

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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Title: BRIEFING ON NRC REACTOR INSPECTION PROGRAM  
ASSESSMENT AND PLANNED IMPROVEMENTS

Location: ROCKVILLE, MARYLAND

Date: SEPTEMBER 20, 1993

Pages: 67 PAGES

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- - - -

PUBLIC MEETING

Nuclear Regulatory Commission  
One White Flint North  
Rockville, Maryland

Monday, September 20, 1993

The Commission met in open session,  
pursuant to notice, at 3:00 p.m., Ivan Selin,  
Chairman, presiding.

COMMISSIONERS PRESENT:

IVAN SELIN, Chairman of the Commission  
KENNETH C. ROGERS, Commissioner  
FORREST J. REMICK, Commissioner  
E. GAIL de PLANQUE, Commissioner

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## STAFF SEATED AT THE COMMISSION TABLE:

WILLIAM C. PARLER, General Counsel

ANDREW BATES, Office of the General Counsel

JAMES TAYLOR, Executive Director for Operations

THOMAS MURLEY, Director, NRR

STEWART EBNETER, Region II Administrator

WILLIAM RUSSELL, Associate Director for Inspections  
and Technology Assessment, NRR

JAMES MILHOAN, Region IV Administrator

ANTHONY GODY, SR., Chief, Inspections and Licensing  
Policy Branch, NRR

HUBERT MILLER, Deputy Administrator, Region III

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## P-R-O-C-E-E-D-I-N-G-S

3:00 p.m.

1  
2  
3 CHAIRMAN SELIN: Good afternoon, ladies  
4 and gentlemen. I'm particularly interested in this  
5 meeting this afternoon since for a long time we've  
6 been talking about how important a reactor inspection  
7 program is and yet we found it difficult to come up  
8 with some kinds of measures to say how are we doing,  
9 how is the program doing, how does it carry out the  
10 interests of the public, is it worth the money we're  
11 spending on it, should we be doing more or less a  
12 little bit differently.

13 Over the past several years, substantial  
14 revisions have been made to this inspection program.  
15 The growing role of team inspections has been  
16 organized. The N+1 resident inspector program has  
17 been implemented. The relation between the inspection  
18 program and the recognition that the likelihood of  
19 finding problems is different at different licensees  
20 depending on their experience has been growing. So,  
21 in order to evaluate the effectiveness of this  
22 program, a detailed program assessment process was  
23 developed and implemented by the staff this year.

24 Today's meeting serves as a means for the  
25 staff to provide the Commission with the reactor

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1 inspection program assessment methodology and with  
2 results of the review of the program.

3 I understand that copies of the viewgraphs  
4 are available at the entrance to the room.

5 Commissioners?

6 Mr. Taylor, would you proceed, please?

7 MR. TAYLOR: Good afternoon. With me at  
8 the table is a very strong representation for  
9 inspection program. In addition to Doctor Murley,  
10 Bill Russell and Tony Gody from NRR. We have with us  
11 three folks from the regions, Stu Ebnetter, Jim  
12 Milhoan, region administrators, and Hub Miller, Deputy  
13 Regional Administrator in Region III.

14 I would take note that the report prepared  
15 by the staff on the inspection program dated August  
16 25th is available at the door and I thought this was  
17 a very broad sweeping and forthright view of the  
18 various parts of our inspection program.

19 With those thoughts, I'll ask Doctor  
20 Murley to continue.

21 DOCTOR MURLEY: Yes. Thanks, Jim.

22 I have some background remarks before Tony  
23 Gody gets into the assessment that we did.

24 The NRC inspection program is the  
25 cornerstone of our regulatory process for assuring the

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1 safe operation of nuclear power plants. Because it's  
2 so important, we regularly review the program and we  
3 make adjustments when we see the need. For example,  
4 going back to the mid-'80s, we began to turn the focus  
5 of the inspection program away from strict compliance  
6 orientation toward a more diagnostic focus to help us  
7 judge how well plants were being operated.

8 Then in 1987, we changed the program to  
9 issue guidelines to structure the program in three  
10 main areas. The first was the core inspection program  
11 which is largely carried out by resident inspectors  
12 and each plant in the country receives that core  
13 program. The second area was regional initiatives  
14 which are largely event driven and, of course, vary  
15 from region to region. The third area are special  
16 area inspections. These are team inspections at each  
17 plant in the country where the staff judged that there  
18 was a safety concern.

19 For example, an emergency operating  
20 procedures we did a team inspection, maintenance team  
21 inspection, electrical distribution functional and  
22 system inspection and service water system inspection.

23 In 1989 the staff did a regulatory impact  
24 survey where a number of senior management -- each of  
25 the regional administrators and myself and the senior

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1 managers in NRR went on teams and we looked at 13  
2 different sites in all five regions just to find out  
3 how the regulatory program was being developed and  
4 implemented and what problems were being caused. Part  
5 of it, of course, was generic communications at  
6 Headquarters, but a large part had to do with the  
7 inspection program and the way it was being  
8 implemented. The results of that led us to make some  
9 changes in the inspection program. It led to the need  
10 for controls on the number of large team inspections  
11 at a given site and a given time and, perhaps more  
12 significant, it led us to conclude that more  
13 management attention was needed to the training and  
14 oversight of individual inspectors.

15 In 1990 and '91, as the Chairman  
16 mentioned, we implemented the Commission's N+1 policy  
17 on resident inspectors. This had largely been done  
18 certainly at one unit sites and several two unit  
19 sites, but we fully implemented it in 1991.

20 1992 and '93, we undertook the SALP  
21 program review. While it didn't directly affect the  
22 inspection program, it's going to have ramifications  
23 that will, we think, affect the inspection program  
24 because there won't be as many SALP categories, for  
25 example, and therefore there won't be the need for as

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1 much inspection in certain areas as we had before.

2 Then finally, in 1993, we did the special  
3 assessment that Tony Gody will talk about in just a  
4 second.

5 The basic questions of concern to the  
6 Commission we understood were the following:

7 Number one, does the inspection program  
8 look at the right things, and I'll give a short  
9 answer, and that is yes. We think the program is  
10 focused on operational safety performance, as it  
11 should be.

12 Second question, is the inspection program  
13 effective in meeting its objectives. That is in  
14 looking at the things it looks at. Here we get a  
15 little subjective, but my answer would be yes, that it  
16 is effective if we can judge by the trends that we see  
17 over the last several years in performance indicators  
18 and in the accident sequence precursor results. But  
19 we have to at the same time say that the inspection  
20 program is not the only means that affect these  
21 performance of licensees and plants. We have many  
22 arrows in our quiver, so to speak. We have AITs,  
23 IITs, diagnostic team inspections, operator exams,  
24 vendor inspections, the whole allegation program and  
25 allegation follow-up program. So, one really has to

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1 look at the entire regulatory process for ensuring  
2 safety, but nonetheless the inspection program is, as  
3 I said, the cornerstone of that entire regulatory  
4 process.

5 The third question would be do we have the  
6 right level of resources applied. We think that in  
7 the past we have, but we also believe that we can  
8 reduce the inspection resources somewhat over the next  
9 few years and the plans are to do that.

10 A fourth question would be is the program  
11 consistently implemented across the country. We would  
12 say generally yes, but we recognize that some  
13 improvements are needed and for sure we have to make  
14 sure that we continually watch that aspect of it, both  
15 the regional administrators and NRR.

16 So, with that introduction, Tony Gody will  
17 talk about the assessment itself.

18 COMMISSIONER ROGERS: Could I just raise  
19 one very brief question --

20 DOCTOR MURLEY: Yes.

21 COMMISSIONER ROGERS: -- on the N+1  
22 program. Is it, in fact, the case that we have N+1  
23 resident inspectors at each site in the country now?  
24 I don't believe we do. Do we?

25 DOCTOR MURLEY: No. No. No.

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1 COMMISSIONER ROGERS: I thought we had --

2 MR. EBNETER: You give us latitude too.

3 COMMISSIONER ROGERS: Yes, we had some  
4 latitude there and I think that's proper. But when  
5 you say implemented, I guess that means that we're  
6 prepared to do it, but if you don't find that a  
7 particular site really justifies that with a better  
8 use of resources, you would not have N+1 at the site.

9 DOCTOR MURLEY: Yes. We're actually -- as  
10 you know, Commissioner, we have asked the Commission  
11 for some latitude and we have received that approval.

12 COMMISSIONER ROGERS: Yes.

13 DOCTOR MURLEY: And we're coming down a  
14 bit. But each site, if it doesn't meet N+1, there has  
15 to be a justification from the regional administrator  
16 to me and we approve it back here. So, it's on an  
17 exception basis where they don't do it and we look at  
18 that pretty carefully, by the way.

19 COMMISSIONER ROGERS: Right. Thank you.

20 DOCTOR MURLEY: Tony?

21 MR. GODY: That exception policy was put  
22 into effect December of '92 and there's currently 13  
23 sites that don't have N+1. All of those are either a  
24 dual or a triple unit site. A single unit site still  
25 has to have two resident inspectors.

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1 COMMISSIONER REMICK: How many sites  
2 exceed the N+1 currently? Do you happen to know that  
3 number?

4 MR. GODY: No.

5 COMMISSIONER REMICK: Certainly Watts Bar,  
6 Brunswick?

7 MR. GODY: Yes. I don't think any of them  
8 do unless it's -- Pilgrim did.

9 DOCTOR MURLEY: Pilgrim still does, I  
10 think, yes.

11 COMMISSIONER REMICK: Okay.

12 MR. GODY: NRR has been doing assessments  
13 of the regions' implementation of the operating  
14 reactor inspection program since 1987. As a matter of  
15 fact, there's an inspection manual chapter established  
16 that developed the guidance for these assessments.  
17 However, in September of '92, because of several  
18 questions asked by the Commission and the Chairman, we  
19 decided to develop a new assessment procedure, one  
20 that would establish the assessment guidance and, in  
21 fact, be made public through memos or a Commission  
22 paper that would be sent to the Commissioners.

