

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON ASSESSMENT OF NRC
INSPECTION PROGRAM

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Friday, April 23, 1993

The Commission met in open session,
pursuant to notice, at 3:28 p.m., Ivan Selin,
Chairman, presiding.

COMMISSIONERS PRESENT:

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

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STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Executive Director for Operations

RICHARD VOLLMER, Director, Office of Policy Planning

FRANK MIRAGLIA, Deputy Director, NRR

RANDOLPH BLOUGH, Chief, Reactor Projects Br. 4, Region
I

JIM LIEBERMAN, Director, Office of Enforcement

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1

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

3:28 p.m.

CHAIRMAN SELIN: It's a couple of minutes early, but if you don't mind we'll start.

Welcome.

The Commissioners are meeting this time to receive the briefing on the assessment of the Reactor Inspection Program.

First of all, Mr. Vollmer, we thank you for your patience. I'm sorry we didn't get to you last week. On the other hand, this does prove that we can delay gratification if absolutely necessary.

The assessment was initiated by the Executive Director for Operations in order to determine the overall health and effectiveness of the inspection program and in fact the Office of Policy Planning as a kind of a reconnaissance office to do a broad review of a number of topics to see if there is reason to do further analyses or what kind of questions show up so that truly the policy planning function, the function of having studies in hand so that when policy issues come up we're not surprised, can be carried out.

So we look forward to hearing the results of your project. I understand copies of the

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1 viewgraphs are available.

2 Commissioners, do you have anything?

3 COMMISSIONER ROGERS: No. I'd like to
4 hear them.

5 CHAIRMAN SELIN: Mr. Taylor, please.

6 MR. TAYLOR: Good afternoon.

7 This briefing will be in two parts, first
8 the briefing on the Office of Policy Planning work by
9 Dick Vollmer and then Frank Miraglia will provide at
10 least the initial responses, and there is other
11 ongoing work, but he will follow the briefing by Dick
12 Vollmer.

13 I'll note that Randy Blough is at the
14 table, who assisted in this work, Region I; and Jim
15 Lieberman, because some of the issues touched on
16 enforcement.

17 Dick?

18 MR. VOLLMER: Thank you.

19 As you indicated, Mr. Chairman, the
20 charter, the charge that we had, was to conduct a
21 broad review of the overall effectiveness and health
22 of the Reactor Inspection Program and we and NRR were
23 charged with that. We were taking the lead. And so,
24 what you'll find is some of our findings and
25 recommendations are fairly high level in nature and we

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1 didn't get down into the details. I think there is
2 some food for thought in what we have provided,
3 however.

4 The main purpose of what we did was to try
5 to stimulate additional consideration, conversation,
6 communication on the Inspection Program activities
7 and, as a result of what we were looking for and the
8 charge that I had, I formed a team consisting of Randy
9 Blough, who is with me at the table. Randy is chief
10 of one of the reactor project branches in Region I.
11 The second member of the team is not here today. He's
12 out conducting a -- I think a regional assessment, and
13 that's Michael Johnson who is a chief of one of the
14 management and operations sections in NRR, and myself.

15 And what we did was we developed a plan
16 which we believe to be -- kind of have the issues that
17 are symptomatic of an effective inspection program
18 and, as we go through the briefing, you need to keep
19 in mind that what I have in mind and what we have in
20 mind regarding effectiveness of an inspection program
21 are whether or not it has a positive impact on the
22 safety performance of the utilities. So, that's sort
23 of our benchmark.

24 The work was carried out in August and
25 September of last year, so some of the findings and

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1 recommendations that we have could be somewhat dated.
2 For example, our comments on SALP were made at a time
3 when the staff was meeting with others on SALP and
4 developing the recommendations that they came up with
5 at last week's meeting and I think changes have been
6 made, for example, relative to the N+1 resident
7 inspector level which happened subsequent to our
8 recommendations and these are a couple examples of
9 things that have overtaken us.

10 (Slide) Could I have the second slide,
11 please?

12 We examined whether the inspection program
13 objectives were being met as one element of the
14 program's effectiveness, the program's impact on the
15 utility safety performance. We looked at the relative
16 effectiveness of regulatory performance initiatives,
17 and by those I mean SALP, the enforcement program, and
18 the problem plant process.

19 (Slide) Slide 3, please.

20 We also looked at whether or not the
21 program was cost-effective, that is were the resources
22 being applied in such a way that if there were more
23 there would not be a diminishing return, if there were
24 less there would not be a positive effect on the
25 program.

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1 We looked at safety versus compliance and
2 how the program was carried out, and finally whether
3 the program itself was effectively using the lessons
4 learned.

5 The methodology we used for the review was
6 we looked at the directives and documentation dealing
7 with the program, the directives, some of which are
8 fairly old, some of which are more recent, but more
9 importantly we contacted executives of seven
10 utilities. Generally we met with two or three
11 executives at a time in each of the seven utilities.
12 These particular utilities covered the five NRC
13 regions and we picked utilities that we believe had a
14 good diversity in plant type, age, and level of
15 performance. So we met with good performers and we
16 met with plants that had been on the problem plant
17 list, so they had a little bit of perspective for us
18 there.

19 We also talked with representatives of
20 INPO. We met with Regions II and III at all levels of
21 management there and we met with some Headquarters
22 managers.

23 Finally, we put our recommendations
24 together in this report which was issued last
25 November. I think what --

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1 COMMISSIONER ROGERS: Just before you go
2 on --

3 MR. VOLLMER: Yes, sir?

4 COMMISSIONER ROGERS: What was the level
5 of the utility executives? What level were they?

6 MR. VOLLMER: We met with the senior -- in
7 all cases, we met with the senior utility nuclear
8 executive, which in some cases generally was the
9 Senior Vice President, Nuclear.

10 COMMISSIONER ROGERS: I see.

11 MR. VOLLMER: And generally two or three
12 of his staff or direct reports.

13 And we also, by the way, we were also
14 selective in that I think in all cases we took a -- we
15 met with the utility executives who had been through
16 the plants himself. We had people with plant
17 experience I think in all cases.

18 Am I right, Randy?

19 I think so. So that was important to us
20 that they had the broader perspective.

21 I think what indicated -- what struck me
22 most perhaps relative to the strengths and weaknesses
23 of the inspection program, particularly since these
24 were the industry we were talking to, that their
25 perspectives were surprisingly consistent with what we

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1 heard from the regions and from NRC Headquarters,
2 despite what, and I'll get into this a little bit
3 later for example on SALP, the feeling that this was
4 a good program was certainly shared by the people we
5 talked to in industry.

6 I know, Commissioner Rogers, you mentioned
7 the same observation last week.

8 Also, industry was certainly not bashful
9 in telling us what they thought about our resource
10 impact on the utilities. I think they were quite
11 candid with us on that. But on the other hand, I
12 don't think they indicated any real significant
13 restructuring or revision need. In other words, I
14 think they shared our observation that the program was
15 healthy in the definition that I articulated earlier.

16 The most common criticism or critique I
17 think from industry concerned our management of the
18 size and content of team inspections and the impact
19 that that had on their activities, and I'll get into
20 that a little bit later, but I think it was more from
21 the point of view that they did benefit from these.
22 They felt they were positive on safety and they were
23 hoping, if we manage this process a bit better, that
24 they would benefit more from the inspection program.

25 (Slide) Slide 4, please.

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1 So, reiterating, our overall conclusion
2 was that the inspection program is healthy and has a
3 positive safety impact on the industry's performance.

4 We did find, as you would expect, certain
5 areas which we believed could benefit from our
6 recommendations. I think these are in some cases
7 fairly narrow and some cases they have to do with
8 process. In some cases, they have to do with just how
9 we manage the process.

10 (Slide) Slide 5.

11 The objectives of the inspection program
12 were delineated in SECY-92-169 and I'd like to just go
13 over them briefly. They are, one, providing a basis
14 for allocation of inspection resources; two, assuring
15 that licensees programs result in safe operation;
16 three, finding and resolving plant-specific safety
17 concerns that have generic significance; and four,
18 identifying declining trends in performance before
19 that performance declines below an acceptable level.

20 So with these being objectives of the
21 inspection program, I think we've found agreement
22 pretty much across the board that the program was
23 generally effective in achieving these objectives. We
24 found that the inspection program's process of
25 selective or audit examination does enable the staff

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1 to draw reasonably accurate conclusions about licensee
2 performance and I think there was general feeling both
3 in industry and the NRC side that the program looked
4 at the right areas in generally the right depth.

5 We also found that the inspection program
6 was effective in measuring the adequacy of the
7 licensee's internal programs and allows reasonable
8 latitude for management of their programs. That is,
9 we weren't overpowering or trying -- or doing too much
10 management of their activities but that that was
11 certainly a concern of some of them, that particularly
12 in some of the more detailed inspections, for example
13 the diagnostics, that we got into areas which we would
14 be managing their activities. But we had no specific
15 recommendations in this area. We thought that the
16 program was effective.

17 (Slide) Slide 6, please.

18 Now with respect to what impact the
19 program has on the safety performance, our finding, as
20 I indicated, is it was an important contributor and
21 that view is shared by industry. It was very
22 difficult to separate out the contribution of the
23 inspection program from those things the utility is
24 already doing, from INPO, and from other NRC
25 activities. Even so, the feeling was that it was

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1 certainly positive and one of the major contributors.
2 We didn't try to articulate how much, percentage or
3 anything like that. That in our view wouldn't have
4 been too productive, but the things that we talk about
5 a little bit later, I think, will tend to provide
6 perhaps a little bit of modification and streamlining
7 and hopefully make the program have more impact for
8 the resources spent.

9 (Slide) Now the types of inspections, if
10 I could have slide 7, please, the team inspections
11 were seen as particularly valuable to enhancing
12 safety. Now I want to point out that our definition
13 of team inspection is a little bit different than the
14 four inspectors for five days. We just sort of
15 generically looked at team inspection was a group of
16 people going in and conducting a well-defined area
17 that would be different than just the core inspection
18 or some of the specialty inspections.

19 But the utilities, surprisingly to me a
20 little bit because I know they do complain a lot about
21 the impact of the team inspections, they felt fairly
22 strongly that they got a lot of safety benefit out of
23 these. And the safety improvements often precede the
24 team inspections. They know what's coming. The SSFI,
25 for example, has spawned a cottage industry of

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1 consultants who do that before we get there and I
2 think in some cases it has been a very valuable source
3 of safety improvement. However, they have a
4 substantial resource impact on the industry and the
5 utility. They use --

6 CHAIRMAN SELIN: Could you stop for a
7 second, Mr. Vollmer?

8 MR. VOLLMER: Yes, sir.

9 CHAIRMAN SELIN: Given that at least in
10 this case you attribute a fair amount of the benefit
11 to a kind of a preemptive or what we used to call
12 virtual attrition -- I mean, they know you're coming
13 and they fix these things -- could you get, could we
14 get, could the licensees get most of the benefit with
15 less of the resources? I don't mean you make believe
16 you're going to do an inspection and then you come
17 back, but, instead of doing --

18 MR. MIRAGLIA: I think we actually talked
19 about that.

20 CHAIRMAN SELIN: Yes. But instead of
21 doing a full inspection, could we get most of the
22 benefit if the concept of the inspection were more to
23 see what they've done instead of to reproduce the
24 results or to produce the results? Have you gone that
25 far or would that be too speculative at this point?

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1 MR. VOLLMER: Although we didn't, as I
2 recall, pursue that specifically, my thinking would
3 indicate that that could be a real positive thing,
4 particularly if we define clearly, and I'll get into
5 that later, what we're looking for and what the safety
6 benefit of it is and exactly why we'd want to do it
7 and lay out the groundwork and then perhaps conduct
8 these on perhaps some plants that we know problems
9 exist and let others either follow in the footsteps to
10 preclude an exam or just because they're good
11 licensees. I think a lot of the benefit could be
12 gained through that, yes, sir.

13 CHAIRMAN SELIN: That leads me to the
14 second question. Can we measure the benefit well
15 enough so that we would know whether we were getting
16 most of the benefit or would we have to sit around and
17 say, "What do you think, Frank? How did we do? I
18 don't know"?

