILITY IN PWRs" (HIGH PRIORITY)

- FOCUSED ON 2 MODES OF CCF OF RHR COOLING:
  - AIR BINDING OF RHR PUMPS DURING MID-LOOP OPERATIONS
  - LOSS OF RHR PUMP SUCTION DUE TO AUTOCLOSURE INTERLOCK-RELATED SPURIOUS CLOSURES OF THE RHR SUCTION/ISOLATION VALVES

### <u>GSI-99 CONT'D.</u>)

ISSUE RESOLVED IN 10/88. GL 88-17 ISSUED TO PWR OLS & CPS WITH GUIDANCE AND RECOMMENDATIONS TO REDUCE THE LIKELIHOOD AND CONSEQUENCES OF A LOSS OF DECAY HEAT REMOVAL:

IMPROVE PROCEDURES AND
 INSTRUMENTATION TO HELP OPERATOR
 PREVENT AND MITIGATE LOSS OF DECAY
 HEAT REMOVAL

# <u>GSI-99 (Cont'd)</u>

DEVELOP PROCEDURES THAT WILL
 PERMIT TIMELY CLOSING OF
 CONTAINMENT OPENINGS DURING A
 DEGRADATION IN DECAY HEAT REMOVAL.

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## <u>B-56</u>, "DIESEL GENERATOR RELIABILITY" (HIGH PRIORITY)

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5-YR, PL	AN RESOLUTION DATE:	09/89
CURRENT	RESOLUTION DATE:	09/89
Status:	CRGR REVIEW OF DTR	09/88C
	ACRS REVIEW OF DTR	11/88C
	11/880	
	07/89	
	ACRS REVIEW OF FTR	07/89
	Issue Final Reg.	
	09/89	

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## <u>B-56 (Cont'd.)</u>

RESOLUTION OF USI A-44 INCLUDED THE NEED FOR A DIESEL RELIABILITY PROGRAM TO MAINTAIN THE RELIABILITY LEVEL OF EDGS AT OR ABOVE LEVELS SELECTED FOR RESPONSE TO THE SBO RULE (10CFR50.63)

#### <u>B-56 (Cont'd)</u>

- CONCLUDING STAFF EFFORTS DIRECTED AT DEFINING THE PRINCIPAL ELEMENTS OF AN EDG RELIABILITY PROGRAM AND TECHNICAL GUIDELINES FOR NRC USE IN REVISION OF REG. GUIDES, SRP, AND INSPECTION MODULES.
- COORDINATING WITH NUMARC TO DEVELOP A RELIABILITY PROGRAM CONSISTENT WITH INDUSTRY PRACTICES AND COMMISSION DESIRE TO MINIMIZE UNNECESSARY TESTING.

#### REVIEW OF LOW PRIORITY ISSUES

IN ACCORDANCE WITH COMMISSION REQUEST, EXTENSIVE STAFF REVIEW OF 25 LOW PRIORITY ISSUES RESULTED IN 1 ELEVATED TO HIGH: GSI 15, "RADIATION EFFECTS ON REACTOR VESSEL SUPPORTS." TASK ACTION PLAN FOR RESOLUTION BEING DEVELOPED BY STAFF.

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#### Delays

- DEPENDENT ON INDUSTRY ACTIONS FOR RESOLUTION E.G., GSI-29, "BOLTING DEGRADATION OR FAILURE IN NUCLEAR POWER PLANTS."
- DEPENDENT ON PLANT EXPERIENCE TO DEMONSTRATE EFFECTIVENESS OF RESOLUTION, E.G., GSI B-55, "IMPROVE RELIABILITY OF TARGET ROCK SAFETY RELIEF VALVES."

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### SUMMARY OF GENERIC ISSUE RESOLUTION STATUS\*

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<u>GI_TYPE</u>	TOTAL ACTIONS	ACTIONS IMPOSED	ACTIONS IMPLEMENTED BY LICENSE	ACTIONS VERIFIED <u>BY_NRC</u>
HIGH GSI	1,540	1,420	1,278	1,150
MEDIUM GSI	1,366	1,308	1,260	1,107
LOW GSI**	630	628	607	567

- \* REPORTED BY SIMS (R-1216505-002 DATED 4/14/89)
- \*\* PRIOR TO THE FORMALIZATION OF THE GENERIC ISSUES PROCESS