23 This program that we develop is one that  
24 evaluates the effectiveness of the inspection program  
25 as well as the region's implementation of that

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1 program. Two primary considerations were are we  
2 looking at the appropriate areas and are we using the  
3 appropriate amount of resources. We also defined the  
4 objectives of the inspection program and incorporated  
5 assessment guidance to ensure that we were meeting  
6 those objectives.

7 We developed an assessment tree and  
8 assessment guidance, sent them out to the regional  
9 offices for comments, received those comments and  
10 incorporated the appropriate comments into our  
11 guidance. One thing this did was give the regions an  
12 idea of what we were looking at and what our measures  
13 were going to be.

14 Prior to conducting the actual assessment,  
15 we sent the regions the finalized assessment guidance.  
16 This approach differed from what we had done in the  
17 past and the regions were able to prepare for the  
18 assessments and also conduct, several of them did,  
19 self-assessments before we came on site. As I said,  
20 we made these available to the Commission, the  
21 assessment criteria to the Commission in a memo from  
22 Jim Taylor and also the results were in a final report  
23 on the national assessments.

24 I'd like to talk a little bit about the  
25 assessment methodology. We did look at the program

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1 effectiveness and the region's implementation of the  
2 program. In the inspection program effectiveness  
3 area, the overall program is divided into three areas.  
4 Tom mentioned the core inspection program, regional  
5 initiative and area of emphasis. We looked into all  
6 three to see if significant safety issues were being  
7 identified before they became self-revealing. Was the  
8 program picking out these areas? Generally we found  
9 that it was. Also that inspection resources were  
10 applied consistent with licensee's performance. We  
11 found some areas there where that was not the case.  
12 And that the focus of the program was placed on the  
13 identification of generic issues.

14 The other part of the program was we  
15 looked at the regional inspection program execution.  
16 In that area we looked at management. That was the  
17 oversight of the inspectors and the program, staffing,  
18 training qualification, those types of things. We  
19 looked at planning. That was, did the planning  
20 coincide with licensee performance, was the inspection  
21 resource allocation -- did that match what the  
22 licensee's performance was? And the performance, and  
23 that was just how well the regions implemented the  
24 program, and then documentation, how well we reported  
25 the findings.

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1           We also looked at the core inspection  
2 effort at good performers. The core is the minimum  
3 amount of inspection that's applied to all plants and  
4 it would be the least amount of inspection that we  
5 devoted to a good performer. We just wanted to make  
6 sure that that effort was sufficient and we found that  
7 it was. As a matter of fact, during the assessment  
8 that was one of the strengths that were identified.

9           The assessment activities, I want to  
10 discuss how the assessment was conducted and the  
11 mechanics of it. Prior to going to the region we did  
12 a two week in-office documentation and data review.  
13 That consisted of reviewing a minimum of 100  
14 inspection reports per region. We looked at the  
15 licensee event reports for the previous two years,  
16 recent SALP reports, inspection data and enforcement  
17 history. Then we conducted a one week regional office  
18 visit where we had interviews with everyone from the  
19 regional administrator down to the inspectors.

20           We also during these assessment visits  
21 visited two reactor sites per assessment to gather  
22 insights from the licensees on how they viewed the  
23 implementation of the program at their facilities and  
24 also any regulatory impact items that they might want  
25 to discuss.

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1                   Following the site visits and the regional  
2 office visit we had a preliminary exit that was  
3 conducted by the assessment team, went back to the  
4 office and did a further review of data we collected  
5 and then we had, approximately three weeks later, a  
6 final exit with the Deputy Director of NRR, Frank  
7 Miraglia and myself. Went back, presented the region  
8 with our findings, gave them a draft assessment  
9 report, requested that they send that back to us  
10 within two or three weeks and reconciled any  
11 differences there were and issued a final report  
12 within about eight weeks after we conducted the final  
13 exit.

14                   During the assessment visits to the site,  
15 several improvements were noted to us by the  
16 licensees. One was that the licensee was more  
17 sensitive to reg. impact. We were doing a lot -- they  
18 were pleased with the announced inspection policy,  
19 although we found some problems with our announcement  
20 of inspections during the assessments. The public  
21 workshops, the operator requal. program. Some of them  
22 mentioned that inspector training and the  
23 professionalism had risen since they last -- since we  
24 conducted the survey.

25                   There was also, on the other hand,

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1 concerns regarding things we were doing. A definition  
2 of what constituted major activities was necessary.  
3 Further improvements in announcing team inspections,  
4 credit for licensee initiatives. That's something  
5 we're doing now with team inspections. If a licensee  
6 decides to conduct their own inspection for a  
7 particular area, we'll review the results of that and  
8 make a determination as to whether or not we have to  
9 conduct that inspection.

10 The assessment team composition. One of  
11 the things I didn't say, with the assessment tree, the  
12 assessment guidance, we were trying to ensure  
13 consistency amongst all five regions with what we were  
14 doing in our assessment. Another way of getting  
15 consistency was to have the team comprised of several  
16 of the same people. Three people were the same in all  
17 five assessments. Myself as the team leader, Mike  
18 Johnson, who is a section chief was one of the team  
19 members, and one staff member conducted or were  
20 participants in all five assessments. The team  
21 generally consisted of six members. The other  
22 participants were the Assistant Director for Projects  
23 in NRR for the appropriate region accompanied us on  
24 these assessments. The regional coordinators  
25 generally -- they're from the Office of the EDO --

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1 generally accompanied us. I believe four out of five  
2 came on it. Then we used other staff from NRR, most  
3 of which had either resident or region-based  
4 inspection experience.

5           Upon completion of all five of the  
6 individual assessments, we integrated the assessments  
7 results and came up with a national tree and a  
8 national assessment report. We issued that assessment  
9 report in August.

10           Summary of what the findings were, the  
11 general perception is the inspection program was  
12 effective in meeting its regulatory objectives, in  
13 evaluating the appropriate areas. However, some areas  
14 have to be added. There are certain places and I'll  
15 get into that when I get into the improvements, where  
16 we have to devote more inspection effort and less in  
17 some others, and in identifying significant trends.

18           Other findings, the regions were very  
19 effective in follow-up on events. All five regions,  
20 as a matter of fact, on a national basis, came out  
21 with significant strength for event follow-up, done  
22 with IITs, augmented inspection teams, AITs, regional  
23 reactive teams and individual inspections.

24           Inspection findings were communicated in  
25 a timely and thorough fashion. That's within the

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1 region, between the plants, with the resident  
2 inspectors at the plants and between regions. As I  
3 said earlier, the core program was effective at the  
4 good performances.

5                   However, several weaknesses were  
6 identified. One of the major ones was that the  
7 inspection resources allocated and expended did not  
8 match the licensee performance. There was a poor  
9 correlation between regions and within regions. In  
10 other words, some licensee with the SALP I and several  
11 functional areas actually received more inspection  
12 than licensee with a SALP III. In some cases there  
13 was a reason for it, there was justification for it,  
14 but it is one of the weaknesses that we identified.

15                   COMMISSIONER REMICK: Last week we had a  
16 briefing. I think it was the one in the materials  
17 area, if I recall. As part of that we were told that  
18 inspectors have a certain fraction of their time that  
19 they're supposed to spend out in inspections. So, if  
20 that's the case, if they're relieved in one area, that  
21 means that they have to apply it somewhere else. Has  
22 any thought been given to how one is going to continue  
23 a practice of inspectors having to spend X percent of  
24 their time out inspecting if we are going to do what  
25 Doctor Murley mentioned is reduce resources where

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1 possible?

2 MR. GODY: And that's the answer.  
3 Inspectors now are required to have 600 hours on-site  
4 inspection per year, which is fairly reasonable.  
5 That's about 28 percent of their time devoted to  
6 inspection activities. If we're talking about  
7 reducing -- the thing that has to be, we have to  
8 reduce the size of the inspection force. What we've  
9 been saying is that what we're doing now is adequate  
10 and maybe more than adequate and we just have to shift  
11 some of the inspection resources to areas where we  
12 have not been --

13 COMMISSIONER REMICK: So, it would be a  
14 reduction in people in the inspection area.

15 MR. TAYLOR: Those percentages are higher  
16 though for residents.

17 COMMISSIONER REMICK: For residents.

18 MR. GODY: Yes. Oh, yes.

19 DOCTOR MURLEY: Yes, for senior residents.

20 MR. GODY: That was for region-based  
21 inspectors. Residents is approximately 50 percent.

22 COMMISSIONER REMICK: And I can see where  
23 regional you have that flexibility. Where you have  
24 residents, you don't have as much flexibility, even  
25 though you might bring them back at the region and do

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1 other things, I guess.

2 MR. RUSSELL: The flexibility is there, it  
3 just takes more planning. There's nothing that would  
4 preclude you from using a resident at one site to  
5 perform inspection activity at another side, or  
6 assigning other modules or other things to follow-up  
7 on. We've had this problem when it's core inspection  
8 where it's generally the residents and N+1 tends to  
9 drive the resources that go into the core program.  
10 So, it is a question of planning and in making sure  
11 that those inspectors, whether they be generalist or  
12 special inspectors, have the skills and the ability to  
13 do that. So, it may involve some cross training of  
14 inspectors or it may involve some advanced planning to  
15 assign inspectors from one site to perform an  
16 inspection activity at another site.

17 MR. GODY: If it was necessary to perform  
18 those activities at the other site. What we've been  
19 doing and what we're looking at now is not just  
20 starting out with a certain amount of hours to be done  
21 and working backward. What we're looking at is what  
22 do we think is necessary to ensure safe operation of  
23 a plant? What inspections do we have to do and areas  
24 do we look into? Then we're going to say, we have  
25 said, how many inspectors or how many inspection hours

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1 are necessary to perform that activity? Then from  
2 that you go on down and you develop. Given that we're  
3 going to have them do either 30 percent, 50 percent,  
4 whatever it is for that appropriate discipline, then  
5 decide how many inspectors are necessary, not work it  
6 backwards, work it from the ground up. If it comes  
7 out that we have too many inspectors, we have too many  
8 inspectors.