19 MR. MIRAGLIA: I think we addressed this
20 somewhat at the meeting last week when we discussed
21 SALP. And certainly in the team inspection area we
22 have started to think in that direction, to identify
23 what we're looking for in terms of what we would use
24 as a TI, but we could express the concerns that we
25 had, the scope of the inspection and perhaps even the

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1 methodology and then audit as opposed to us doing the
2 entire review. We have a pilot underway in Region I
3 to assess that, the effectiveness of what we get out
4 of those kinds of things, so that's a step in that
5 direction.

6 In addition, another analogy somewhat is
7 the restructuring of the Part 55 Rule and looking at
8 establishing what the criteria for exams are and how
9 those exams are conducted and us taking a more audit
10 and getting in examining for cause, but yet keeping
11 our hand in in a sufficient fashion to see that we are
12 administering the right kind of programs and those
13 kinds of things. So I think the thinking has
14 progressed along those lines.

15 CHAIRMAN SELIN: What other Part 55
16 programs?

17 MR. MIRAGLIA: The requalification
18 examinations for operating examiner. So I think, yes,
19 we're thinking along those lines. Certainly the
20 initial effort in the pilot with the team inspections
21 will give us a feel for how well we can do that and
22 how comfortable we feel and I think as we gain
23 experience we could look into other areas as well.

24 MR. VOLLMER: Okay. In terms of impact,
25 I think the utility uses at least three to five times

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1 the NRC's effort in preparing for the inspection and
2 dealing with the near-term aftermath. And if there
3 are significant findings from the inspections it goes
4 on and on, so there are significant resources devoted
5 to that. And I think some of their observations and
6 some of the things that I believe I saw when I was --
7 before I came back to the Commission was that when the
8 team goes out, if the findings, the positions are not
9 well articulated and thought out in advance, that
10 sometimes will cause the licensees to make false
11 starts, to be unproductive in their resource use.

12 And of course, some of the team
13 inspections, we heard complaints that they were too
14 long, too large and so on and so forth, but I think
15 that is not as significant as the comment that, if the
16 NRC team was managed and carefully controlled and the
17 needs and the safety benefit of the inspection were
18 well articulated, I think most of these other
19 criticisms would go away.

20 As a result of these findings, we
21 recommended that more attention be devoted to the
22 effectiveness elements that we delineated in the
23 appendix to our report. Many of these elements are
24 already somewhere in the program now, but we feel more
25 attention should be given to them.

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1 For example, adequate notification is
2 needed prior to a large team inspection. We heard a
3 number of instances where they just didn't give much
4 notice or they got a lot of notice and then it was put
5 off and then on short notice it was reinstated, things
6 of that nature.

7 There should be a clear understanding
8 between the NRC and the licensee of the objectives and
9 expectations. I'm not suggesting that they be
10 involved in formulating our inspection program, but
11 once we've decided on what we want to do, particularly
12 in a team inspection, they need to know exactly what
13 we're looking for and why it is, what the safety
14 background is.

15 And lastly, I think the team needs to know
16 itself what is acceptable going in and ensure that the
17 team's findings are in agreement with NRC's technical
18 positions. This has been, I think, a problem cited to
19 us before, that the team would tell them one thing and
20 after negotiation or discussions with Headquarters
21 they might hear something else. So, those are areas
22 that I think just involve good sound management of the
23 team inspection process.

24 COMMISSIONER REMICK: Dick?

25 MR. VOLLMER: Yes, sir?

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1 COMMISSIONER REMICK: When I first came on
2 board and visited the regions and raised the question,
3 because of hearing some of the same things that all of
4 us have heard about the impact in talking to people in
5 the regions, at least in several regions they
6 indicated that they were getting notified that "We
7 have a team. In two weeks we'd like to come into the
8 region and do this inspection," and the region felt
9 that that was not necessarily consistent where they
10 thought emphasis should be given with particular
11 licensees and that it actually might interfere with
12 ongoing activities they had.

13 Did you hear any of this at this time?
14 This goes back probably two and a half, three years
15 ago, I guess, when I heard those things, but --

16 MR. BLOUGH: There is a vastly improved
17 process in place for the Headquarters and the region
18 coordinating the team inspections and it's generally
19 resulting in more advanced notice than was a few years
20 ago. Our report advocates, however, providing even
21 more notice, improving on that substantially,
22 providing ample notice.

23 COMMISSIONER REMICK: And one of the
24 things I know that was emphasized is that the region
25 had basically a program going with the licensee on the

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1 things that they thought were important and by this
2 even giving advance notice, but this team coming in
3 emphasizing another area they did not think was a
4 priority area with what they had emphasized with that
5 particular licensee is what was needed.

6 MR. MIRAGLIA: As Randy is saying, what
7 we've instituted is sort of a Headquarters clearing
8 house where we coordinate with each of the regions'
9 project managers. Along with regions, we've
10 instituted a master inspection program. There's
11 quarterly reviews. There's coordination between
12 Headquarters and regions and we project team
13 inspections over a six or nine month window.

14 In addition to that, we also look at and
15 take cognizance of the fact of what are other
16 activities going on in the licensee's facilities. For
17 example, we consider INPO evaluations, INPO assist
18 visits, American Nuclear Insurers visits and things of
19 that nature, and so we try to take cognizance of that.

20 Now schedules do change and events do
21 happen and that, but I think that's lesser of a
22 concern today than it was.

23 COMMISSIONER REMICK: And maybe you're
24 answering what I'm trying to get at. Coordination can
25 mean we can tell you that in three months we're coming

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1 to do this, but coordination can also mean asking the
2 region "Do you think this is a priority?" Do they
3 have an opportunity to respond and say, "We don't
4 think we need a team in that area"?

5 MR. MIRAGLIA: Yes, sir, that dialogue
6 goes on --

7 COMMISSIONER REMICK: Okay. Good.

8 MR. MIRAGLIA: -- between Headquarters and
9 the regions.

10 MR. VOLLMER: However, I think that almost
11 all of the things that we have suggested in our report
12 or recommended in our report, at least most of them,
13 are things that you can point to, we're already doing
14 that in a sense or the program directives say to do
15 this. I think what we're suggesting is more
16 discipline and more management attention be given to
17 these things, and this is one of them, I think,
18 because even -- and what we heard were that, both from
19 the regions and from the licensee, that more attention
20 was needed in this area.

21 COMMISSIONER REMICK: In looking at this,
22 have you or have the staff looked at INPO's approach
23 to doing an assessment visits or accreditation visits,
24 the management, the participation in planning and
25 emphasizing the focus of it and then when the findings

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1 come back making sure that that goes up and that's
2 consistent with the overall emphasis?

3 MR. MIRAGLIA: Yes, sir.

4 COMMISSIONER REMICK: Have you looked at
5 that type of thing?

6 MR. MIRAGLIA: That has also been
7 examined. I think many, if not all, of the regional
8 administrators went on several days of an INPO
9 evaluation. We had staff individuals participate and
10 observe the entire evaluation. Doctor Murley and
11 several other NRR managers also participated in that
12 to have a feel for what does INPO do and how does it
13 do it and to have that process, a good appreciation of
14 the process. And we see some strengths in that
15 process. Their approach is different. Their focus is
16 a lot different and I think we tried to learn from
17 that process as well, but our inspection program is
18 directed a little bit differently. But we have been
19 participating along with them.

20 COMMISSIONER REMICK: Good. Thank you.

21 MR. VOLLMER: I'd agree with what Frank
22 said. I think INPO perhaps, because their process is
23 structured differently and perhaps the resources are
24 assigned differently, they have a more structured and
25 more disciplined approach particularly to peer review

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1 of findings and to senior management review, I think,
2 and that was one of the things we'll get to a little
3 bit later here.

4 (Slide) Slide 8, please.

5 With respect to the resident program, this
6 was very well considered by all licensees we talked
7 to. They see it as an effective day to day
8 contributor to the safety of the plant. The program
9 was viewed as being well-staffed and I think there was
10 general agreement both with the industry and the
11 regions that we talked to that increased attention to
12 poorly performing plants would yield more safety
13 benefit than the formula resident at good sites, and
14 we'll get to our recommendation on that in a minute.

15 The special inspections are important to
16 SALP and to senior management meeting considerations
17 which help us assess trends for licensee performance.
18 So although this is already at a low resource level,
19 our recommendation of establishing the N+1 resident
20 staffing as a policy guideline only would help free up
21 some of those resources and hence our reason for that
22 recommendation.

23 (Slide) Slide 9, please.

24 CHAIRMAN SELIN: You wouldn't recommend
25 fewer than two residents at a site, would you?

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1 MR. VOLLMER: No, sir. Two residents.

2 CHAIRMAN SELIN: This is multi-unit sites
3 you're talking about?

4 MR. VOLLMER: But when you have multi-unit
5 sites, particularly with good performance and common
6 type reactors at a site, we think that more discretion
7 would be appropriate.

8 We looked at how effective the regulatory
9 performance initiatives are. As I said, the
10 initiatives, as we defined them, were the problem
11 plant list, SALP, and enforcement. And the problem
12 plant list, to the surprise of no one, is very
13 effective in focusing attention on poor performers and
14 there's probably no better way short of shut-down
15 because of the visibility this has throughout the
16 industry, the financial community, as well as the
17 NRC's process to reach the list because the process
18 itself has a fair amount of credibility to get the
19 full attention of the utility.

20 CHAIRMAN SELIN: That's an interesting
21 point. I didn't catch that in your written report
22 that the process itself is a credible process. It's
23 not seen as arbitrary, capricious, et cetera.

24 MR. VOLLMER: It perhaps should have been
25 put in the report. You're right. I don't think it

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1 was, but I think the process itself is credible. And
2 I go back, if I may, to before I came back to the
3 Commission. I was involved with a number of
4 utilities, both who had achieved that status and those
5 that had not, and I think the feeling was in most
6 cases that the NRC does a pretty good job in focusing
7 attention on the right plants. Obviously, some people
8 might --

9 COMMISSIONER REMICK: Is that as long as
10 they're somebody else's plant and not my plant?

11 MR. VOLLMER: I've heard more than one
12 utility say "I hope the bear feeds on that end of the
13 country and not on my end," but that's true.

14 However, the problem plant list does come
15 with its problems. One of the main ones is
16 overwhelming attention from the NRC, from INPO,
17 insurance carriers, PUCs, financial community. One
18 former member of the list had an inspection by
19 insurers which made our team inspections look puny in
20 size and duration. That was surprising to me, but
21 we're talking about a major effort by insurance
22 companies looking at that plant.

23 It was also apparent to us and it's been
24 my experience that most utilities would initiate
25 fairly robust action to avoid the problem plant list

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1 status. We also found and know from experience that
2 once on the list the desire for early removal
3 sometimes involves throwing resources at every problem
4 in sight.

5 (Slide) Slide 10, please.

6 Now relative to the SALP process, we
7 believe our findings would indicate it's effective for
8 communication with the industry and with the public.
9 Many utilities, perhaps most of the better ones, use
10 SALP for their planning and motivational purposes.

11 We discussed with the utilities unintended
12 uses of SALP, for example by the financial community,
13 but these did not seem to counter-balance the intended
14 uses of SALP.

15 So, what I'm saying is that, and going
16 back again to the meeting you had last week, is that
17 our findings would be very supportive of the staff
18 position that you heard last week, that SALP indeed is
19 a good program and one worth keeping. Further than
20 that, I think my own experience would indicate that
21 SALP was useful in helping utilities manage plants.

22 And I also would share the view, which is
23 what Commissioner Rogers had indicated last week, that
24 most utilities that I talked to would not have shared
25 the view that we should get rid of SALP, because

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1 certainly if we did get rid of SALP there would be
2 something else to take its place and perhaps have to,
3 but it was used by many utilities in an effective way.

4 So therefore, relative to regulatory
5 performance initiatives, our recommendations were two-
6 fold. One, when a plant's performance extrapolates to
7 the problem plant list, that the utility be notified
8 at the highest levels.

9 It's been my past experience that a couple
10 of the utilities that ended up on the list, the
11 executives at the highest levels, the board level and
12 the chief operating officer or the president, were
13 surprised at what happened. And although we may have
14 indicated in great detail to the nuclear executives in
15 the industry where they were going, that didn't always
16 get up to the top and as a consequence proper actions
17 that could have avoided or turned around performance
18 a lot earlier may not have been taken.