9 COMMISSIONER REMICK: Thank you.

10 MR. GODY: Another area where we  
11 identified weaknesses was management oversight of  
12 inspectors was not consistently applied. We've got an  
13 inspection procedure out requiring section chiefs,  
14 branch chiefs and division directors to go to sites on  
15 a frequency of anywhere from one to three days  
16 depending on what they are. In some cases this has  
17 proven to be unrealistic. In the cases of small  
18 regions it's got a larger impact on the licensee than  
19 it does on us and we're asking to go to the sites too  
20 often and the licensee has to accommodate that. In  
21 the larger regions, it looks like it's a proper mix.  
22 However, the regions were not implementing it. In  
23 some cases people were not satisfying the guidance,  
24 number one. Number two, when they were going there  
25 they were not doing what we expected them to do. We

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1 had stories of managers going out, staying in the  
2 resident's office and not providing feedback to the  
3 inspector, not attending the exit interviews and that  
4 type of thing. So, we have to strengthen the guidance  
5 and then management of that particular area.

6 CHAIRMAN SELIN: Now, Mr. Gody, one thing  
7 that wasn't clear to me in reading the report is you  
8 had some observations about management but did you  
9 actually go to the point of saying do we have either  
10 too much oversight per inspector hour either in terms  
11 of number levels or just number of managers per  
12 inspection hour, or did you take the structure as  
13 given, take a look at the inspector hours and just  
14 scale that up?

15 MR. GODY: We took the management  
16 structure as given and did not look or make any  
17 decisions regarding any ratios of management to staff.  
18 I think that's going to be going -- it has gone on for  
19 Regions IV and V and it's going to be going on in a  
20 future effort. But we didn't look at that.

21 CHAIRMAN SELIN: Thank you.

22 MR. RUSSELL: One comment. The oversight  
23 policy and guidance is actually broken into two areas.  
24 The first one addresses what types of activities we  
25 want the management to be involved in when they're at

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1 the site, specifically what they're to be doing with  
2 their time to be observing issues that are being  
3 raised by the inspectors, to make judgments themselves  
4 about those issues, to interact with the inspectors,  
5 et cetera.

6 The second part of the guidance is the  
7 part that has got some benchmarks or some guidelines  
8 in it. They are not absolutes, but it does identify  
9 time on site conducting these kinds of activities.  
10 They were estimates based upon what we felt was  
11 reasonable to accomplish the activities. That's the  
12 area of the guidance both in what they were doing and  
13 how much time they were spending on site, that there  
14 were some shortcomings.

15 CHAIRMAN SELIN: My observation was  
16 somewhat different. Coming from outside and getting  
17 familiar with the organization is a lot of middle  
18 management at NRC. It's not a question of overhead  
19 versus direct because an awful lot of technical work  
20 is done by people that are in principal and  
21 supervisory positions. But it has to do both with the  
22 numbers of levels and the number of really rather  
23 small units that we have that are being supervised.  
24 But that was not part of the -- that was not even a  
25 peripheral subject of the review.

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1 MR. GODY: No. Span of control, that type  
2 of thing, we did not look at. We would have  
3 identified it if it went the other way.

4 CHAIRMAN SELIN: Effectiveness, right.

5 DOCTOR MURLEY: Well, I need to comment,  
6 I think, here. Going back to the regulatory impact  
7 survey that we did in 1989, what we saw there was the  
8 impact of not enough management oversight. Inspectors  
9 were out making policy for the agency basically.  
10 Sometimes it was consistent with what we thought was  
11 our policy and sometimes it wasn't. So, we at that  
12 time, as a follow-on to that, required the section  
13 chiefs and branch chiefs and division directors even  
14 to get out more.

15 CHAIRMAN SELIN: Right.

16 COMMISSIONER REMICK: I don't think we're  
17 differing with that, Tom, at all because it's a  
18 question of number of managers versus management  
19 oversight of employees. I agree, I think now our  
20 managers are getting out and more directly observing  
21 the inspectors in the field and that's what the  
22 regulatory impact survey was saying that we should do.  
23 I thought the point that Chairman Selin was making  
24 that there are a large number of manager slots,  
25 although they are related things, I think they're two

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1 different points.

2 MR. TAYLOR: We understand the difference,  
3 yes.

4 MR. RUSSELL: I guess just one additional  
5 comment. When we put the policy together, there was  
6 pretty much a senior management judgment that this was  
7 important and needed to be done. But we also got  
8 feedback of what about all the stuff I used to be  
9 doing that I'm not going to be doing anymore because  
10 I'm now going to a site to oversee activities on site.  
11 So, there are tradeoffs both ways and it does take  
12 travel time and it takes time to get out. You may  
13 have a section leader that has responsibility for two  
14 or more sites rather than just one and then branch  
15 chiefs that have several.

16 CHAIRMAN SELIN: I would be disingenuous,  
17 which although I have many vices, disingenuity is not  
18 one of them, if I said I didn't believe that  
19 throughout the agency we have too many levels of  
20 supervision, too much time is spent reviewing other  
21 people. That's not the subject of this meeting. My  
22 question was just whether you took a look at that  
23 question with respect to the inspection and the answer  
24 was no, it was taken as given and if we needed ten  
25 percent more or ten percent fewer inspection hours,

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1 then presumably the recommendation would be increase  
2 or decrease the numbers in proportion --

3 MR. GODY: There's an overhead ratio, yes.

4 CHAIRMAN SELIN: -- by the same ten  
5 percent.

6 MR. GODY: Right.

7 To go on, another identified weakness was  
8 the core inspection focus on safety assessment and  
9 quality verification and engineering and technical  
10 support was insufficient. As a matter of fact, there  
11 was very little of it. We're in the process of  
12 developing a safety assessment and quality  
13 verification inspection procedure where we will look  
14 at management control systems such as root cause  
15 analysis, corrective action systems, off-site and on-  
16 site review committees, self-assessment, third party  
17 audits, how licensees respond to audit and inspection  
18 findings. Put that into the program and we will make  
19 adjustments and take away from other areas.

20 Also, engineering and technical support.  
21 As far back as when we were doing the maintenance team  
22 inspections and then the ads fees, it was identified  
23 that we had very little look at engineering and  
24 technical support, a very important area. So, we have  
25 developed and are about to issue a new inspection

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1 procedure in that area.

2 CHAIRMAN SELIN: What's the reverse of the  
3 coin? What were the areas that we're getting an  
4 excessive amount of it?

5 MR. GODY: Maintenance observations by  
6 resident inspectors where we told them to look at four  
7 activities per month, not paying any attention to what  
8 the significance of those activities were and that  
9 type of thing.

10 CHAIRMAN SELIN: So, it wasn't that there  
11 was insufficient inspection, but it was insufficiently  
12 divided by doing the risk analysis or the engineering  
13 analysis or the safety assessments. They looked more  
14 here than there because there's a higher payoff for  
15 problems found here.

16 MR. GODY: Right.

17 COMMISSIONER ROGERS: I'm just a little  
18 concerned on that point myself or that bullet as to  
19 really what kind of increase in activity you  
20 contemplate. What will the inspections be looking at  
21 that they weren't looking at before in safety  
22 assessment or engineering support?

23 MR. GODY: They'll actually be looking at  
24 engineering and on-site work being accomplished and we  
25 hadn't looked at it. We hadn't looked at calculations

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1 to any extent. We hadn't looked at --

2 COMMISSIONER ROGERS: But it will be  
3 looking at the results of the engineering work, is  
4 that right?

5 MR. GODY: Right.

6 COMMISSIONER ROGERS: Rather than how many  
7 engineers they have on-site or something like that?

8 MR. GODY: No. No. That's not the way  
9 it's geared. The other thing you asked, where will we  
10 take it from? I didn't want to get into numbers, but  
11 in the existing inspection program we've got about 25,  
12 27 percent of the inspection activity devoted to area  
13 of emphasis inspections which are generic area teams  
14 and other special inspections. Historically the  
15 regions have only been expending about ten percent of  
16 the inspection effort on those areas, leaving us a  
17 considerable amount of resources to apply to other  
18 areas. That's the type of thing we're going to be  
19 doing. We've been over expending in the core area and  
20 we're going to adjust that to make it more realistic  
21 as to what we actually do need.

22 MR. RUSSELL: These two findings were also  
23 factored into the SALP program revisions and we found  
24 that, in fact, the guidance to inspection of what we  
25 wanted people to look at both in the area of

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1 engineering and in the decision to have safety  
2 assessment quality verification cut across the four  
3 areas and then be addressed specifically in the cover  
4 letter, we found that we really had not put out good  
5 concise guidance as to what constituted those areas.  
6 It had built up with judgment somewhat over time and  
7 there was actually little inspection guidance from the  
8 standpoint of what should be done in those areas,  
9 particularly in the engineering area.

10 CHAIRMAN SELIN: Actually I'm getting the  
11 impression -- and I'd like to say this so if I'm wrong  
12 you'll correct me. You're basically saying you're  
13 breaking the tight connection between resident  
14 inspectors and core inspections, that there are tasks  
15 to be done and there are people to do them.

16 MR. GODY: That's right.

17 CHAIRMAN SELIN: And that some of the  
18 tasks that are not core inspection tasks that would  
19 change from time to time can be carried out by  
20 resident inspectors if they're properly trained and  
21 directed.

22 MR. GODY: And vice versa.

23 CHAIRMAN SELIN: So, that tight connection  
24 won't be so tight --

25 MR. GODY: Right.

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1 CHAIRMAN SELIN: -- in the future.

2 MR. GODY: And vice versa. Like the  
3 regional initiative, which is about a third of the  
4 program, where the regional administrators direct  
5 resources to where they see fit. That could be any  
6 type of inspector that's qualified to do the job.

7 COMMISSIONER ROGERS: Well, you now, I  
8 don't wan to belabor the point but I am concerned  
9 about how the inspections are going to be conducted,  
10 let's say of the engineering and technical support.  
11 It does seem to me that it isn't possible to take an  
12 average resident inspector and ask that person to look  
13 at the quality of an engineering assessment. They  
14 might or might not be capable of doing that.  
15 Therefore, how do you propose to do that?