19 We know of cases also that the belief by
20 top management that the plant was headed for the
21 problem plant list has caused a dramatic and lasting
22 turn around, so that would argue that this
23 recommendation be considered.

24 We also recommend that when a plant is
25 placed on the list there be a minimum residence time

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1 before reevaluation for removal. This could allow for
2 a more orderly improvement process which generally
3 includes management, program, and process changes.
4 The NRC would continue to closely monitor plant
5 performance to ensure that the performance is not
6 continuing to deteriorate and save major inspection
7 activities for verifying improvement, not validating
8 bad performance.

9 This again, I think if there was one --
10 but perhaps no plants have gotten off in less than one
11 year, although I can assure you that when they are put
12 on the list they shoot for the first time around to
13 get off and I've seen many cases of ill-conceived
14 programs. Just the trauma associated with it to begin
15 with causes them to do a lot to try to get off the
16 list, and rightly so.

17 (Slide) Slide 11.

18 COMMISSIONER CURTISS: Could I -- let me
19 pursue that point with respect to the minimum
20 residence time. Your recommendation here, is it
21 driven by a view or a finding on your part that what
22 we see with plants that are on the problem plant list
23 is that they throw money at the problem quickly in an
24 effort to cure the problem and, as a consequence of
25 that, what ends up happening is that we might consider

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1 removing them too early and that because their
2 corrective actions are not sustainable and they get
3 back into problems? Or, is the concern here that
4 they're just spending their own resources in an
5 inefficient way? If they knew they were on there for
6 a while, they might be a little bit more deliberate in
7 how they'd allocate their resources?

8 MR. VOLLMER: I think it's principally the
9 later. The issue is, of course, sustained performance
10 and I think we do and need to look for that before we
11 consider taking them off the list. So if performance
12 really is at a level where they need to go on the
13 list, it's my view that they really couldn't get off
14 in less than a year because you wouldn't have the
15 period of sustained performance.

16 And secondly, just the fact that
17 intellectually for the licensee and for the people
18 that use the problem plant list, let's say the
19 financial community and others, it's my view that if
20 achieving the list status would be such that don't
21 expect them to get off for 12 to 18 months, for
22 example, I'm just picking some numbers here right now,
23 the expectations perhaps would be a little bit
24 different. So that's sort of the basis for it.

25 COMMISSIONER CURTISS: Okay.

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1 Second question, and here jumping ahead to
2 borrow from a point that I think you're going to make
3 in a minute about the impact of publicity in the
4 context of enforcement activities, would you recommend
5 based upon what you've found here that the plants that
6 as you've described it whose performance if
7 extrapolated would lead to the problem plant list,
8 that the plants that are on the full discussion list
9 be notified not only at a higher level but in a more
10 visible manner?

11 MR. VOLLMER: What I was suggesting, I
12 think what we were suggesting was that -- and I
13 wouldn't want to say all the plants that are on full
14 discussion, because I'm not sure if the plants on the
15 full discussion, after the full discussion took place,
16 that the decision would be made at the senior
17 management meeting that this plant does look like it's
18 heading to problem plant status. But if it were, then
19 I would suggest that a high level NRC contact be made,
20 my personal recommendation would be by the EDO to the
21 board, and say that we're just not pleased with the
22 performance of the plant and here's what our thinking
23 is and here's why, and I think that many or most
24 utilities would harken to that and do something about
25 it.

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1 COMMISSIONER CURTISS: Okay. I have to
2 confess I'm a little bit unclear on what our current
3 policy is with respect to notification of those plants
4 that are on the full discussion list but that don't
5 wind up on the problem plant list. What is the policy
6 and how do we inform, if at all?

7 MR. MIRAGLIA: For plants on the full
8 discussion list, subsequent to the meeting each
9 regional administrator does indicate to the utility
10 and the question would be at what level. It's
11 probably at the vice president --

12 MR. TAYLOR: The vice president.

13 MR. MIRAGLIA: -- level as a minimum.

14 COMMISSIONER CURTISS: All of the plants
15 on the full discussion list are notified, then?

16 MR. MIRAGLIA: That the plant was --

17 MR. TAYLOR: Discussed.

18 MR. MIRAGLIA: -- the plant was discussed.

19 As a result of the senior management
20 meeting, as Mr. Vollmer indicated, not all plants
21 discussed -- it doesn't necessary -- the senior
22 managers say it's on a slippery slope downward. In
23 those cases where we have those kinds of concerns, one
24 of the options that are discussed is does the industry
25 clearly -- does the utility clearly understand what

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1 our concerns are and do we need to talk to, say, the
2 senior vice president or perhaps talk with the CEO or
3 even the board of directors, and in certain instances
4 those things have happened on a case by case kind of
5 basis. And so, while there is not a prescriptive
6 formula, I think by practice that's generally what the
7 policy is.

8 COMMISSIONER CURTISS: Okay.

9 MR. TAYLOR: Many times discussion plants
10 require further observation for a longer period,
11 that's for sure, and we've seen people who are
12 discussed actually turn around and not extrapolate to
13 problem plant status.

14 COMMISSIONER ROGERS: But, you know, I
15 think that it still is a good idea to let them know.
16 I mean, they may turn around by themselves, but, after
17 all, what we want to do is have them turn around and
18 we don't want to get into a "gotcha" situation.

19 MR. MIRAGLIA: They do know. It's a
20 question of the level.

21 MR. TAYLOR: They do know they're being
22 discussed. There's both the level and quite the way
23 you say it.

24 COMMISSIONER ROGERS: Right.

25 MR. TAYLOR: We don't always say, "You've

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1 been discussed and, if you don't change..." That
2 sounds kind of threatening. We don't say, "You're
3 going to be on the problem plant list," per se, but
4 the fact that they've been discussed, that they know
5 a lot of the issues, the input to the senior
6 management, so there are certain assumptions they have
7 to make when they get that type of --

8 COMMISSIONER ROGERS: Well, I'm suggesting
9 to try to go as high as you can go. I'm not convinced
10 that the V.P. Nuclear is necessarily the right place
11 to go. I've seen situations where the V.P. Nuclear
12 just kept that to himself and below, but it never got
13 higher. If it might have gotten higher, things might
14 have changed much more rapidly.

15 So I think when it starts to look serious,
16 I think people want -- top managers want to know those
17 things. They don't want that hidden from them and
18 there's always a problem in every organization that
19 somebody doesn't want their boss to know that they've
20 got a problem, and the boss wants to know. Certainly
21 at the board level they like to know, and so I think
22 it's worth trying to carry a concern pretty high if it
23 is a serious concern. That's a judgement that you
24 folks are going to have to make as to how serious it
25 is, but I would --

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1 MR. MIRAGLIA: That's the type of
2 discussion we do have.

3 COMMISSIONER ROGERS: Just going to the
4 Senior V.P. Nuclear I don't think is high enough, if
5 you really feel that there is a serious problem, that
6 they really are headed towards the problem list. I
7 think you're doing them a favor, frankly, to get it
8 higher.

9 MR. TAYLOR: All right. We'll take that
10 into account.

11 MR. VOLLMER: (Slide) Slide 11, please.

12 We found the inspection program to be
13 generally cost-effective. I don't think I'll dwell on
14 this too much, but our general conclusion is if we
15 increased the program resources and attentiveness we
16 don't think that there would be a commensurate
17 improvement with the overall trend in safety.

18 And conversely, do we think significant
19 revisions are in order or reductions are in order? We
20 think, as best we could measure it with our
21 benchmarking, we think that it's at about the right
22 level but we would try to maximize the safety benefit
23 by some of the things I'll mention a little bit later.

24 (Slide) Slide 12.

25 COMMISSIONER REMICK: Dick?

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1 MR. VOLLMER: Yes?

2 COMMISSIONER REMICK: You indicate in the
3 report that certain inspection activities seem to
4 focus on areas of low safety significance, and I think
5 you specifically mention security, but you didn't
6 elaborate on what caused you to make that observation.

7 MR. VOLLMER: Well, I think -- and I have
8 that in my comments here too -- I think the three
9 things that were mentioned most often and pretty
10 commonly were security, emergency planning, and
11 commercial grade dedication. I think it's the belief
12 by industry and I think in some cases -- well, in most
13 cases I think shared by the regions, that we do devote
14 a lot of resources to this.

15 Of course we've seen some different
16 security happenings recently, somewhat dating our
17 report, but a great deal of attention in some cases
18 and expense is paid to this activity and it's
19 sometimes not easy to develop the good safety nexus
20 that you could look for in other areas.

21 Some things we need to do because they're
22 part of the regulations and we have to make sure
23 they're being complied with, so I'm not suggesting
24 cutting out some of these things but perhaps taking a
25 look and focusing in terms of using the IPEs and just

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1 general risk assessments to try to focus the overall
2 impact of the inspection resources as best we can, but
3 those three areas certainly were mentioned quite
4 often.

5 (Slide) Slide 12, please.

6 We indicate here that our recommendation
7 again, as I just said, making the program a bit more
8 responsive to adjustments on safety considerations, I
9 think that's generally the direction that the program
10 is going now and I think it's always easy to say "make
11 them more safety significant."

12 We didn't have an opportunity to get into
13 the details that would help us make any specific
14 recommendations, but, since most plants now have IPEs
15 or will in the short-term, I think it might be well to
16 consider if one could form individual plant inspection
17 programs a little bit with the IPE in mind and
18 certainly for the generic or the team inspections or
19 big inspection programs, make sure they have they have
20 a strong tie to safety before we use our resources and
21 the licensee's resources.

22 COMMISSIONER REMICK: Just a question that
23 I don't understand. Do we have people dedicated in
24 Headquarters just to team inspections? Are these
25 people that are used for other things when we haven't

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1 needed them for a team inspection? In other words, do
2 we need to keep them busy by sending them out for team
3 inspections?

4 MR. MIRAGLIA: Well, we did have a
5 significantly larger staff three years ago than we do
6 now. This is one of the areas in the realignment of
7 resources to take care of other office priorities that
8 we have reduced, but we do have within our
9 Headquarters branch a Headquarters inspection branch
10 that is focusing on developing the team inspection
11 kind of technology. We usually conduct pilots and
12 team leaders for those pilots would come out of that
13 branch and work along with regions and then for the
14 first inspections led by a regional team leader, there
15 would be assistance from those teams to make sure that
16 the methodology is utilized and is being developed and
17 implemented in the field according to the temporary
18 instructions.

19 So, there is a cadre of people here at
20 Headquarters for team inspections. It's to develop
21 the special inspection techniques and the
22 implementation of them as well.

23 COMMISSIONER REMICK: Do they -- to be
24 utilized, do they have to be developing new team
25 inspection concepts? In other words, is that --

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1 MR. MIRAGLIA: Well, one of their
2 principal focuses is to look at those kinds of areas.
3 For example, the EDSFI was developed within the
4 context of that group, the EOP inspections and those
5 kinds of things.

6 MR. TAYLOR: Service water.

7 MR. MIRAGLIA: Service water inspections.

8 MR. TAYLOR: As you know, that gets looked
9 at by management there and then ultimately is brought
10 to the Commission.

11 MR. MIRAGLIA: And those are developed
12 when they are identified for an area of emphasis type
13 of inspection, we come to the Commission prior to
14 implementation.

15 MR. TAYLOR: We have to convince ourselves
16 that there's a payoff or potential payoff.

17 COMMISSIONER REMICK: That there's a need
18 to develop it and so forth.

19 MR. TAYLOR: Need and that it's
20 appropriate.

21 MR. MIRAGLIA: And in the development of
22 that, for example, in the electrical inspections, the
23 early pilots, the findings from the early pilots were
24 looked at, we tried to assess the safety significance
25 of those findings in terms of the findings that we've

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1 made. That fact is they appear to be to us very
2 significant and we put some early information notices
3 out as a result of those early inspections, to give
4 the rest of the industry a leg up in saying we're
5 doing these things and we're finding safety
6 significant things from these inspections. So, those
7 elements are there.

8 COMMISSIONER REMICK: What do they do when
9 you have not defined a need to develop a new pilot
10 program, pilot inspection program?

11 MR. MIRAGLIA: Well, these individuals can
12 assist also on AITs and also DETs. They also are
13 resourced to the region to assist them in some special
14 inspection activities as well.

15 MR. VOLLMER: (Slide) Slide 13, please.

16 The inspection program focus relative to
17 safety and performance continues to increase relative
18 to compliance and the general feeling was this
19 direction is appropriate. Some in the industry
20 believe that only compliance inspections are
21 appropriate, but most recognize the need for
22 performance assessments. However, it raises issues of
23 consistency because your measurement is a value
24 measurement and the need to ensure that what an
25 inspector views as a performance deficiency, we need

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1 to ensure that that's really shared by the Agency.
2 So, that's a problem area that I think everybody
3 recognizes, but I think the general view is that
4 performance inspections are important.

5 Again, the reason we need to do that is to
6 assure that the inspector findings are valid, is
7 because licensee resources are devoted to meeting
8 these findings. Particularly we like the licensees to
9 be very responsive and sometimes they jump on a
10 problem very quickly. So, it was shared with us that
11 sometimes they jumped on problems a little bit too
12 quickly and they found out that they may not have been
13 dealing with the right issue. I don't think that's a
14 large problem, but the more you get into performance
15 based inspections, the bigger the problem will be
16 compared to a strictly compliance inspection.

17 COMMISSIONER CURTISS: In fact, let me
18 pick up on that point because you didn't get into a
19 lot of detail here and it may well be because we don't
20 have very many comprehensive performance-based
21 regulatory regimes in place. But as we get into an
22 initiative like that and the maintenance rule will be
23 the first one out of the blocks, it seems to me this
24 challenge is a particularly important one. What I
25 would encourage you to do, you the staff collectively

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1 I guess, is to, as I think you are, recognize the
2 unique challenge in the inspection context that a
3 performance-based regulatory regime poses. The effort
4 that you're devoting to the inspection guidance for
5 the maintenance rule, which I personally believe will
6 be a much more difficult challenge than developing the
7 guidance for implementing the rule, I would encourage
8 you to focus and, Dick, bring the expertise that
9 you've developed in the context of this look see into
10 that arena so that the performance-based focus of a
11 regulation like that can, in fact, be achieved when
12 it's translated into the inspection field.

13 MR. VOLLMER: Yes, sir.

14 CHAIRMAN SELIN: I'd like to follow up on
15 that. I think at some point there are three questions
16 that we should be able to ask and get an answer, and
17 it's a little bit consistent with your
18 recommendations. First is how can we find out if we
19 are, in fact, shifting to looking at safety instead of
20 compliance? You know, the Director of NRR says,
21 "Let's do all this," and maybe we are and maybe we
22 aren't. But is there some way to measure if it's even
23 happening, let alone whether it's a good thing or not?
24 It's part of my generic problem that it's much easier
25 for me to understand what the Agency's guidance is

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1 than to find out what's happening in the field.

2 When we looked at SALP hours we found, to
3 our surprise, that there really wasn't much
4 correspondence between SALP ratings and where the
5 resources went, even though it's been our policy for
6 a number of years to try to use the two. This is less
7 of a quantitative question. How would we even see if
8 it's happening, let alone whether it's a good thing or
9 not?

10 The second is our plans are to cut the
11 inspection hours in fiscal year '94 by about five
12 percent per reactor compared to '93. They're going
13 from 2800 to 2700 hours per reactor, according to our
14 plan. We should have a way to measure whether it
15 makes any difference or not. That's not the right way
16 to do it. It's not just that we're cutting, we're
17 doing a number of steps that we think will permit us
18 to reduce the inspection hours because it will be a
19 more efficient program. But we should have some
20 measure to see whether it makes any difference.

21 Now, maybe the measure is overall
22 performance indicators, but as you said at the
23 beginning, Mr. Vollmer, it's hard to separate the
24 impact of inspection from the impact of everything
25 else. We should at least be thinking so that when we

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1 go up to our committees next year and talk about our
2 '95 budget, that we did or didn't get this reduction
3 and although nobody can be sure, we're reasonably
4 comfortable it did or it didn't impact on performance
5 and here are the kind of questions we asked ourselves.
6 We measured the status quo ante, we did some controls,
7 whatever it is. I mean it's a question that we should
8 have set up now before the fiscal year starts so that
9 at the end of that time we can answer that question.

10 Each of these questions is harder than the
11 one before, as you'll notice, but I only have three.
12 So, they don't go on indefinitely.

13 The third is we spend a large part of our
14 overall budget on inspection. How would you grossly
15 go about the question are we getting our money's worth
16 as opposed to looking at it and saying, "It's a pretty
17 good program. We can improve it here?" More
18 precisely, how would you answer the question, what
19 would happen if we added ten percent or took back ten
20 percent from our resources? I don't mean how do you
21 predict, but how would we even notice whether the
22 difference was -- how would we think about whether the
23 difference was worthwhile or not? You know, it's what
24 I call -- in German it a gadankin experiment. If we
25 were to increase resources ten percent and then we

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1 carried out the program for a couple years, how would
2 we know whether it was ten percent better, five
3 percent better, a lot better? You know, sort of an
4 incremental way of just trying to answer the broader
5 question about is the country getting its money's
6 worth out of the program.

7 I don't really expect you to try to do
8 these on the fly, but I do think that questions at
9 some point that one has to go about trying to answer.

10 MR. TAYLOR: There's a long history of
11 this subject, having involved in inspection in earlier
12 years. There were attempts, various attempts, to
13 measure effectiveness. I remember the Z scores which
14 really predated me.

15 I'd like to come back on that subject --

16 CHAIRMAN SELIN: Sure.

17 MR. TAYLOR: -- as I think those are good
18 questions, somewhat difficult to answer.

19 CHAIRMAN SELIN: I'm not looking for
20 mechanical, please.

21 MR. TAYLOR: I understand.

22 CHAIRMAN SELIN: I'm really pretty happy
23 that in terms of overall performance these performance
24 indicators are sort of correlated with performance,
25 that when we look at enough of these things we can say

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1 that the performance of the plants in general is going
2 in which direction, et cetera. Inspection is a very
3 big part of what we do.

4 MR. MIRAGLIA: In the assessments that
5 we're conducting right now, earlier in the month we
6 gave you the assessment tree and the assessment
7 process that we're using. We're asking questions that
8 are related to some of the concerns. Can we look at
9 a plant's performance and the inspection hours? What
10 are the generic findings that are coming out of
11 inspections in terms of safety, risk significance, to
12 try to look for figures of merit such as that? That's
13 part of the assessments that are ongoing. They'll go
14 a step to answering all the questions, perhaps not the
15 last one.

16 CHAIRMAN SELIN: Does the Z factor mean
17 that that was our 26th attempt to get --

18 MR. TAYLOR: Not exactly. I would note
19 that sometimes inspection is confirmatory, which is
20 important also, a part of what we do.

21 CHAIRMAN SELIN: I'm looking for rough
22 answers, not did this inspection pay off or did that.

23 MR. TAYLOR: No, I understand.

24 CHAIRMAN SELIN: You just sit back and you
25 say, "How does it add up?"

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1 MR. TAYLOR: Yes, sir, we'll do that.

2 MR. VOLLMER: I think in that regard, we
3 talk a little bit about that on page 7 of the report
4 and the yardsticks we use were performance indicators
5 and so on. But to make another observation and
6 something that occurred to me after the report was
7 written, and that is if one goes back and takes a look
8 at repeats, it's an indication of how well you did
9 going out and looking and beating the bushes. I would
10 think -- my offhand feeling would be that repeat would
11 be a measure of effectiveness.

12 CHAIRMAN SELIN: Just to follow up a
13 little bit. It's hard enough to look back and say,
14 "How did we do?" but I'm asking for a little more than
15 that. I'm saying, for instance, in '94 we're going to
16 have a change in the program. Not a huge change. We
17 should be thinking now and putting ourselves on --
18 about how we're going to measure whether it was okay
19 or not.

20 MR. VOLLMER: Yes, I understand.

21 CHAIRMAN SELIN: Not do it and then go
22 back and come up with after-the-fact indicators.

23 MR. VOLLMER: Yes.

24 CHAIRMAN SELIN: Okay.

25 MR. VOLLMER: (Slide) Slide 14, please.

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1 Relative to the effectiveness of
2 enforcement as a safety tool, it was clear from our
3 review that escalated enforcement certainly does get
4 top utility management's attention. However, it was
5 our view that enforcement affected safety less broadly
6 than SALP, for example, or the problem plant list
7 because it didn't have a large impact on licensee
8 planning and resource allocations. What all that's
9 saying is a utility manager does not plan to avoid
10 enforcement because they plan on doing a good job in
11 general and enforcement is just something that
12 happens.

13 Both the NRC and the utility devotes
14 substantial amount of resources to the resolution of
15 enforcement, even when the issues are resolved to
16 everyone's satisfaction. Both on the utility and the
17 region side, we were told that these often senior
18 resources could be put to better use.

19 So, what we're saying here is not throwing
20 out enforcement or anything like that, but as our
21 measure, i.e. the impact on safety, that the
22 enforcement activity does get a problem generally well
23 resolved and corrective action generally very
24 effective. But it was our view that the amount of
25 resources it took and the attention it took sometimes

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1 was broader than its overall impact on safety. It's
2 as simple as that.

3 So, our recommendations were to reduce the
4 resource impact to the extent we could on escalated
5 enforcement by improving self-identification and
6 corrective action credit and focusing these areas
7 where they're weak. We also recommended a less
8 resource intensive process for development enforcement
9 actions and for clarifying the regulatory concern and
10 its significance in public material. Sometimes these
11 tend to get a bit legalese and it's not always clear
12 to the licensee or the public, I think in some cases,
13 the real significance of what we're getting at.

14 So, that was the finding before --

15 CHAIRMAN SELIN: Before you go any
16 further, you said that it was hard to measure actions
17 that licensees took in planning their work based on
18 the fear of enforcement actions. But how about the
19 amount of energy with which the self-identification
20 went in? One would think that if, to take an extreme
21 case, we didn't have an enforcement policy, we only
22 have a blunt instrument of a SALP, that the amount of
23 self-identification might go down considerably.

24 MR. VOLLMER: No, I certainly agree with
25 that and that's why we indicated that if we could

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1 reduce the impact of enforcement on the utility where
2 he did a good job of self-identification and built up
3 that initiative, I think that is really where the
4 value is the highest. That was the thrust of the
5 recommendation, to increase self-identification and
6 give as much credit as we could for it.

7 COMMISSIONER REMICK: Dick, on that
8 specific recommendation, I didn't quite understand.
9 In the report it says, "Improve self-identification
10 and corrective action credit. For example, make it
11 practical to avoid the enforcement conference." With
12 that I didn't understand. Schedule it at a time when
13 they're out of town or -- making it practical, I'm not
14 sure what this meant.

15 MR. VOLLMER: It's not very well
16 articulated. I'm sorry. I think that, in fact, is
17 what is being suggested, that in some cases --

18 Well, Jim, why don't you answer that?

19 MR. LIEBERMAN: The enforcement policy
20 provides that normally we hold an enforcement
21 conference when we're considering escalated action.
22 There were some cases the staff has a full
23 understanding of the root causes of the violation. We
24 understand that corrective action. We're satisfied
25 that the licensee appreciates and understands the

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1 significance of the issues. In those type cases,
2 we're considering not having enforcement conferences
3 because it may not serve a regulatory purpose and they
4 are resource intensive.

5 MR. VOLLMER: So, that's what we meant by
6 avoiding --

7 COMMISSIONER REMICK: Okay. All right.

8 COMMISSIONER CURTISS: Yes. Can I follow
9 up on that? It's an interesting concept. What you're
10 saying -- let me just paraphrase what I think you've
11 concluded here and correct me if I'm wrong.
12 Mitigation or escalation of a civil penalty has little
13 impact in terms of the response of a utility, first.
14 Little is probably too strong of a word, but relative
15 to the second point, the publicity is what has an
16 impact, much more so than mitigation or escalation.

17 Taking those two factors into account,
18 third, what you're proposing here is to -- rather than
19 to, as we do under the current policy, give benefit
20 for self-identification and corrective action in the
21 form of mitigation of the civil penalty, that's the
22 conventional and current approach, what you're
23 proposing here is to instead give credit for self-
24 identification and corrective action in the form of
25 the thing that the utility really is concerned about,

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1 which is the publicity, and provide for an option
2 which would say, "If you identify the problem yourself
3 and/or take corrective action yourself, we will
4 publicize your problem less." Is that an accurate
5 paraphrase of --

6 MR. VOLLMER: That's accurate, yes. And
7 not that if you find the same one over and over again
8 and do a good job. I mean not be a repeat offender.
9 But for a fairly good utility, I would say that
10 articulates what we're suggesting. For example, some
11 utilities had indicated -- or two utilities indicated
12 that even when they had a reduction in the severity of
13 the civil penalty, it got a separate press notice and
14 they felt the public couldn't distinguish that from
15 their previous notification of violation. That
16 concerned them and I think rightly so.