16 MR. GODY: Right now we have the program  
17 split up where about two-thirds of the inspection  
18 effort would be performed by region-based inspectors,  
19 engineering inspectors, and some of it, another third,  
20 would be done by the resident inspectors mainly  
21 because they're on-site, they have a window of  
22 opportunity to look at modifications, installations  
23 and that type of thing which would follow-up on what  
24 the region-based inspector looked at in the  
25 engineering office. We would go look and they would

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1 review calculations.

2 CHAIRMAN SELIN: You're basically arguing,  
3 if I understand correctly, that if the communications  
4 were better between the region and resident inspector  
5 and the assignments were more explicit that some of  
6 the follow-up work can be done efficiently by resident  
7 inspectors.

8 MR. GODY: Yes, but communications  
9 generally are very effective between the resident and  
10 the regions. I think they do it on daily basis. The  
11 regional administrators could attest to that. They  
12 usually are very good communications. One of the  
13 strengths in the program was communications between  
14 regions and between the residents and the region-based  
15 inspectors. They complement one another. So, they  
16 would -- the region-based would take a look at the  
17 actual engineering and the resident can take a look at  
18 the implementation of those activities.

19 MR. RUSSELL: Some good examples are the  
20 motor-operated valve inspections that are done where  
21 we look at engineering and how they've done set-up of  
22 the valves, the electrical system design inspections,  
23 service water inspections. Some of these have aspects  
24 of engineering design evaluation as well as  
25 operations. So, they can split the inspection group

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1 up and there may be some aspects that look at  
2 operations performance associated with biofouling or  
3 things like that that can be done by a resident and  
4 you may be having engineering looking at heat removal,  
5 some of the design calculation issues.

6 MR. GODY: Some of the regions are doing  
7 that and were doing it. Even though we didn't have an  
8 inspection procedure that said engineering and  
9 technical support, the regions with the regional  
10 initiative developed their own and went out and looked  
11 at these activities. Region III in particular did  
12 that.

13 CHAIRMAN SELIN: Just like your  
14 introduction.

15 MR. MILLER: Two facets to engineering,  
16 there's the classical design engineering function at  
17 plants and then there's the close support that's  
18 performed by the technical staff to operations and  
19 maintenance. The element that was not explicitly  
20 covered in the core program was the second part that  
21 addresses how engineering supports maintenance on a  
22 day to day basis, how they follow-up on equipment when  
23 it fails to get good root cause evaluation. Now,  
24 we've covered that in different ways. Residents have  
25 picked up much of it, the region-based inspectors have

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1 picked up much, but it wasn't explicitly covered in  
2 the core inspection program. I think the regions have  
3 been working very closely with NRR to develop an  
4 inspection module, if you will, that would address  
5 that area. It's a very important area.

6 COMMISSIONER ROGERS: It still sounds to  
7 me more like a process though than the quality of the  
8 engineering itself. It's the relationship between the  
9 engineering and maintenance that you're looking at.

10 MR. MILLER: Well, our focus has been, and  
11 I assume the other regions as well, is very much on  
12 product. Pull the string on a valve that fails. Why  
13 did it fail? What kind of preventive maintenance or  
14 predictive maintenance was done on that valve or not  
15 done on that valve? So, much less the process, much  
16 more what engineering contribution there has been to  
17 the situation, but looking at it through actual  
18 performance.

19 MR. RUSSELL: We also do get support from  
20 contractors where we need it where we bring designers  
21 in to assist with the design reviews. For example, on  
22 the electrical system design inspections, we typically  
23 had three contract designers that would assist us with  
24 the details of the calculations to supplement staff.  
25 Where the region may have had that same capability in-

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1 house, we'd use fewer contractors to support it.  
2 We're doing the same thing in other areas. We also  
3 look into some of the reloads and the fuel issues.  
4 For example, the issues that we had with WNP where we  
5 provided support.

6 So, it's really trying to provide a focus  
7 to the engineering area that was spread out and really  
8 didn't have a focus before. We've identified that it  
9 is significant and important and what we're trying to  
10 do now is identify what would be the core program for  
11 sampling in that area so that you've got a basis for  
12 making a judgment overall in the engineering area.

13 MR. GODY: (Slide) I'm going to put up  
14 the national inspection program assessment tree and  
15 just briefly go over that.

16 In the area of inspection program  
17 effectiveness, you'll notice there are three areas  
18 where we've identified significant strengths. One was  
19 the core inspection procedure and it being adequate  
20 for good performing plants. That sounds strange, but  
21 we wanted to make sure we were at least giving them  
22 enough of a look to ensure that they were sustaining  
23 the good performance.

24 I mentioned earlier the reactive resources  
25 used to respond to significant events and issues.

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1 That was a strength. As a matter of fact, I believe  
2 that was a strength in all five regions. And  
3 inspection findings communicated across regions to  
4 Headquarters and within a region. That we identified  
5 as a strength. Then under inspection program  
6 implementation or execution, the event follow-up was  
7 the strength.

8 As you look at it, we identified several  
9 areas, those are in yellow, that require improvement.  
10 In both the core and the regional initiative, the  
11 effect has to be consistent with industry performance.  
12 It was not. What follows that is over in the area on  
13 execution, inspection planning. That has to be  
14 strengthened to ensure that you have the appropriate  
15 amount of resources devoted to the appropriate  
16 licensee.

17 Inspector oversight, as I mentioned  
18 earlier, that needs improvement and inspector  
19 utilization. Again, that has to do with the resources  
20 and the licensee's performance. And again, the last  
21 thing was inspection report format. As I said, we  
22 reviewed 100 inspection reports and --

23 CHAIRMAN SELIN: If you read this,  
24 basically it supports Doctor Murley's view that there  
25 isn't an excessive amount of management in the field

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1 with the inspection program, that all the areas that  
2 you say need working have to do with --

3 MR. GODY: Management.

4 CHAIRMAN SELIN: -- management.

5 MR. GODY: Yes. But that doesn't  
6 necessarily mean it's because we don't have enough  
7 managers.

8 CHAIRMAN SELIN: It might be that the  
9 structure is inefficient, it might be you do have  
10 enough, you don't have enough managers, priorities  
11 might be different. They may be weighed down with  
12 Commission requests instead of doing the work. There  
13 are a lot of theoretical possibilities.

14 MR. GODY: Oh, yes.

15 DOCTOR MURLEY: Keeping this place  
16 informed takes a lot of time. Everybody wants to know  
17 everything instantly.

18 CHAIRMAN SELIN: But this is mostly the  
19 regions we're talking about, right?

20 MR. TAYLOR: Yes.

21 MR. GODY: Yes. And it's the program  
22 also, changes that we have to make to the inspection  
23 program itself. As a matter of fact, I would say  
24 there is more work we have to do on the program than  
25 the regions have to do with implementation of that

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1 program.

2 CHAIRMAN SELIN: Okay.

3 MR. RUSSELL: We also conduct inspections  
4 out of Headquarters and need to take the lessons to  
5 heart also in the planning and oversight area.

6 COMMISSIONER REMICK: Yes. I find this  
7 assessment tree concept, which is similar to what you  
8 used in the maintenance inspections, is a very good  
9 communication tool to give you a feeling of broad  
10 areas and where are the problem areas and the good  
11 areas and so forth. I still feel to be an effective  
12 way for SALP programs rather than numbers. But  
13 putting that aside, I think it is an effective way of  
14 displaying the overall program.

15 MR. GODY: Yes.

16 COMMISSIONER REMICK: There's one box down  
17 here, training and qualification, which is green and  
18 I don't differ with that. Back in 1989 the ACRS made  
19 a recommendation that the agency undertake some  
20 research on what makes a good inspector and I think  
21 that was perhaps misunderstood. The reaction was  
22 somewhat negative because the arguments made were that  
23 a lot of training is provided to inspectors and I  
24 think that's true and I think it's good training.

25 But the thing that the ACRS had in mind,

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1 at that time in the late '80s there was a lot of  
2 criticism of inconsistencies and arm-twisting and so  
3 forth that was going on and I think what the ACRS was  
4 trying to get at, do we really know what makes a good  
5 inspector and what makes a bad inspector? And if we  
6 knew what makes a good inspector, are we making sure  
7 that that's the type of training we're giving, not  
8 only the technical training and procedures and so  
9 forth, but are there other aspects of being a good  
10 inspector that should be addressed and perhaps are not  
11 being addressed? I don't know if any additional  
12 consideration has been given to that.

13 It's kind of like in a way related to the  
14 job and task analysis where you determine what it is  
15 a person has to do and then you ask yourself, "How are  
16 we going to make sure that he has the tools to do  
17 that?" I don't know that we've ever done such a thing  
18 as organized as that for inspectors, but, I think, as  
19 I say, I thought the recommendation was misunderstood  
20 back in '89. Perhaps it wasn't adequately described.

21 Have we done anything like that? Do we  
22 have any plans?

23 MR. GODY: No.

24 COMMISSIONER REMICK: It isn't a question  
25 that they're getting training and the training is

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1 good. It's a question is it what they really need.

2 MR. GODY: They get a sufficient amount of  
3 technical training.

4 COMMISSIONER REMICK: Yes.

5 MR. GODY: What you're talking about is,  
6 is this going to be a good parent or a poor parent, a  
7 good inspector, a very subjective area, and to my  
8 knowledge I don't think we're doing anything in that  
9 area.

10 COMMISSIONER de PLANQUE: In the  
11 information paper you mentioned you put a new module  
12 in on the fundamentals of inspection and you tried  
13 that out earlier this summer. Any evaluation of that  
14 yet?

15 MR. GODY: No.

16 COMMISSIONER de PLANQUE: Is it too soon  
17 to really --

18 MR. GODY: It's too soon. That's going to  
19 be extremely difficult. They had pilot training in a  
20 couple of regions and there's a group now looking at  
21 the Fundamentals of Inspection course and seeing  
22 lessons learned from the pilot training courses.