17 COMMISSIONER CURTISS: Okay. Jim, do you
18 have any other comments on that?

19 MR. LIEBERMAN: Well, responding to the
20 issue of less publicity or no publicity where the
21 licensee has identified and corrected the violations,
22 under the enforcement policy to provide for 100
23 percent mitigation based on those two factors, 50
24 percent for identification and 50 percent for
25 corrective action. So, other things being equal, it

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1 would only be a notice of violation, not a civil
2 penalty. They only issue the press release for the
3 civil penalty. So, you'd only have a press release in
4 a civil penalty, if there's other factors, the past
5 performance, prior opportunities, duration and those
6 type factors.

7 So, there's a balance in creating the
8 assessment. Maybe just to hump ahead just for a
9 second, because of these changes, recommendations,
10 we're going to take a look at the enforcement policy
11 and use it as an opportunity to see whether we should
12 be making cost corrections because we can always learn
13 and do better in this area.

14 COMMISSIONER CURTISS: Okay.

15 CHAIRMAN SELIN: It's pretty clear that if
16 it's a repeat offense, there must have been some
17 problem that would cause correction. That sort of
18 almost takes care of itself.

19 MR. VOLLMER: (Slide) Okay. Finally,
20 slide 15.

21 We looked at feedback and lessons learned
22 activities in the program to assess the effectiveness
23 of this. We found the process to be less formal and
24 we felt there were opportunities for further
25 improvement on the feedback and lessons learned. We

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1 think NRC effectively reviews events for generic
2 safety implication and provides excellent feedback to
3 industry. However, we believe that feedback and
4 lessons learned in the inspection program itself is
5 less consistent. That is the process of looking back
6 into the program to find, to the extent you could, why
7 you didn't find a problem sooner or how the program
8 could be better shaped. That process is not as
9 disciplined as we think it could be or should be.

10 INPO had the same problem. Why did
11 performance deteriorate at a plant? Why couldn't we
12 find it? It's that type of introspective look that we
13 think could be done in a more disciplined way. The
14 reasons were particularly strong, believing that this
15 was an issue that would be important to be felt in the
16 inspection program.

17 So, our recommendation is to try to
18 develop a structured process with a clear definition
19 of responsibilities to get routine feedback on the
20 effectiveness and the conduct of major inspections.
21 The inspectors in the regions felt that this would
22 help them significantly.

23 That's the totality of our report and
24 recommendations. We appreciate the opportunity to
25 talk with you.

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1 CHAIRMAN SELIN: Frank is still going to
2 come on and --

3 MR. TAYLOR: Yes. Frank Miraglia --

4 CHAIRMAN SELIN: Before you get on that,
5 is there any way to -- measure is probably too strong,
6 but even describe how much we get out of allegations?
7 In other words, compared to inspections. Do we find
8 99 percent of the problem -- or 95 percent of the
9 problem is licensee identified, do we find 99 percent
10 of what's left ourselves and only one percent or five
11 percent comes from allegations, or is it much more
12 important or is that just a question that can't be
13 answered?

14 MR. VOLLMER: We talked about allegations
15 in a couple of our regional conversations and the
16 thrust that I got, but we didn't delve into that
17 issue, was that the safety significance of many of
18 these allegation follow-ups, that they were less
19 safety significant than our inspection finding
20 themselves.

21 Randy, your observation? That's about all
22 I can --

23 MR. BLOUGH: Right. I think, to put it in
24 my words, a small number of allegations prove to be of
25 extremely high value to safety. So, a very small

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1 percentage of them turn out to be quite valuable. For
2 the rest of them, we tend to spend a lot more
3 resources than the safety benefit --

4 CHAIRMAN SELIN: We should only spend the
5 time on the allegations that are going to prove
6 fruitful. But still, I wasn't really talking about
7 compared to the resources. I was more seriously just
8 talking about overall -- I mean is there any way to
9 even frame a question about how valuable are
10 allegations or is that just such a hard thing to do
11 that you can only look qualitatively and say, "Look,
12 we found a few things that are really important from
13 them, so we have to keep looking. But you can't put
14 them on the same terms as our routine."

15 MR. MIRAGLIA: I think there's probably
16 sufficient databases where we can get some review and
17 some quantitative numbers on that. To expand on what
18 Randy would say, I would say the perspective on
19 allegations is that it takes lots of resources given
20 the small number of significant safety findings that
21 come through allegations. My own perception is that
22 probably the biggest source of generic concerns and
23 most significant safety concerns come from operating
24 experience and then my own view would be second would
25 perhaps be the inspection program. But that's -- I

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1 don't know if that would be borne out if we looked at
2 the databases and things, but I'm giving you a
3 personal perception in that regard, and that
4 allegations would be down towards the lower end.
5 Research programs certainly raise issues and there's
6 a number of inputs that the process considered on
7 generic safety issues. That's not to discount the
8 allegations is a system by which they can be
9 identified. The trick is knowing which ones are the
10 ones we should spend the time on.

11 COMMISSIONER CURTISS: Right. Within the
12 context of allegations and as you look at the
13 database, I guess my sense has been that it depends
14 upon what kind of plant and in what posture the
15 allegations are raised. I think if you look back over
16 time, what you will find is that, for example, in a
17 near-term operating license case, let's pick Diablo
18 Canyon since that was the focus on a lot of the
19 Agency's thinking about allegation management, you're
20 probably going to find a smaller percentage of
21 allegations that bear fruit in that context. Perhaps
22 because of the motivation that may have existed behind
23 some of the allegations in a different context and
24 because there may not be that nexus between raising
25 the allegations and the timing of a regulatory action,

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1 my sense is that since that incentive does not exist,
2 the allegations may -- the percentage of allegations
3 that raise legitimate concerns may, in fact, be
4 somewhat higher.

5 MR. TAYLOR: There were many more
6 allegations in construction sites than I think we
7 found typically in operating sites. Numbers of those
8 ultimately prove to be important, important to meeting
9 the standards of construction particularly. So,
10 there's a long record of those. Of course, there's
11 not much construction, but there are differences.

12 CHAIRMAN SELIN: Of course there's a
13 virtual aspect to it. I have no doubt if we announced
14 tomorrow we will not follow up on allegations, that
15 people's self-inspection will go way down.

16 MR. TAYLOR: Sure. They're important.

17 CHAIRMAN SELIN: Mr. Miraglia?

18 MR. MIRAGLIA: (Slide) Yes. I have one
19 slide that I'll briefly go through.

20 We've had some discussion on the
21 recommendations. Many of the concerns that Dick had
22 identified had been previously identified to us in the
23 conduct of the regulatory information survey. In
24 response --

25 MR. TAYLOR: Impact.

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1 MR. MIRAGLIA: Impact survey. In response
2 to that, we did put many new initiatives and
3 procedures and processes for management oversight in
4 place, such as the coordination of team inspections
5 and things of that nature. What we're -- I think we
6 agree generally with the recommendations in the
7 inspection report. We have underway an assessment of
8 our inspection program. Earlier this month we
9 provided the Commission with what that assessment
10 entails, the kinds of questions we're asking of the
11 program. We have an assessment tree and this is taken
12 from the maintenance team inspections where we used a
13 similar approach to look at programs and
14 implementation. The tree would have two branches.
15 One is the implementation of the program and the
16 policies and procedures that have been set out by the
17 regions and the other branch is for us to assess what
18 are we learning about the program based on what we
19 see? One of the things that clearly comes out is the
20 relationship of SALP scores to inspection hours. When
21 one looks at that data, there are reasons and
22 explanations for those kinds of things, but it
23 certainly does raise the issues what can we do to
24 improve the program in that area.

25 In addition to that, the concern it raised

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1 about how are generic issues being identified. Are
2 they being identified via the inspection program? How
3 many safety significance? Those types of questions
4 are within the assessment program.

5 So, we are completing this week the field
6 inspection of the Region IV. That's the fifth region.
7 What we would spend the next couple of months on is to
8 step back and say, given the kinds of information we
9 have in examining the implementation within the field.
10 The question of how much time are we spending on core
11 inspection, is it too much or too little? Have we
12 asked the residents to do too much? Should that be
13 redirected? Those kinds of questions are being looked
14 at. We're going to take a step back and try to
15 integrate that information and then interact with the
16 regions again and say, "These here have certain
17 implications to how the program should be refocused,"
18 and get their responses. Then that assessment -- we
19 owe the complete assessment report to the Commission
20 in July of this year. In that assessment, we'll
21 certainly also reexamine the recommendations that Mr.
22 Vollmer has in this report because I think they go to
23 the effectiveness of implementation of some of the
24 processes we have in place and certainly improvements
25 can be made.

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1 That would complete my remarks.

2 CHAIRMAN SELIN: Did anything that you got
3 from OPP, either just say, "Oh, that's terrific. I
4 didn't think of it," or did any of them just strike
5 you like a bullet in the throat and say, "This is
6 crazy. How can that be?"

7 MR. MIRAGLIA: It did not -- I don't think
8 there were any surprises. These are things that we
9 thought we were addressing. The fact is could we do
10 a better job? The answer is in some areas probably
11 yes and we would look at those.

12 CHAIRMAN SELIN: While we have you all
13 here, before we go through a bunch of questions, could
14 I ask Mr. Lieberman what --

15 MR. LIEBERMAN: Surely.

16 CHAIRMAN SELIN: You said something about
17 we're going to look at some enforcement questions.
18 Could you elaborate a little bit on what you plan on
19 doing?

20 MR. LIEBERMAN: All right. We're planning
21 to use this as an opportunity to relook at the policy.
22 The senior managers, the office directors and regional
23 administrators are planning to meet the day before the
24 next senior management meeting to go over the policy
25 and its implementation in a somewhat structured way to

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1 see are there areas that we should be changing.

2 CHAIRMAN SELIN: One of the reasons the
3 SALP meeting appeared to have been so productive is
4 because people thought a lot about what the options
5 are before the meeting started. Have you done
6 something comparable?

7 MR. LIEBERMAN: Yes, I have. I've
8 developed a structure. I'm in the process of meeting
9 with each regional administrator and office director
10 before the meeting to get their views because there's
11 a lot of things you could talk about in a relatively
12 short time period to structure an agenda to hit the
13 high points.

14 CHAIRMAN SELIN: Commissioner Rogers?

15 COMMISSIONER ROGERS: Well, I just wanted
16 to say that I thought it was a very interesting
17 report. I wanted to complement you for doing all the
18 interviews in three weeks. That seemed to me quite a
19 fete.

20 Many of my comments have already been
21 touched on, but there were a couple of things in the
22 report that I just wanted to go back to for a moment.
23 On the exit interview report, you mentioned in your
24 recommendations on section of inspections, I guess,
25 expanded exit preparation to ensure validity of

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1 findings before triggering a substantial licensee
2 effort.

3 It did seem to me that there is always the
4 possibility that at the end of an inspection -- I know
5 I participate in other kinds of inspections. Very
6 often the team is there. You want to get your message
7 to whoever you're inspecting and you work day and
8 night to put something together that everybody more or
9 less agrees on and then you share it with the
10 organization being inspected and you leave. Sometimes
11 that really puts some tremendous pressures to put
12 things in focus that are really difficult to do on
13 short notice.

14 I wondered if you'd had any thoughts about
15 the possibility, at least for certain kinds of
16 inspections, not making a report at the end of the
17 inspection immediately, but going back, sitting down,
18 giving it a week or so to digest before finally coming
19 to a report.

20 MR. MIRAGLIA: In some inspections, that
21 is being done right now. For example, in the
22 diagnostic team inspections and in some of the -- we
23 did some special team inspections where we have used
24 that technique. In addition, as further
25 amplification, we have conducted team training. Part

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1 of the team training and team leader training is the
2 conduct of an exit. In addition, as part of the
3 oversight, getting managers out in the field to
4 support the inspectors. The management is encouraged
5 to attend the pre-exit meetings and be there so
6 management is present during the conduct of an exit as
7 well.