23 COMMISSIONER de PLANQUE: But this seemed  
24 to be aimed more at those other areas.

25 MR. GODY: I know, and I personally think

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1 it's going to be very difficult to --

2 COMMISSIONER de PLANQUE: To evaluate,  
3 yes.

4 CHAIRMAN SELIN: I might just follow-up on  
5 Commissioner Remick's remark. In the software  
6 industry, which is the industry of which I'm a  
7 graduate, there's always the question about what makes  
8 a good programmer. What we found was the best thing  
9 to do was everybody knew who the good programmers  
10 were, so, instead of doing a theoretical analysis, we  
11 looked at the best people we knew and we found out how  
12 they differed from the other people. There were  
13 significant differences. I mean, they're irrelevant  
14 to inspection, but these were people who had very good  
15 verbal skills as opposed to mathematical skills, which  
16 was a surprise until you realize that programming is  
17 very much a question of syntax much more than  
18 computation.

19 But sometimes the easiest way to find out  
20 what makes the best of a class is to see if you agree  
21 on who the best of the class is, and most people do,  
22 and then find out what makes them different from --  
23 you know, how are they different from the other  
24 people, a very simple empirical --

25 MR. GODY: I think we'll find the skills

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1 are no different, the attributes that are desired are  
2 no different for a programmer than they are for an  
3 inspector too. It's good communication skills,  
4 ability to let people know what you're thinking. That  
5 type of thing would apply here also.

6 Unless there's other questions, I'll move  
7 on to the proposed improvement actions. These are  
8 pretty much self-explanatory, but we do intend to  
9 modify the inspection program. As a matter of fact,  
10 we've already started to do that.

11 Also have the regions improve their  
12 planning, this would be a little more difficult. The  
13 region administrators are going to be --

14 CHAIRMAN SELIN: One thing that came  
15 across really more when you delivered the SALP  
16 briefing than here was the difference of philosophy.  
17 It's not just sort of grading the amount of effort up  
18 and down depending on whether the licensee is --  
19 Commission Remick would prefer there be an "honors" a  
20 "high pass" and a "pass" than a 1, 2, and 3, and I  
21 appreciate that, but basically it's saying the  
22 function of inspection is not to do things from  
23 scratch but to validate work that the licensee does in  
24 the area if the licensee does that work. I mean,  
25 that's a very powerful concept.

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1           You're not just saying let's do 2,200  
2 hours instead of 2,400 hours, but you're saying let's  
3 do something different. Let's find out that the  
4 licensee has done the work himself and, if so, is it  
5 good enough to be validated or do we have to go out  
6 and reproduce it? That part was pretty clear.

7           It's not clear to me if there are other  
8 places where you're really doing something  
9 qualitatively different and not just a little more if  
10 it's a weak licensee and a little less if it's a  
11 strong licensee.

12           MR. GODY: Okay. That has to be done too,  
13 though, the correlation of the effort to the  
14 licensee's performance. That's important.

15           In the engineering and technical support  
16 area, that is an area that we have to look at that's  
17 going to provide results, looking at the licensee's  
18 almost entire organization.

19           CHAIRMAN SELIN: Let me say this  
20 differently. It's a big difference between saying I'm  
21 going to take a two percent sample on a strong  
22 licensee and a three percent sample on a weak licensee  
23 to say we're not -- you know, we're going to certify  
24 the work rather than reproduce it. I mean, one is  
25 just a question of grading the quantity compared to

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1 the a priori probability you're going to find  
2 something. The other one says the focus at least of  
3 that one part ought to be qualitatively different from  
4 what we've been doing with certain of the team  
5 inspections.

6 MR. GODY: And in what way.

7 CHAIRMAN SELIN: Are there other areas  
8 where you've come up with an approach other than just  
9 sort of shading of resources?

10 MR. RUSSELL: There are two areas we're  
11 looking at.

12 One I mentioned at the SALP briefing and  
13 that inspection procedure has been issued and it has  
14 been quite well received. That is where you have a  
15 dialogue with the licensee in advance in an area of  
16 interest and the licensee identified to you how they  
17 propose to inspect that area themselves and who they  
18 will use to do it. The second phase of that, we would  
19 monitor the actual implementation of that agreed upon  
20 plan. And the third phase would be to review the  
21 results of that with the licensee informing us of what  
22 they found and what corrective actions they're going  
23 to take, and I indicated we will use that as input  
24 into both the licensee's ability to self-assess their  
25 own performance in a technical area as well as

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1 providing an incentive by way of reducing resources of  
2 the major team inspections.

3 The other area that we're looking at  
4 shifting and we have an initiative ongoing in NRR to  
5 look at this and we're having dialogue with industry,  
6 and that is to develop a more performance-based or  
7 graded approach toward QA reviews in the quality  
8 areas, not in the audit assessment.

9 We are working also in the audit  
10 assessment as it relates to self-assessment, as Tony  
11 mentioned, and we're working on developing guidance as  
12 to how they assess, collect inputs from various  
13 activities, whether it is from NRC findings, INPO  
14 findings, their own findings from their QA audit  
15 function, or whether it's from an on-site engineering  
16 group or whoever it is, how they pull those together,  
17 assess them and develop corrective actions is in the  
18 area of safety assessment, quality verification.

19 But we're also changing the approach on QA  
20 from a standpoint of looking at areas the licensee has  
21 assessed, did they find problems, and that's probably  
22 an area we would not go in and look in if we had  
23 confidence. But if there were an inspection finding  
24 by the staff, we would ask questions. Had they looked  
25 in that area? If they had, did they find these type

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1 of problems? If they did, why didn't they do  
2 something about it? If they didn't, what does that  
3 tell you about their assessment approaches? So, we  
4 are making some changes in those areas.

5 We're also looking to how we might use the  
6 approvals that have been reached with industry under  
7 the maintenance rule of identifying the relative  
8 importance of things to be maintained, and that  
9 covered the scope of maybe 60, 70 percent of the plant  
10 equipment. Once we reached agreement on a process to  
11 identify that which is important, there may be some  
12 opportunity for using that in making audits as it  
13 relates to engineering quality or other areas. We  
14 have not completed the work on that, but we've had  
15 dialogue with NUMARC and with industry, so we're  
16 working in those areas.

17 CHAIRMAN SELIN: Are you talking about the  
18 interim inspection guidance or once the maintenance  
19 rule goes in?

20 MR. RUSSELL: No. What I'm talking about  
21 now is in Reg Guide 160. We've reached agreement on  
22 a process for identifying the risk significant  
23 activities for the maintenance rule when it goes into  
24 effect in the future and how that insight in those  
25 findings can be used.

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1                   CHAIRMAN SELIN: Okay. I understand that.  
2                   Are you planning on doing anything with the interim  
3                   inspection guidance based on those insights before the  
4                   maintenance rule goes in?

5                   MR. RUSSELL: We had not planned on  
6                   revising. We did make one -- I guess there are two  
7                   exceptions. We did update the guidance and we are  
8                   also proposing a generic letter that would allow  
9                   elimination of accelerated testing for emergency  
10                  diesel generators based upon voluntary adoption early  
11                  of the maintenance rule as it applies to the emergency  
12                  diesel generator. So if they would want to follow  
13                  that example and go to a performance based approach  
14                  including root cause analysis for failures, we would  
15                  eliminate the requirements for accelerated testing.  
16                  And that is out for comment now. In fact, we just  
17                  briefed the ACRS on this last month. So those are  
18                  some areas we're also making changes in our approach.

19                  What Tony was discussing was how we assess  
20                  this overall based broadly upon the performance  
21                  categories we use for SALP, so we're going to try and  
22                  correlate inspection modules to SALP categories, look  
23                  at how many hours were expended and then be able to  
24                  correlate how much total resources went in. That will  
25                  cause us to raise questions about an area, then we'll

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1 have to dig the next layer down to find out why there  
2 are differences if there are some.

3 MR. GODY: I think the safety assessment  
4 and quality verification procedure that we're  
5 developing will answer some of that. As I said  
6 earlier, it's the management control systems that  
7 we'll be looking at and how they're addressing their  
8 own -- first how they're identifying their own  
9 problems and then how they're addressing them.  
10 Haven't gone into a lot of detail in the past in that  
11 particular area.

12 So we have several improvement actions  
13 that we are going to be putting into place and  
14 developing and they have to do with improving the  
15 planning, better correlation of inspection resources  
16 for licensee performance, improve the management  
17 oversight activity area, the inspection guidance for  
18 SAQV, inspection guidance for engineering and  
19 technical support.

20 We're revising the program to reflect the  
21 SALP process. The inspection program is the primary  
22 input to SALP, so SALP is going to four functional  
23 areas plus SAQV, in a sense, and we're changing our  
24 inspection program to better prepare input to that  
25 process.

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1           We're going to redistribute resources for  
2           the core, regional initiative, and area of emphasis.  
3           Actually, the regional initiative will stay the same.  
4           They've been using around 32, 33 percent of their  
5           resources for that. The core we're going to have to  
6           add some resources. And the area of emphasis, the  
7           generic area teams, we're going to decrease the amount  
8           of resources allocated to that area.

9           One of the things that came up, questions  
10          that the Commission asked was, if we did reduce -- as  
11          a matter of fact, if we reduce resources by five or  
12          ten percent or increase resources, what would we do to  
13          monitor licensee performance? How would we pick up  
14          any declines in performances?

15          What we've decided is pretty much what we  
16          have in effect now is working to give us an early  
17          warning if a licensee's performance is declining.  
18          Those are reviewing the results of independent  
19          inspection, the plant performance indicators that have  
20          been in use for some time, the SALP performance trends  
21          and the SALP ratings, enforcement history and  
22          enforcement trends, periodic plant reviews that the  
23          regions conduct semi-annually and some on a quarterly  
24          basis for the licensees -- it's a mini-SALP, so to  
25          speak, for the licensees in that particular region --

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1 our senior management meeting almost all of this feeds  
2 into when our senior managements get together and make  
3 some determinations as to licensee performance, and we  
4 intend to continue these assessment activities.