8 So, these are directed at some of the
9 concerns raised by Mr. Vollmer's report. The fact
10 that there are still concerns out there mean that
11 perhaps we haven't been as effective as we had hoped
12 to be in those kinds of areas. But with respect to
13 not having an exit, that has been done and that's
14 practiced with respect to the diagnostic inspectors.

15 COMMISSIONER ROGERS: Yes. Well, it's
16 always an important part of the process, but how you
17 handle it needs thought.

18 On feedback and lessons learned section,
19 the report pointed out that the most recent NRC
20 inspection manual guidance was issued in 1983. It
21 doesn't reflect current lines of communication. Is
22 something being done about that?

23 MR. MIRAGLIA: Yes, sir. We're looking at
24 updating the inspection program and as part of this
25 reassessment consideration in that recommendation,

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1 we'll be following up on that.

2 COMMISSIONER ROGERS: Okay. Fine.

3 MR. MIRAGLIA: There have been some
4 memorandum and guidance that perhaps needs to be put
5 together and collated in one central place.

6 COMMISSIONER ROGERS: Thank you. That's
7 all I had.

8 COMMISSIONER CURTISS: I don't have any
9 other questions, but I thought, Dick, this report was
10 really first rate. The level of attention and focus
11 on the issues, at least from my standpoint, is exactly
12 what I thought and hoped that we would get from an OPP
13 office. So, for you and Mr. Blough and in absentia
14 Mr. Johnson, I'd like to thank you for your --

15 MR. MIRAGLIA: He is at Region IV.

16 COMMISSIONER CURTISS: If he's out there
17 somewhere, thank him too. I appreciate the effort.

18 MR. MIRAGLIA: Thank you.

19 CHAIRMAN SELIN: Commissioner Remick?

20 COMMISSIONER REMICK: Just a comment on
21 the inspection program assessment. I apologize to
22 everybody. At this late date maybe I'm getting
23 punchy, but I can't help but be a little bit
24 facetious.

25 I see, Frank, that you come up with a

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1 colorful way of evaluating performance in the
2 inspection program with colors like orange, green,
3 yellow, red and blue. I was a little disappointed
4 because I didn't know how I was going to average those
5 to get 1.26. But I thought --

6 MR. MIRAGLIA: Can I expect that in the
7 SRM also?

8 COMMISSIONER REMICK: Maybe I could
9 average yellow which said needs improvement with blue,
10 which is not applicable. But then I come up with
11 green which says satisfactory, so no, I can't do it.
12 But now to be serious, why didn't you assign numbers
13 if we assign numbers to our licensees when we're
14 evaluating their performance? I think something a
15 little bit more innovative here or the other side of
16 the question --

17 MR. MIRAGLIA: Well, it's the same --

18 COMMISSIONER REMICK: -- is why wasn't
19 this proposed for SALP?

20 MR. MIRAGLIA: I don't have an answer for
21 that question.

22 COMMISSIONER REMICK: Are we going to have
23 green, yellow and code blue perhaps?

24 MR. MIRAGLIA: I don't have an answer for
25 that question, but the technique is one that we've

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1 used in a number of occasions and particularly --

2 COMMISSIONER REMICK: Yes, maintenance.

3 MR. MIRAGLIA: -- it was the technique in
4 the maintenance team inspection.

5 COMMISSIONER REMICK: It was a very
6 effective way too.

7 MR. MIRAGLIA: And it was an effective way
8 of displaying the kinds of concerns. Many of the
9 questions that we raise in here are really qualitative
10 and there is a significant amount of judgment in some
11 of those areas, perhaps based on hard findings in all
12 areas. That wouldn't be true of all of the boxes on
13 that three, but they cover broad areas and there's a
14 lot of subjectivity and judgment in there. That's the
15 color coding. I think in the SALP process when you're
16 going back and looking at inspection findings, you
17 perhaps have more factual bits to look at, although
18 that would certainly be true in some of these boxes as
19 well.

20 COMMISSIONER REMICK: Yes. I seriously
21 wish the staff had thought of such innovative methods
22 to get around the problem.

23 CHAIRMAN SELIN: I find no sign of
24 punchiness in Commissioner Remick.

25 Commissioner de Planque?

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1 COMMISSIONER de PLANQUE: I'll try to stay
2 unpunchy too.

3 In your section on enforcement, you did
4 mention that publicity is a key factor and then the
5 impact is greater when the open conferences are held.
6 Have you -- this may not be possible to answer right
7 now, but did you look at all to see if this correlates
8 with the questionnaires that are coming back from the
9 licensees on open enforcement in our pilot program?

10 MR. VOLLMER: No, we didn't, Commissioner
11 de Planque.

12 COMMISSIONER de PLANQUE: I'm just curious
13 if it's consistent with what you're seeing. I know
14 that's a preliminary question.

15 MR. LIEBERMAN: Commissioner, we have
16 available these questionnaires at all the open
17 enforcement conferences. But frankly, I think we've
18 had two questionnaires returned. So, for whatever
19 reason, we say in the opening remarks of each of these
20 enforcement conferences that these questionnaires are
21 there but people are not filling them out.

22 COMMISSIONER de PLANQUE: Including the
23 utilities?

24 MR. LIEBERMAN: Including utilities.
25 Now --

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1 COMMISSIONER de PLANQUE: They're not shy
2 when they come to see us.

3 CHAIRMAN SELIN: Tell them you won't talk
4 to them if they don't bring the questionnaire.

5 COMMISSIONER de PLANQUE: That's right,
6 bring your questionnaire. I'm going to do that.

7 So there's really no evidence --

8 MR. LIEBERMAN: From that type of
9 feedback. But we haven't had a lot of public
10 attendance at the open enforcement conferences. We do
11 put out press releases announcing the open
12 conferences.

13 COMMISSIONER de PLANQUE: Okay. That's
14 it. Thanks.

15 CHAIRMAN SELIN: It was very interesting.
16 Very nice job. I'd be very interested really in both
17 sides. One is how the staff follows up on these
18 particular programs, but the second is some of the
19 development of how would we measure particularly in
20 advance that I talked about. I'm not trying to
21 commission a whole new study at this point. That's
22 done through an SRM. But if there are some thoughts
23 about how to do that, particularly this question of
24 how are we going to measure the change, the impact if
25 any of not a huge but a five percent difference in

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1 hours that we're programming for licensing, that would
2 be helpful.

3 Thank you very much.

4 (Whereupon, at 4:51 p.m., the above-
5 entitled matter was concluded.)
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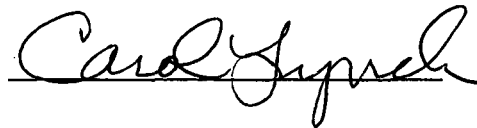
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of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON ASSESSMENT OF NRC INSPECTION PROGRAM

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: APRIL 23, 1993

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**ASSESSMENT OF REACTOR
INSPECTION PROGRAM
OPP-92-01**

COMMISSION BRIEFING

APRIL 23, 1993

ASSESSMENT OF INSPECTION PROGRAM

- **FOCUS ON THE OVERALL EFFECTIVENESS AND HEALTH OF THE INSPECTION PROGRAM AND ITS ASSESSMENT AND MANAGEMENT PROCESS**
- **PLAN FOR ASSESSMENT OF REACTOR INSPECTION PROGRAM ADDRESSED THE FOLLOWING ISSUES**
 - **ARE THE OBJECTIVES OF THE INSPECTION PROGRAM MET**
 - **HOW DOES THE INSPECTION PROGRAM AFFECT UTILITY SAFETY PERFORMANCE**
 - **WHICH REGULATORY PERFORMANCE INITIATIVES ARE MOST EFFECTIVE**

- ARE INSPECTION PROGRAM BENEFITS
COMMENSURATE WITH AGENCY EXPENDITURES
 - IS THE BALANCE OF SAFETY AND PERFORMANCE
VERSUS COMPLIANCE APPROPRIATE
 - ARE FEEDBACK AND LESSONS LEARNED USED
EFFECTIVELY
- METHODOLOGY FOR BROAD REVIEW COVERING
RELEVANT PLAYERS
 - REVIEW OF PROGRAM OBJECTIVES, DIRECTIVES,
MANAGEMENT AND ASSESSMENT PROCESS
 - INTERVIEW OF UTILITY EXECUTIVES, INPO, NRC
REGIONS (II AND III), AND NRC HQ MANAGERS

**OVERALL CONCLUSION: INSPECTION PROGRAM
HEALTHY AND HAS POSITIVE IMPACT ON UTILITY
SAFETY PERFORMANCE. HOWEVER,
OPPORTUNITIES EXIST FOR INCREMENTAL
IMPROVEMENTS IN EFFECTIVENESS**

ARE INSPECTION PROGRAM OBJECTIVES MET

STRONG AGREEMENT WAS FOUND AMONG UTILITY EXECUTIVES AND NRC MANAGERS THAT THE OBJECTIVES OF THE INSPECTION PROGRAM ARE BEING ACHIEVED

- **SELECTIVE EXAMINATION PROCESS IS EFFECTIVE IN ENABLING THE STAFF TO DRAW CONCLUSIONS ABOUT LICENSEE PERFORMANCE**
- **PROGRAM ENSURES LICENSEES' INTERNAL PROGRAMS ADEQUATE TO IMPLEMENT SAFE OPERATIONS**

NO RECOMMENDATIONS

IMPACT ON UTILITY SAFETY PERFORMANCE

REACTOR INSPECTION PROGRAM CONTRIBUTES TO LONG-TERM SAFETY IMPROVEMENT

- **CAN'T FULLY SEPARATE INSPECTION PROGRAM IMPACT FROM OTHER SAFETY CONTRIBUTORS**
- **BASIC INSPECTION PROGRAM IS GOOD BUT ADJUSTMENTS NEEDED TO ENHANCE SAFETY BENEFIT**

TEAM INSPECTIONS HAVE SUBSTANTIAL IMPACT ON UTILITY SAFETY PERFORMANCE

- BIG RESOURCE COMMITMENT FOR NRC AND LICENSEE
- EFFECTIVE MANAGEMENT OF THIS TOOL IS A CHALLENGE

RECOMMEND MAKING IMPROVEMENTS TO ENHANCE TEAM EFFECTIVENESS

- INVOLVE INDUSTRY AND RESOLVE DIFFERENCES BEFORE INSPECTION
- ENSURE FINDINGS ARE NRC POSITIONS

RESIDENT PROGRAM IS STRONG AND WELL STAFFED

**SPECIALIST INSPECTIONS ARE IMPORTANT TO SALP
AND SMM**

- **ALREADY AT A LOW LEVEL OF RESOURCES**

**RECOMMEND ESTABLISHING N + 1 RESIDENT
STAFFING AS A POLICY GUIDELINE**

EFFECTIVENESS OF REGULATORY PERFORMANCE INITIATIVES

**THE PROBLEM PLANT LIST IS CONSIDERED HIGHLY
EFFECTIVE BY INDUSTRY AND NRC IN FOCUSING
PROPER ATTENTION ON POORLY PERFORMING PLANTS**

- **CONCERN FOR OVERWHELMING LICENSEES WAS
EXPRESSED**
- **MOST LICENSEES WOULD INITIATE ROBUST
ACTIONS TO AVOID PROBLEM PLANT STATUS**
- **DESIRE FOR EARLY REMOVAL CAN RESULT IN
UNPRODUCTIVE RESOURCE EXPENDITURES**

**SALP IS CONSIDERED AN EFFECTIVE TOOL FOR
COMMUNICATION WITH LICENSEE MANAGEMENT,
BOARDS, AND THE PUBLIC. USED FOR PLANNING AND
MOTIVATIONAL PURPOSES**