5 That's the extent of my briefing.

6 CHAIRMAN SELIN: You've run out of charts,  
7 so that must be the briefing.

8 MR. GODY: That's it. I'm done.

9 CHAIRMAN SELIN: No, no. That's the end  
10 of the briefing.

11 Doctor Murley's opening remarks basically  
12 I think illustrate a certain dilemma that we have,  
13 that over time most of these performance indicators  
14 that we have are starting to approach an asymptote.  
15 They really have. Except for safety system  
16 actuations, they've all leveled off in the last couple  
17 years and you would expect that if, in fact, all the  
18 plants are excellent.

19 Now if the top guys are getting pretty  
20 close to where they're going, but there's still this  
21 big spread between the top and the bottom folks and  
22 the bottom folks were improving their performance --  
23 I don't mean an individual plant because the watch  
24 list comes and goes, but if the average -- you know,  
25 if you think of this as a population where the

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1 performance of the top guys is more or less constant  
2 but the performance of the bottom people overall is  
3 improving so that the average is coming up slowly, you  
4 would expect that we would not be reaching the  
5 saturation in the safety system or the other -- I'm  
6 sorry, the performance indicators.

7 In other words, I look at the performance  
8 indicators and it seems to me that the bottom  
9 performers are not improving as fast as they ought to  
10 improve. We should be seeing more of an improvement  
11 over all the safety -- I mean, the performance  
12 indicators than we are.

13 The first question is, am I reading these  
14 wrong or are we still seeing insufficient progress at  
15 the weaker performers coming closer to the stronger  
16 performers?

17 And then the second depends on the first.  
18 There are lessons from the inspection program other  
19 than just grading the amounts? I mean, should we be  
20 doing different kinds of inspections at the laggards  
21 from the kinds that we're doing at the better people?

22 MR. GODY: One thing we've found. The  
23 good performers that are identified by the senior  
24 management meeting, they take very little inspection  
25 effort. As a matter of fact, applying the whole

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1 program takes less time than it does at a poor  
2 performer.

3 The really poor performers, the ones that  
4 are on the senior management list, they get more than  
5 enough attention. They're devoting their own  
6 attention to themselves. We're putting a lot of  
7 effort into it.

8 What worries us is what's in the middle.  
9 It's almost like -- it's a normal distribution, just  
10 about. At the top end, you have half a dozen plants.  
11 At the bottom you have half a dozen plants. It's that  
12 95 in the middle that you have to worry about, because  
13 the poor performers within that group, they're the  
14 ones that are potential senior management meeting poor  
15 performers. Most of the inspection effort would be  
16 devoted at that particular group. The regional  
17 initiative would be spent there. Once they're on that  
18 list they're taking a good look at themselves and  
19 we've done just about all we can do. As far as  
20 identifying weaknesses, they're already there.

21 CHAIRMAN SELIN: But the folks in the  
22 third quartile need--

23 MR. GODY: Yes.

24 CHAIRMAN SELIN: Do they need attention  
25 that's qualitatively different from the kind that

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1 we're giving them today? I mean, that third quartile  
2 isn't really getting better as fast as it ought.

3 MR. GODY: They do need the attention.  
4 They're not getting the attention now.

5 CHAIRMAN SELIN: Can I ask the regional  
6 folks?

7 MR. EBNETER: That's exactly right from my  
8 view. It's that middle section, and we have several  
9 of them in region II, that have been stagnant for  
10 years.

11 If you look at a Pareto plot of Region II  
12 plants of ours versus SALP scores, they line up pretty  
13 good now. That wasn't true before Tony came. We've  
14 readjusted the --

15 CHAIRMAN SELIN: The inspections to fit  
16 the statistics.

17 MR. EBNETER: Well, at least the numbers  
18 come out better.

19 But I think that's true. The poor  
20 performers we do put a lot of effort on, and over a  
21 period of two to four years they become good  
22 performers. They really do. Turkey Point is a  
23 classic example, and Surrey. It's that middle bunch  
24 that does not get the resources or maybe a different  
25 type of inspection, as you have noted, to maybe

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1 motivate them a little more or to do something with  
2 them to make them improve at a faster rate, but that  
3 group seems to be pretty constant.

4 MR. MILHOAN: I guess I'd agree with Stu's  
5 comments.

6 I think one of the problems is not the  
7 inspection resources devoted to the poor performers  
8 but the uncertainty in the inspections that are  
9 necessary to detect a decline in performance for the  
10 middle category plants. It's always in the back of  
11 your mind. Have you detected that change in  
12 performance soon enough so that you can apply the  
13 additional resources necessary to quantify that change  
14 in performance?

15 CHAIRMAN SELIN: Those middle folks should  
16 be getting better slowly but surely. They're not so  
17 bad that they're going to get dramatic improvement  
18 from one year to the next, but, if you hold them up  
19 against the best in their class, you can see there's  
20 a significant difference that's not explained by the  
21 design of the plant or the original quality.

22 MR. MILLER: The same perspective.

23 CHAIRMAN SELIN: Commissioner Rogers?

24 COMMISSIONER ROGERS: Well, I think this  
25 is a very interesting effort. I am a little bit

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1 concerned that it moves more towards performance-based  
2 inspections rather than process-based inspections. I  
3 know that's your philosophy. I mean, that's something  
4 we've been moving more and more towards and, Bill,  
5 your statements seem to give me some reassurance on  
6 that, but it is a matter that concerns me with  
7 inspections because that's always where we can start  
8 to exercise an attempt to tell the licensee exactly  
9 how to do everything, and to me that's the wrong way  
10 to go, but we do want to hold them accountable for  
11 results.

12 I like the little outline that you gave in  
13 your description in one area of how they would propose  
14 to do something and we would hold them to achieving  
15 those results and it seems to me that's a good way to  
16 go and I like it very much. But I just have a  
17 concern, and it may be a misplaced concern, that we  
18 may be mixing performance-based regulation with  
19 looking at processes and, if I'm wrong on that, I hope  
20 I am, because I think that's not what we should be  
21 doing.

22 MR. RUSSELL: I would hope we could  
23 characterize it that we're moving slowly from what we  
24 were doing in the process area before. We still have  
25 some of that, but we're trying to introduce

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1 performance-based inspection activity as well. We've  
2 made fairly substantial cutbacks in the area of  
3 specialist inspection in physical security, in  
4 emergency preparedness, and in regional health  
5 physics, as the regional administrators would be able  
6 to attest from the standpoint of what we've done in  
7 budget space and reallocation, and that's resulted in  
8 the need to cross-train and hire in some different  
9 areas. And now we're focusing on engineering and some  
10 alternative approaches to inspection. But it's going  
11 to be a gradual change. It's not going to be a  
12 revolutionary process.

13 COMMISSIONER ROGERS: Well, I just wanted  
14 to say I'm pleased to see that we're doing it. I  
15 think that it represents a very serious effort and I  
16 think that we have to keep it up, keep the resources,  
17 our resources applied to this to see some results.

18 That's all I have.

19 CHAIRMAN SELIN: Commissioner?

20 COMMISSIONER REMICK: I strongly support  
21 the need for stronger management oversight in the  
22 inspection activities and I'm pleased that we're doing  
23 more of that. Just from one or two data points, I  
24 know that it is being done. What kind of feedback are  
25 you getting from say regional personnel now going out

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1 and observing inspectors, but also sitting in on the  
2 exit interviews and so forth? Exit meetings, excuse  
3 me. Are you getting any kind of feedback of what  
4 they're finding? Any surprises since they're out  
5 there observing the inspectors more?

6 DOCTOR MURLEY: You mean, for example, the  
7 regional section chiefs and branch chiefs?

8 COMMISSIONER REMICK: Yes, actually going  
9 out and spending more time with inspectors and sitting  
10 in on the exit meetings and so forth more frequently.

11 MR. MILLER: I think it's always been a  
12 vital part of inspection is the management oversight.  
13 I think what has happened after the regulatory impact  
14 survey is to set some goals to perhaps enforce that a  
15 little more stringently.

16 I think it tends to be, from my  
17 observation, more of an observation inspector by  
18 inspector. I don't know that there's any pattern that  
19 I've seen come out of this and maybe that's why you're  
20 not getting a quick response here. But we have  
21 clearly seen cases where you get insight on how  
22 inspectors are doing, well or poorly, and that, of  
23 course, gets reflected in performance appraisals and  
24 steps to improve.

25 MR. EBNETER: I think the biggest thing I

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1 see out of it, there is more contact with licensee  
2 management because they do go to the exits more often  
3 and the licensee has more of a direct input to the  
4 management, the line management. I think it's  
5 valuable from that standpoint. You realize the  
6 inspectors are on their best behavior when you go out  
7 with them.

8 COMMISSIONER REMICK: Even regional  
9 administrators when the Commission goes, right?

10 MR. EBNETER: True, true.

11 CHAIRMAN SELIN: Stu told me it was the  
12 other way around, the Commissioners are on their good  
13 behavior when they go out to the regions.

14 MR. MILHOAN: I guess I see one additional  
15 thing impact in addition to the management oversight  
16 of the inspectors with the additional management time  
17 at the site is the supervision and the region  
18 management, I think, have a clearer picture of  
19 understanding of what is going on at the particular  
20 sites and I think that makes for a better input into  
21 the SALP process and for a lot more overview of  
22 licensee performance.

23 COMMISSIONER REMICK: Thank you.

24 Bill, going back to something you said  
25 about when we have an inspection finding and a logical

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1 question is why didn't the licensee pick this up in  
2 the self-assessment process and I agree it's a logical  
3 thing. But just very recently I heard a concern  
4 expressed by a licensee that their self-assessment  
5 programs were being used against them. The results  
6 are being used against them and this had a chilling  
7 effect on their willingness to want to conduct self-  
8 assessments or make them readily available to the  
9 staff.