**RECOMMEND NOTIFYING CEO OR BOARD OF PLANT
PERFORMANCE THAT EXTRAPOLATES TO PROBLEM
PLANT STATUS**

**RECOMMEND ESTABLISHING A FIXED PERIOD BEFORE
RE-EVALUATION FOR REMOVAL FROM PROBLEM
PLANT LIST**

ARE BENEFITS COMMENSURATE WITH AGENCY EXPENDITURES

THE INSPECTION PROGRAM IS GENERALLY COST-EFFECTIVE

- **OVERALL TREND IN SAFETY IS POSITIVE:**
 - **NRC IS FINDING FEWER PROBLEMS**
 - **PERFORMANCE INDICATORS POINT TO OVERALL IMPROVEMENT**
 - **LICENSEE SELF ASSESSMENT PROGRAMS ARE MORE EFFECTIVE AT FINDING PROBLEMS**
- **REFINEMENTS ARE NEEDED TO BETTER ALIGN PROGRAM TO MAXIMIZE THE POTENTIAL SAFETY BENEFIT**

**RECOMMEND MAKING INSPECTION PROGRAM MORE
RESPONSIVE TO IDENTIFIED NEEDS FOR
ADJUSTMENTS BASED ON SAFETY CONSIDERATIONS**

**RECOMMEND MAKING INCREASED USE OF IPEs AND
RISK ASSESSMENTS TO FOCUS THE INSPECTION
PROGRAM**

**IS THE FOCUS ON SAFETY AND
PERFORMANCE VS COMPLIANCE APPROPRIATE**

**FOCUS OF INSPECTIONS APPROPRIATE - HOWEVER,
NEED IMPROVEMENT IN CONSISTENCY OF
PERFORMANCE-BASED FINDINGS**

**RECOMMEND ENHANCING SYSTEMATIC MEASURES
TO ENSURE CONSISTENCY**

**ENFORCEMENT EFFECTIVE WHEN NEEDED TO SEIZE
TOP MANAGEMENT ATTENTION BUT SAFETY BENEFIT
DOES NOT APPEAR COMMENSURATE WITH NRC OR
LICENSEE RESOURCES EXPENDED**

**RECOMMEND REDUCING ESCALATED ENFORCEMENT
FOCUS WHERE SAFETY OBJECTIVES ALREADY MET**

**RECOMMEND SIMPLIFYING ENFORCEMENT PROCESSES
AND ISSUANCES**

ARE FEEDBACK AND LESSONS LEARNED USED EFFECTIVELY

**THE INSPECTION PROGRAM HAS IMPROVED IN
RESPONSE TO FEEDBACK AND LESSONS LEARNED BUT
PROCESS LACKS RIGOR IN IMPLEMENTATION**

**RECOMMEND MORE STRUCTURED PROCESS FOR
IDENTIFICATION OF LESSONS LEARNED AND
ASSURANCE OF PROGRAM IMPROVEMENTS**



STAFF RESPONSE TO OPP ASSESSMENT OF REACTOR INSPECTION PROGRAM

April 23, 1993

**Frank J. Miraglia
Office of Nuclear Reactor Regulation**

STAFF RESPONSE TO OPP REPORT

- ▶ **Staff generally agrees with recommendations in OPP report**
- ▶ **Some recommendations have been implemented**
- ▶ **NRR conducting a self-assessment of reactor inspection program**
- ▶ **Integrate review findings from:**
 - **NRR self-assessment**
 - **Regulatory Review Group Report**
 - **OPP Report**
- ▶ **Consideration of all efforts will result in an enhanced
reactor inspection program**

OFFICE OF POLICY PLANNING

**ASSESSMENT OF THE
REACTOR INSPECTION PROGRAM**

OPP-92-01

November 16, 1992



EXECUTIVE SUMMARY

The Executive Director for Operations (EDO) directed the Offices of Policy Planning (OPP) and Nuclear Reactor Regulation (NRR) to conduct a broad review of the reactor inspection program, focusing on the overall health and effectiveness of the program and its assessment and management process. This report responds to that direction by providing a broad perspective on (1) the impact of the inspection program on the safety performance of nuclear utilities, (2) the effectiveness of inspection program elements and regulatory initiatives such as the systematic assessment of licensee performance (SALP) and the problem plant list, and (3) those policy initiatives that are appropriate to enhance the effectiveness and management of the inspection program.

The broad perspective called for by the EDO led to an effort that combined a review of relevant program and implementation documents with focused interviews of selected utility executives, staff members of the Institute of Nuclear Power Operations (INPO), and NRC regional and headquarters managers. During the interviews, the following questions were addressed:

- Are the objectives of the inspection program met?
- How does the inspection program affect utility safety performance?
- Which regulatory performance initiatives are most effective?
- Are inspection program benefits commensurate with agency expenditures?
- Is the balance of safety and performance versus compliance appropriate?
- Are feedback and lessons learned used effectively?

The overall conclusion reached is that the reactor inspection program is healthy and has a positive impact on the safety performance of utilities. However, opportunities exist for making improvements in the effectiveness of both the inspection program and the regulatory initiatives founded on inspection program results and conclusions. These improvements would enhance the program's focus on safety significance and diminish the regulatory burden. They could be implemented with minimal resource commitments. The body of this report provides the findings from which this overall conclusion is drawn and the specific recommendations for improvements, both of which are summarized below.

<u>Finding</u>	<u>Recommendation</u>
The objectives of the inspection program are being met.	No recommendation in this area.
The inspection program has a positive impact on safety performance at utilities.	No recommendation in this area.
Team inspections have a substantial positive impact on both utility safety performance and resource expenditures. However, inspection practices that promote both the positive safety impact and an efficient use of NRC and utility resources are not consistently applied.	Revise inspection procedures and practices, addressing elements described in Appendix A, to enhance definition of issues, acceptance criteria, and NRC preparation before inspection.
The resident program is working well and specialist inspections are important to SALP and senior management meeting (SMM) considerations. Discretionary specialist resources are already at a low level and implementation of N+1 will further reduce ability to tackle emerging issues.	Establish N+1 resident staffing as a policy guideline only.
The problem plant list is highly effective in focusing proper attention on poor plant performance. Most licensees would initiate robust actions to avoid problem plant status. However, once on the list, attention from NRC, INPO, and insurance carriers, along with the utility's desire to be removed from the list quickly, results in heavy and some unproductive resource expenditures.	Notify chief executive officer or board of plant performance that extrapolates to problem plant status. Category 2 plants should have minimum residence time on the list (e.g., 12-18 months) before they are considered for removal.

<u>Finding</u>	<u>Recommendation</u>
<p>SALP provides effective regulatory communication with utility boards, management, and the public, and is useful for planning and motivation.</p>	<p>No recommendation in this area.</p>
<p>The inspection program yields benefits commensurate with agency expenditures with focus and resources near appropriate level; however, there are opportunities for improvement, particularly where the inspection activity is without a clearly identified nexus to reactor safety.</p>	<p>Make inspection program more responsive to identified needs for adjustment based on safety considerations, and increase use of risk assessment to focus inspections.</p>
<p>The focus on safety and performance versus compliance appears appropriate. Opportunity exists for improvement in measures to ensure consistency of performance-based findings.</p>	<p>Institute measures to enhance review of inspection findings for which licensee action is expected.</p>
<p>Escalated enforcement is effective as an attention getter but the safety benefit does not appear commensurate with NRC or licensee resources expended.</p>	<p>Reduce escalated enforcement focus in areas where safety objectives are already met. Simplify the enforcement process.</p>
<p>The inspection program has improved in response to feedback and lessons learned, but the process lacks rigor in implementation.</p>	<p>Revise the process to review lessons learned in the inspection program and to ensure program improvements.</p>

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APPENDICES

- A Elements of an Effective Team Inspection Effort
- B Team Members Who Participated in the Assessment of the
Reactor Inspection Program

INTRODUCTION

By memorandum dated August 4, 1992, the EDO directed OPP and NRR to conduct a broad review of the reactor inspection program, focusing "on assessing the overall effectiveness and health of the inspection program and its assessment and management process." To implement this task, a team (see Appendix B) experienced in the inspection program, regional operations, and industry activities was formed and developed an assessment plan. The team prepared a detailed list of questions and issues to be addressed and selected for interviews seven executives from utilities whose nuclear plants represented diversity in plant type, age, and historical performance. The utilities selected included at least one from each of NRC's five regions. The team also decided on interviewing selected NRR and Office of Enforcement managers responsible for various elements of the inspection and enforcement program, the three top levels of management at NRC Regions II and III, and persons selected by INPO who were experienced in the INPO plant assessment process. The interviews began on September 4 and were completed on September 25, 1992.

The EDO was briefed on the results of this assessment on October 6, 1992. He requested that the team prepare this report documenting its findings and recommendations.

DISCUSSION

The EDO instructed the team to provide a "think piece," interpreted to mean a high-level, rather than detailed, assessment designed to answer the question of the overall effectiveness and health of the inspection program and to stimulate consideration of and perhaps additional study and initiatives in selected areas. The team therefore, developed interview questions that were broad and would elicit unfiltered and direct responses, and selected interviewees who represented diversity in viewpoint and experience. Although the interviews were sometimes far ranging, there was surprising uniformity of agreement in the findings presented herein. The views of the industry participants on the overarching issue of effectiveness and health of the inspection program were generally consistent with those of the NRC participants. The recommendations presented are either the team's views or an amalgam from views presented by interviewees that the team believes will be beneficial in enhancing the effectiveness of the inspection program.

The subsequent sections of this report are organized to follow the topic areas used in the interviews, which, taken as a

whole, are responsive to the charter of assessing the overall effectiveness and health of the inspection program:

- meeting the inspection program objectives
- impact on utility safety performance
- effectiveness of regulatory performance initiatives
- cost effectiveness of inspection program
- balance of safety and performance versus compliance
- feedback and lessons learned

Meeting the Inspection Program Objectives

Findings

The team found strong agreement among utility executives and NRC managers that the overall objective of the inspection program is being achieved. This objective, as stated in SECY-92-169, "The Staff's Progress on Actions to Improve Independent Assessment of the Inspection Program," is to ensure licensees are operating facilities safely by:

1. Providing one of several bases for conclusions on both individual licensee and industry wide performance for allocating resources.
2. Ensuring that the licensee's systems and techniques for conducting internal inspections and maintaining control result in safe operations.
3. Finding and resolving plant-specific safety concerns that have generic significance.
4. Identifying significant declining trends in performance and performing inspections to verify that the licensee has resolved the issue before performance declines below an acceptable level.

The role of the inspection program in providing independent oversight of licensee programs and activities to ensure safe

operations was well understood by NRC and industry and considered necessary by both.

There was good agreement that the inspection program is effective in identifying significant declines in licensee performance before that performance declines below an acceptable level. The process for selectively examining licensee activities generally focuses on the "safety-significant" areas and at the proper depth to provide necessary insights for the staff to draw meaningful conclusions about licensee performance.

The inspection program ensures that licensees' systems and techniques for conducting internal inspections and maintaining control result in safe operations. It focuses licensee managements' attention on ensuring that their internal systems proactively identify potential safety problems and enact lasting corrective actions. In most cases, the inspection program accomplishes this without usurping licensee managements' responsibilities or prerogatives.

The team attempted to identify ways to directly measure the effectiveness of the inspection program in achieving its primary objective of ensuring safety. The NRC and industry use various indicators to gauge safety performance; these include SALP, NRC performance indicators, INPO performance indicators, and accident sequence precursors. These indicators suggest that industry safety performance has improved. Because the inspection program is but one of several major influences on licensee performance, including INPO and other industry initiatives, it is difficult to quantify the direct contribution of the inspection program. However, there is widespread agreement that the inspection program, and the regulatory initiatives that are greatly influenced by inspection program results, have substantially contributed to improved safety performance by the industry.

Recommendations

None.

Impact on Utility Safety Performance

The team found that the NRC inspection program does contribute to long-term safety improvements at nuclear power plants. Although some NRC inspection contributions are qualitatively distinguishable from other contributors to nuclear safety improvement (such as utility, INPO, and other NRC initiatives), we found no accurate and objective means to separate and quantify all inspection program activities.

The team found that the current NRC inspection program structure is good and provides a generally effective mix of types of inspection and areas of focus. This is discussed further in the section entitled "Cost Effectiveness of the Inspection Program."

The team developed a number of insights regarding NRC team inspections and resident and specialist inspections; these are discussed below.

Team Inspections

Findings

Team inspections are powerful tools and have been especially valuable to enhance the safety performance of licensees. Safety improvements often precede NRC inspections as utilities perform self-assessments in response to NRC's display of interest in an area. Refinements and improvements to NRC's management of team inspection programs, as well as teams themselves, can further improve effectiveness and perhaps reduce resource expenditures.