10 I'm wondering in light of what you just  
11 said, is there a possibility here there's a  
12 miscommunication from the licensee on why we might be  
13 looking at self-assessment? I mean is there a full  
14 understanding of --

15 MR. RUSSELL: I'm aware of comments being  
16 made in that context, particularly as it relates to  
17 what I will characterize as prudence issues. I have  
18 not heard that with respect to NRC findings. I have  
19 heard it in the past. Where a licensee brings forward  
20 an issue to an inspector, the inspector characterizes  
21 the issue. The licensee then reads about it in the  
22 monthly inspection report or at an enforcement  
23 conference and they don't seem to get the --

24 COMMISSIONER REMICK: It was this latter  
25 context, yes.

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1 MR. RUSSELL: -- credit for self-  
2 identification.

3 COMMISSIONER REMICK: Right.

4 MR. RUSSELL: I think that's a management  
5 philosophy issue that we need to get out. We clearly  
6 rely upon the licensees to operate these facilities.  
7 It's their responsibility for safety, not ours, and  
8 what we are trying to do through this process is  
9 encourage them to find their own problems.

10 COMMISSIONER REMICK: Right. I agree.

11 MR. RUSSELL: I characterize that if you  
12 have a self-revealing problem or NRC finds the  
13 problem, we're going to be asking questions about that  
14 issue and why did you not act on it before had you  
15 known about it. In fact, I just discussed this this  
16 week with the non-operating owners and the owners when  
17 they got together in Philadelphia, the approach we're  
18 taking to self-assessment and what our expectations  
19 are and some of these initiatives to move toward a  
20 more graded approach toward quality assurance that  
21 we're working with industry on. And, by the way,  
22 working with the regions, we've already had our first  
23 counterpart meeting with all the regions as well.

24 So, I think this is going to be a 12 to 18  
25 month effort to really put these concepts in place and

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1 then some period of time of experience with them. But  
2 it is the direction we're moving.

3 DOCTOR MURLEY: But with regard to your  
4 basic question of are we having a chilling effect by  
5 some actions that we do, a licensee's own self-  
6 assessment program, I have not sensed that. There may  
7 be some isolated cases. I guess I'd like to hear from  
8 the regions.

9 MR. EBNETER: No, I agree with you,  
10 Commissioner. I get those comments too. But it  
11 mostly occurs -- the enforcement policy forces us into  
12 some of those molds if the licensee does a self-  
13 assessment or there's a self-revealing problem, and it  
14 clearly violates some safety function, then we take  
15 enforcement action on that even though the licensee  
16 has identified it. They really resent that, but  
17 that's our present policy.

18 MR. RUSSELL: Yes. For self-revealing or  
19 NRC identified, we would take full enforcement. But  
20 we can mitigate up to severity level 3, but we  
21 typically issue a notice of violation even though  
22 there may not be civil penalty action.

23 COMMISSIONER REMICK: And I don't know in  
24 the particular case I'm referring to where the person  
25 made a comment it was enforcement action or not. I

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1 perhaps probably should have pursued it in that  
2 direction. So, I really don't know if it was a case  
3 of that or --

4 MR. EBNETER: It's prudent and in all of  
5 my meetings with my staff on enforcement issues in  
6 particular, the first question I ask them is who found  
7 it. Occasionally you'll find a case where there's  
8 some reluctance to admit that the licensee -- but  
9 generally the staff is pretty straightforward on it.

10 MR. GODY: More often than not the report  
11 will say it's a licensee-identified item.

12 COMMISSIONER REMICK: In the enforcement  
13 action?

14 MR. GODY: No, in the inspection report.

15 COMMISSIONER REMICK: Oh, inspection  
16 report.

17 MR. RUSSELL: We're trying to get that in  
18 the inspection report.

19 COMMISSIONER REMICK: Good. I thank you  
20 very much.

21 CHAIRMAN SELIN: Commissioner de Planque?

22 COMMISSIONER de PLANQUE: The  
23 inconsistency problem is one you hear about all the  
24 time when you're circulating out there in the  
25 community and I hear it mostly in the sense of

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1 inconsistencies from region to region. But obviously  
2 it's plant to plant even within regions. And to some  
3 extent you want that if you're going to have it  
4 consistent with performance. What of all the actions  
5 that you're taking do you think will really address  
6 the inconsistency problem and, if it is addressed, how  
7 can that really be communicated out there?

8 MR. EBNETER: Well, probably the major  
9 action is just what Tony did. He went through and  
10 identified where we're not very consistent and there  
11 were some good findings in there. Other than that, we  
12 try at least through our training programs and general  
13 meetings to make sure at least within the region that  
14 we're consistent. But my guess is we'll never be --  
15 you can't clone everybody.

16 MR. MILLER: I think one of the things we  
17 have found very valuable are counterpart meetings on  
18 selected topics. I can think of motor-operated  
19 valves, for example, where there have been any number  
20 of meetings between the program office and the  
21 regions. We find that very important, especially in  
22 those areas where appropriately our guidance is not  
23 highly prescriptive.

24 COMMISSIONER de PLANQUE: Right.

25 MR. MILHOAN: I would think internally to

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1 the region, as Stu said, I think one of the most  
2 important things that we can do is improve the  
3 communications within the region with respect to  
4 conduct of inspections, holding workshops on different  
5 inspection areas of how to conduct a good inspection,  
6 peer review of inspection reports within the region,  
7 feedback to inspectors on quality of inspection  
8 reports and that's very important to consistency  
9 within a region.

10 MR. EBNETER: There are several comments  
11 in Tony's basic report about the inspection program is  
12 a function of the individual inspections, inspectors,  
13 several cases of it and that's why it's important for  
14 the management oversight. And that's absolutely true.  
15 We have a lot of different inspectors. They don't get  
16 a lot of management oversight and the regional  
17 inspector is on travel. Between travel time and on-  
18 site time, 40 percent of his time he's not even  
19 accessible to his supervisor. The resident inspector  
20 is even less accessible. His dealings are through the  
21 telephone.

22 So, it's very difficult for the line  
23 managers. If you talk about consistency, it's even  
24 more difficult under those circumstances.

25 COMMISSIONER de PLANQUE: Yes. Okay.

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1 Very good briefing.

2 CHAIRMAN SELIN: Actually, you did a  
3 report last year that showed that in terms of the SALP  
4 scores the variation from region to region have gone  
5 down considerably over the last five years, but the  
6 other half is that the variation, not by region but of  
7 inspection hours, uncorrelated to SALP scores, was  
8 really quite bad.

9 MR. RUSSELL: Yes.

10 CHAIRMAN SELIN: And I think that supports  
11 what Mr. Ebnetter said, that once the spotlight turns  
12 on these issues they tend to get straightened out.

13 Did I read in your notes that --  
14 Commissioner Remick convinced me without too much  
15 trouble of the idea that we should be reviewing the  
16 requal programs and not the requals. Did I read that  
17 that review is going to be at the resident inspector's  
18 level to take a look at the --

19 MR. GODY: It will be region-based  
20 inspections.

21 MR. RUSSELL: There may be some feedback  
22 back because the residents may observe some training  
23 as a part of their program, but the intent is to use  
24 the examiners and to cross-train them to become  
25 inspectors to follow-up on these areas and then use

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1 either observation of utilities examining review of  
2 actual exams or, in a last resort, administering our  
3 own exams to judge performance. But we want to make  
4 it performance-based inspection. That's probably the  
5 most performance-based inspection we have, is when we  
6 go to the final step of examining, or simply observing  
7 them conduct the exam. So, this is really getting  
8 leverage by observing someone else do it.

9 CHAIRMAN SELIN: Either Doctor Murley or  
10 maybe Mr. Russell, what do you see the connection with  
11 the findings at this level which are in principle very  
12 short-term with what's coming out of the regulatory  
13 review group which also talked a lot about inspections  
14 but other activities that will effect the inspections?  
15 Do you see the kind of changes that is being talked  
16 there as dovetailing with the changes here? How are  
17 they tied together?

18 DOCTOR MURLEY: With regard to the  
19 inspection program, I do, yes. Generally, in fact,  
20 they rely very heavily on this assessment for their  
21 conclusions. So, I don't see really any significant  
22 differences.

23 CHAIRMAN SELIN: Okay. I would just like  
24 to make one observation and that is you've got to get  
25 the core programs down because there are always

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1 surprises and if everybody has programmed 95  
2 percent -- you know, last year it was shutdown  
3 operations. The year before was electrical problems.

4 There's always going to be some area that  
5 we become aware of so that there has to be some spare  
6 capacity in the system to pick up -- not boiling water  
7 level indicators. I mean there's a big issue every  
8 year or more and we need to have the -- I won't call  
9 it the routine, but the plannable, predictable work  
10 under some control so that there's some capacity to  
11 pick up these things.

12 MR. GODY: There is. There is currently.  
13 You've got the regional initiative, which I said 31  
14 percent of the inspection resources are devoted to  
15 just this type of thing if something comes up. The  
16 area of emphasis inspection, when we have a particular  
17 safety concern in an area, we'll concentrate resources  
18 from there.

19 CHAIRMAN SELIN: I misunderstood what you  
20 meant by regional initiative. I thought that was a  
21 set of problems that particular plants or the region  
22 decides that they have a particular --

23 MR. GODY: That too.

24 CHAIRMAN SELIN: -- problem. But, you  
25 know, the couple years I've been here there have been

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1 three or four major -- the fire inspection, the  
2 boiling water level indicators, the follow-on and the  
3 shutdown operations, that have really been very time  
4 and effort rich that have had to have been picked up  
5 and not predicted at the time.

6 MR. GODY: Yes. And resources from region  
7 initiative are devoted to this. It makes it more  
8 difficult for the regional administrators because we  
9 just tap that well.

10 MR. RUSSELL: But we have reduced it. At  
11 one point in time we had two major team inspections  
12 basically going in parallel. We've essentially  
13 dropped those to the point where we have one at a time  
14 and we've been phasing them so that there is some  
15 backing off in those areas. But I agree, we're going  
16 to see something different next year. If we continue  
17 having steam generator problems with the way they're  
18 aging and inspections and more replacements, that's  
19 clearly going to take more of our resources.

20 CHAIRMAN SELIN: That was really an  
21 excellent presentation. The Q&A was illuminating.  
22 It's really very good work to be encouraged on all  
23 avenues. It's a very good initiative, very good  
24 follow-on.

25 Thank you very much.

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1 (Whereupon, at 4:22 p.m., the above-  
2 entitled matter was concluded.)  
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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 NRC REACTOR INSPECTION PROGRAM  
ASSESSMENT AND PLANNED IMPROVEMENTS

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: SEPTEMBER 20, 1993

were transcribed by me. I further certify that said transcription  
is accurate and complete, to the best of my ability, and that the  
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# **ASSESSMENT OF NRC REACTOR INSPECTION PROGRAM**

**September 20, 1993**

**T. Murley  
W. Russell  
A. Gody**

**S. Ebnetter  
J. Milhoan  
H. Miller**

## **BACKGROUND**

- **Inspection Program Substantially Revised in 1987**
  - **Program Tied to Licensee Performance**
  - **Recognized Growing Role of Team Inspections**
  - **Established Regional Initiative**
  
- **Regulatory Impact Survey Conducted in Fall of 1989**
  - **Improve Coordination of Team Inspections**
  - **Improve Management Oversight**
  
- **N + 1 Resident Program Implemented 1989**
  - **Residents on site by 1991**
  - **Fully Implemented 1993**
  
- **Detailed Inspection Program Assessment Process Developed in 1993**

# **INSPECTION PROGRAM ASSESSMENT**

**Objective - Evaluate the Operating Reactor Inspection Program to Determine If:**

- **Regulatory Objectives are Achieved**
- **Appropriate Areas are Examined**
- **Resources are Applied Consistent With Industry Performance**
- **The Program is Consistently Implemented on a National Basis**

## **ASSESSMENT DEVELOPMENT**

- **Inspection Program Objectives and Evaluation Measures Established (SECY-92-169)**
- **Assessment Methodology Developed**
  - **Structured Assessment Tree**
  - **Detailed Assessment Guide**
- **Regional Comments on Assessment Methodology Resolved**
- **Provided Assessment Tree and Guide to the Commission on April 13, 1993, in Memorandum from J. Taylor on Assessment of Reactor Inspection Program**

# **ASSESSMENT METHODOLOGY**

## **Review Inspection Program Effectiveness**

- **Core Inspection Program**
- **Regional Initiative Inspection Program**
- **Area of Emphasis Inspection Program**

## **Review Regional Inspection Program Execution**

- **Management**
- **Planning**
- **Performance**
- **Documentation**

# **ASSESSMENT METHODOLOGY**

**(continued)**

## **Focus on Key Issues of Effectiveness and Consistency**

- **Significant Issues Found Before Self-Revealing**
- **Core Inspection Effort at Good Performers Effective**
- **Emerging/Existing Safety Concerns Addressed**
- **Effort Correlation with Industry Performance**

## **ASSESSMENT ACTIVITIES EACH REGION**

- **2 Week In-Office Inspection Related Documentation and Data Review**
- **1 Week Regional Office Visit**
- **2 Reactor Site Visits to Review Implementation**
- **Preliminary Exit by Assessment Team**
- **Final Exit by Deputy Director, Office of Nuclear Reactor Regulation and Assessment Team Leader**
- **Regional Assessment Report**

# **ASSESSMENT TEAM COMPOSITION**

**(Six Members)**

## **Participants in All Five Assessments**

**Assessment Team Leader**  
**Section Chief**  
**Staff Member**

## **Additional Participants**

**Assistant Directors for Projects**  
**Regional Coordinators from the Office of the EDO**  
**Other Office of Nuclear Reactor Regulation Staff**

## **ASSESSMENT ACTIVITIES NATIONAL**

- **Integrated Regional Assessment Results**
- **Compared Generic Safety Issues to Inspection Program Activities**
- **National Inspection Program Assessment Report Issued (SECY-93-241, 8/25/93)**

## **SUMMARY OF RESULTS**

**The Inspection Program is Generally Effective in:**

- **Meeting Its Regulatory Objectives**
- **Evaluating the Appropriate Areas**
- **Identifying Significant Issues/Trends**

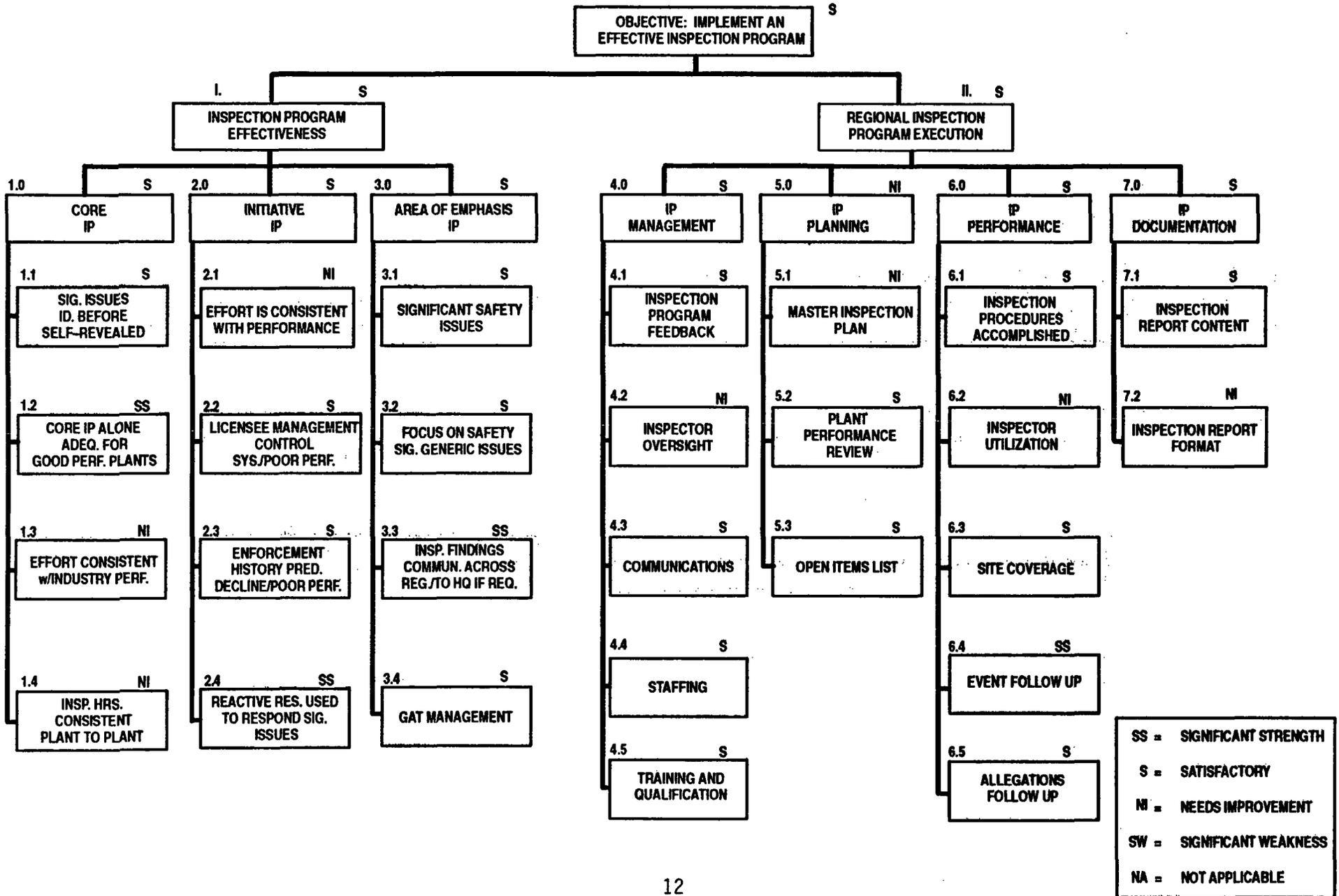
# **SUMMARY OF RESULTS**

**(continued)**

## **Identified Weaknesses**

- **Resources Did Not Match Licensee Performance**
- **Management Oversight of Inspectors Not Consistently Applied**
- **Core Inspection Focus on Safety Assessment/Quality Verification and Engineering/Technical Support was Insufficient**
- **Adjustments Can be Made to Allocated Inspection Resources to Reflect Historical Expenditures**

# NATIONAL INSPECTION PROGRAM ASSESSMENT TREE



## **PROPOSED IMPROVEMENT ACTIONS**

**Modify the Inspection Program and Improve Planning to Ensure Inspection Effort is Consistent with Licensee Performance**

**Reduce Overall Inspection Effort Based on Savings from a Better Correlation of Inspection Resources with Licensee Performance**

**Improve Guidance and Implementation of Management Oversight Activities**

## **PROPOSED IMPROVEMENT ACTIONS**

**(continued)**

**Develop Inspection Guidance in Safety Assessment/  
Quality Verification**

**Issue Inspection Guidance for Engineering/Technical  
Support**

**Revise Inspection Program to Address Identified  
Weaknesses and Other Lessons Learned**

**Revise Program to Reflect the SALP Process**

## **MODIFIED INSPECTION PROGRAM**

- **Reduce Resources Based on Analysis of Requirements**
- **Redistribute Resources for Core, Regional Initiative, and Area of Emphasis Inspections**
  - **Core - Add Resources for SA/QV and E/TS, Expand Maintenance, and Add Requalification Exam Inspections**
  - **Regional Initiative - Distribute Based on Licensee Performance**
  - **Area of Emphasis - Decrease Based on Historical Effort**

## **MONITOR IMPACT OF RESOURCE CHANGES ON INSPECTION PROGRAM EFFECTIVENESS**

- **Review Results of Independent Inspections**
- **Review Plant Performance Indicators**
- **Review SALP Performance Trends and Ratings**
- **Review Enforcement Trends**
- **Periodic Plant Reviews**
- **Senior Management Meetings**
- **Ongoing Assessments Activities**