Team inspections involve substantial utility and NRC resources and thereby warrant commensurate management attention toward maximizing safety benefit and managing the impact on these resources. We identified a number of elements or features that promote a positive safety impact of an inspection while promoting efficient use of NRC and utility resources related to the team inspection. These are discussed in Appendix A. Although most of these elements are present to some degree in many team inspections, further staff effort is needed to ensure they are consistently applied to all. For example, some team inspections have been too large and have lasted too long or have been conducted without a clear definition of the issues and criteria for acceptance. By consciously addressing these elements thoroughly and consistently, NRC could achieve improved quality, better safety impact, more uniform performance, and better control of the regulatory burden.

Recommendations

NRC should ensure that inspection procedures and practices consistently address the elements of an effective team inspection outlined in Appendix A. This would include more effort to reach an understanding between the NRC and industry on objectives and expectations. The inspection teams should be evaluating a plant against defined criteria. Also, stronger measures are needed to internally test the validity, significance, and consistency of inspection team findings. Given resource constraints, this process might involve inspecting somewhat less, but expending more effort in evaluating findings.

Resident and Specialist Inspections

Findings

The resident inspector program is well received by industry and considered to be working effectively for safety. Licensees and NRC staff interviewed considered the program to be appropriately staffed and did not believe an increase in resident staffing would enhance safety performance. They indicated that there is more safety benefit to providing increased resident inspector attention to poorly performing sites than to varying the number of inspectors solely on the basis of the number of units.

Individual specialist inspections provide less dramatic results than team inspections and resident inspector activities; nonetheless, they are important to assessing trends and overall licensee performance. Their findings are important contributors to the SALP and SMM process.

In addition to individual inspections, specialists follow up events and allegations and contribute to team inspections. In some regions, implementation of N+1 minimum staffing will further cut specialist resources, which are already at a low level. Because the resident inspector program already appears adequately staffed, full staffing at an N+1 level does not seem to be warranted.

Recommendations

NRC should establish N+1 as a policy guideline, with a minimum of two inspectors per operating site. Regional administrators should annually justify to the EDO exceptions to N+1 based on safety benefit.

Effectiveness of Regulatory Performance Initiatives

Findings

The results of the inspection program provide the principal bases for application of certain regulatory performance initiatives, such as SALP, the problem plant list, and enforcement. Licensees and, to varying degrees, interested parties inside and outside the industry give all of these initiatives priority attention. The focus the team put on this issue was that of determining which of these initiatives was the most effective in enhancing licensee safety performance. Both industry and NRC consider the problem plant list highly effective in focusing proper regulatory and licensee attention on poorly performing plants. There was general agreement that this is the

most certain way to ensure improved safety performance. Other NRC initiatives, along with INPO, peer, and public pressure are not always sufficient to force those fundamental changes in a utility's operating and management practices that are often necessary for a lasting turnaround.

Strong evidence existed that most licensees would take robust actions to remediate poor performance if they considered their plant close to the problem plant list. Other evidence showed that it is more difficult, costly, and disruptive to turn a plant around once it is placed on this list. This is because problem plant status results in overwhelming attention, not only from the NRC but from INPO, insurance carriers, and financial interests. This, along with a desire to be quickly removed from the list, results in heavy and often unproductive resource expenditures.

The SALP is also considered an effective regulatory tool for communication with licensee management, utility boards, and the public. Because many licensees use the SALP in their planning process, initiatives deriving from the SALP may get long-lasting attention. The interviewees discussed the unintended uses of the SALP, such as by the public utility commissions (PUCs) and the financial community, but no support was shown for current staff initiatives of reducing the number of categories to four. The utilities interviewed thought that combining certain areas would lessen motivation and accountability.

Recommendations

When the SMM process indicates that plant performance extrapolates to problem plant status, the utility's chief executive officer or board should be so informed. Should performance continue to degrade, placement on the list could occur no later than the next SMM meeting. Further, Category 2 plants should have a minimum residence time of, for example, 12 to 18 months before NRC considers them for removal. This would allow a more orderly implementation of performance improvements, including management, program, and process changes. The NRC should continue to closely monitor safety performance to ensure that performance is not continuing to deteriorate, and save major inspection activities for verifying improvement, not validating poor performance.

Cost Effectiveness of Inspection Program

Findings

This area was one of lively discussion with the utility interviewees because the inspection program is demanding and

costly in regard to their resources. Interviewees believed that certain areas were overinspected and that certain inspection activities focused on areas of low safety significance. Of those mentioned, the most prominent was security. Alternatively, we found that NRC's choice of topics for "area of emphasis" inspections, which command substantial NRC and licensee resources, were well received by industry and were cost effective for the agency because of the safety insights gained. Opportunities for improvement exist, particularly where the inspection activity is without a clearly identified nexus to reactor safety.

By most yardsticks, the general trend in industry safety performance is positive. The NRC is finding fewer problems; utilities are finding more of their own; performance indicators point to improvement; and, perhaps arguably, public concern about reactor safety has eased. Therefore, it is not clear that a significant increase in inspection activities would be productive. In addition, since most of the inspection efforts were viewed as beneficial to safety performance, a substantial cut in inspection activities might have a negative effect on safety. Overall, the inspection program yields benefits commensurate with agency expenditure, with its focus and resources near appropriate levels.

Recommendations

The most effective use of inspection resources would be focusing attention on issues and activities having high safety significance, recognizing that certain inspection activities are needed as a matter of policy and for increased public assurance. It appears that the inspection program could be more responsive to diminished safety return in certain areas. Therefore, the inspection program should make increased use of risk to focus its activities and identify and enact improvements based on safety need. The SMM process should continue to provide broad direction on changes in program emphasis.

Balance of Safety and Performance versus Compliance

The findings in this area are organized into two subtopics: inspection and enforcement.

Inspection

Findings

The inspection program objective of ascertaining both safety and compliance is well understood, as is the policy that inspectors are safety inspectors first. NRC's focus on

performance and safety relative to compliance continues to increase and the overall balance appears appropriate. However, safety and performance inspections are more difficult to conduct than compliance-based inspections. Key challenges involve (1) how to ensure a consistent yardstick is used when compliance is not the measure and (2) how to ensure findings are both valid and sufficiently significant to warrant licensee effort and resources. For example, comments made in a draft inspection report or at an exit meeting with a licensee may amount to suggestions or criticism of minor safety significance and may receive little NRC review for validity, consistency, safety significance, or subsequent followup. But the licensee will often put forth considerable effort to address the comment in order to demonstrate responsiveness to the inspection results. We found that this issue is recognized and is receiving NRC attention but more should be done.

Recommendations

NRC should institute better measures to ensure consistency in all NRC inspection findings before the licensee is informed and initiates corrective action. In particular, the following actions would be appropriate:

- more involvement of management (above the lead inspector or team leader) in the review of inspection findings
- peer and technical review branch test of significant findings which are likely to result in resource expenditures by the licensee
- expanded exit preparation to ensure validity of findings before triggering substantial licensee effort

Enforcement

Findings

Although escalated enforcement activities capture top licensee management attention, they affect safety much less broadly than the SALP or the problem plant list. The safety benefit does not always appear commensurate with NRC or licensee resources expended.

The key benefit of escalated enforcement is getting top management attention when needed, but the enforcement process is not solely based on that objective. For example, many civil penalties (CPs) involve self-identified issues to which licensee management is already devoting significant resources. Further, in cases of significant compliance-based safety issues, the NRC staff resolves those issues promptly; therefore the enforcement,

albeit handled expeditiously, usually involves issues which are already well understood by the parties.

Escalated enforcement does not affect licensee planning and resource allocation as broadly as do the SALP and the SMM. Utility executives do not make key planning decisions based on the likelihood of incurring CPs. On the other hand, SALP and SMM results cause licensees to develop or modify forward-looking, integrated plans and to evaluate overall resource allocations. Escalated enforcement is not such a factor in management planning and strategy, because enforcement comes from the unexpected.

Publicity is the principal impact on licensees from NRC escalated enforcement. This impact begins when NRC decides to hold a conference, and is greater for open conferences. Each action involves multiple publicity opportunities. Mitigation or escalation of the CP has little affect the utility's concern of damaged public image. When a contemplated CP is mitigated to zero dollars, there still has been an impact on the licensee, due to the effort and publicity associated with the enforcement conference.

Substantial staff time is spent in developing and revising the packages, which are quite complex and may be confusing to eventual readers. This factor reduces the ratio of safety benefit to time spent on enforcement. There is evident frustration within the regions on the cost-effectiveness of enforcement activities.

Recommendations

NRC should revise escalated enforcement policy and practices to reduce resources but retain the benefit of seizing top management attention when needed:

- Improve self-identification and corrective action credit; for example, make it practical to avoid the enforcement conference. Focus primarily on corrective action or self-assessment failures.
- Evaluate public affairs practices to identify unneeded or redundant issuances, such as followup press releases when CPs are reduced. Licensees may publicize this reduction if they choose.
- Simplify the NRC process for developing and approving enforcement actions and clarify the regulatory concern and its significance in public material.

Feedback and Lessons Learned

Findings

Improvements to the inspection program are being made in response to internal feedback, lessons learned, and reactor events. The staff identifies the need for major inspection enhancements and initiatives through periodic senior management meetings, management and inspector counterpart meetings, inspection program working groups, and the generic communications process. However, the process is primarily informal and does not routinely invite feedback on necessary program improvements.

The NRC effectively reviews major events and problems for their generic safety implications and provides timely and comprehensive information to the industry, where appropriate, to alert licensees. The inspection program is a major source of information used in this process. However, feedback in the other direction, that is, from event insights to the inspection program and procedures to improve future inspections, is less consistent. Relatively few events or problems result in formal changes in inspection program guidance or requirements. This may represent a lost opportunity to identify valuable lessons learned.

Inspector feedback on whether major inspections achieved their established objectives and were effective in enhancing safety is not aggressively sought. In contrast, INPO collects feedback from each peer evaluator and evaluation team member on what was done well and what could be done better. While this approach is not practical for every NRC inspection activity, it could be applied to major team inspections. Such a process would potentially improve effectiveness and consistency of these major efforts.

The current process by which individual inspectors provide feedback on necessary program or procedure improvements is not well understood by the inspectors and is rarely utilized. The most recent NRC Inspection Manual guidance was issued in 1983 and does not reflect current lines of communication.

Recommendations

The staff should revise its current feedback process to provide a more structured one to identify lessons learned and necessary program improvements and enact program improvements. This process should be simple, establish clear responsibilities, provide for timely change, and provide the following:

- review of major events and problems to identify successes and failures of the inspection program

- more routine feedback regarding the effectiveness and conduct of major inspection activities
- ongoing feedback from inspectors as a result of experience and insights

APPENDIX A

ELEMENTS OF AN EFFECTIVE TEAM INSPECTION EFFORT

Developing and Planning the Effort

- Develop an overall NRC strategy for dealing with an issue and conduct a management evaluation as to whether a team inspection is an appropriate part of that strategy.
- Resolve licensing issues before starting inspections.
- Involve industry and establish clear inspection objectives, acceptance criteria, and expectations; resolve any broad differences with industry.
- Complete training (on technical areas and inspection techniques) for management, leaders, members of teams.
- Provide ample advance notice to licensees. Typically, six months or more notice is needed to allow licensees to prudently allocate time and resources to the inspection preparation and support. Where NRC schedules are tentative or approximate, licensees should nonetheless be notified, rather than having to wait until an exact date is set.

Managing the Specific Inspection Effort

- Control the size and the scope of the team, as well as inspection duration.
- Enforce disciplined preparation and other measures to ensure team readiness.
- Maintain close rapport with those who know the site (resident and regional personnel).
- Carefully select team leaders with demonstrated communication and leadership skills.
- Use sufficient and diverse measures to ensure validity and consistency of findings. (INPO appears to more consistently follow a thorough process to internally test and validate preliminary findings than does NRC.)

Assessment of the Reactor Inspection Program

Feedback

- Systematically ensure good feedback to improve subsequent teams.
- Use a more graded approach toward inspecting the industry (ranging from large teams and two-week inspections to smaller teams and shorter inspections, specialist inspections, or no inspection as appropriate to situation). This may save some NRC and licensee resources.

APPENDIX B

**Team Members Who Participated in the
Assessment of the Reactor Inspection Program**

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