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2 UNITED STATES OF AMERICA
3 NUCLEAR REGULATORY COMMISSION
4 ***
5 PERIODIC BRIEFING ON OPERATING REACTORS
6 AND FUEL FACILITIES
7 ***
8 PUBLIC MEETING
9 ***

10 U.S. Nuclear Regulatory Commission
11 One White Flint North
12 Rockville, Maryland

13 Wednesday, January 31, 1996

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16 The Commission met in open session, pursuant to
17 notice, at 10:02 a.m., Shirley A. Jackson, Chairman,
18 presiding.

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20 COMMISSIONERS PRESENT:

21 SHIRLEY A. JACKSON, Chairman of the Commission
22 KENNETH C. ROGERS, Member of the Commission
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3 STAFF SEATED AT THE COMMISSION TABLE:
4 JOHN HOYLE, Secretary of the Commission
5 JAMES TAYLOR, EDO
6 WILLIAM RUSSELL, Director, NRR
7 DR. CARL PAPERIELLO, Director, NMSS
8 THOMAS MARTIN, Region I Administrator
9 HUBERT MILLER, Region III Administrator
10 STEWART EBNETER, Region II Administrator
11 JOE CALLAN, Region IV Administrator
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4 P R O C E E D I N G S

5 [10:02 a.m.]

6 CHAIRMAN JACKSON: Good morning, ladies and
7 gentlemen. I'm pleased to have the headquarters staff and
8 the regional administrators here this morning to brief the
9 Commission on the results of the recent NRC senior
10 management review of performance at operating reactors and
11 fuel facilities.

12 The senior management meetings are conducted semi-
13 annually to ensure that the NRC is properly focussing its
14 resources on facilities that most need regulatory attention,
15 based on licensee performance and on related issues of
16 greatest safety significance.

17 In addition, as a result of a previous Commission
18 request, it is my understanding that the staff will also
19 describe the actions being taken to integrate the overall
20 inspection program and plant evaluation process. Copies of
21 the slides are available at the entrance to the meeting
22 room.

23 Commissioner Rogers, do you have any comment?

24 COMMISSIONER ROGERS: Not at this time. Thank
25 you.

CHAIRMAN JACKSON: If not, Mr. Taylor, you may
proceed.

MR. TAYLOR: Good morning. As you know, the

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1 senior management meeting process was initiated in 1986 in
2 response to the loss of feedwater event at Davis-Besse which
3 occurred in June of 1985. This current meeting was the 20th
4 such meeting. Although we have refined the process and the

5 analysis used in support of the meetings, as usual, the
6 discussions at this meeting focussed on the performance of
7 selected plants which we'll report on today.

8 In one departure from past practice, when we
9 discussed trending performance at Hope Creek today we'll
10 also provide some information on the Public Service's
11 adjacent Salem plant.

12 This meeting also included discussions regarding
13 the status of staff actions on final safety analysis, report
14 reviews, our inspection activities related to the 10 CFR
15 5059 change process at licensees, the PRA implementation
16 plan, steam generator issues, and dry cask storage
17 initiatives. You'll hear some on this topic from offices.

18 The order of the meeting, after the regional
19 administrators provide their reports on plants, Bill Russell
20 will briefly summarize the reactor technical issues, which
21 we discussed, and provide the status of certain staff
22 initiatives in our reactor inspection program. And Dr. Carl
23 Paperiello will discuss dry cask storage issues.

24 I'll now ask Bill Russell to continue.

25 MR. RUSSELL: Dr. Jackson, Commissioner Rogers,

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1 the senior management meeting process has two principal
2 objectives as it relates to nuclear power plant performance.
3 First is to identify potential problem performance and
4 adverse safety trends before they become actual safety
5 problems. And secondly is to effectively utilize agency
6 resources in overseeing operating reactor safety.

7 An integrated review of plant safety performance
8 is conducted using objective information, including plant-
9 specific inspection results, operating experience, PRA
10 insights, systematic assessment of licensee performance
11 reports, performance indicators, and enforcement history.

12 Special attention is given to the effectiveness of
13 licensee self-assessments and the effectiveness of
14 corrective action taken for problems identified by
15 licensees.

16 Our objective is to identify facilities early that
17 have negative performance trends and those facilities whose
18 performance requires agency-wide close monitoring and
19 oversight. We also discussed planned inspection activities,
20 NRC management oversight, and allocation of resources for
21 individual plants discussed.

22 I will summarize the overall results of the senior
23 management meeting, and following that overall discussion,
24 each regional administrator will discuss the facilities
25 which we have categorized as needing agency-wide attention,

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1 starting with Tim Martin in Region I.

2 If I can have slide number 2, please, this slide
3 is by way of background for facilities removed from the list
4 of problem plants. There were no facilities removed during
5 this last senior management meeting.

6 Slide 3, please. Category 2 facilities are those
7 plants whose operation is closely monitored by NRC. These
8 facilities are Indian Point 3, Millstone Station, Units 1, 2
9 and 3, Browns Ferry 3 and Dresden 2 and 3. Tim Martin will
10 discuss Indian Point 3 and Millstone, Stew Ebnetter will
11 discuss Browns Ferry 3, and Hub Miller will discuss Dresden
12 2 and 3.

13 Slide 4, please. Category 3 plants are plants
14 that are shut down and require authorization of the
15 Commission to operate, which the staff also closely
16 monitors. Browns Ferry 1 remains a category 3 plant, and
17 Stew Ebnetter will briefly its status.

18 Next slide, please. As a result of our
19 discussions, the senior managers concluded that one plant,
20 Hope Creek, had exhibited adverse trend in performance that
21 warranted issuance of a trending letter. This letter
22 includes additional comments concerning the performance of
23 Salem 1 and 2, which are collocated with Hope Creek and
24 operated by the same licensee. Tim Martin will address the
25 performance at these facilities.

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1 As the Chairman has indicated, we will also
2 discuss and summarize discussions from the senior management
3 meeting related to important program and generic issues.
4 For the reactor program, I'll discuss activities related to
5 plant performance evaluation and short-term inspection
6 initiatives which we are taking related to facility final
7 safety analysis reports and overall performance evaluation.

8 I will discuss two generic issues: the experience
9 of last fall's outages, particularly related to

10 circumferential cracking of pressurized water reactor steam
11 generator tubes, and also staff activities related to the
12 PRA action plan and our efforts to accelerate progress on
13 developing a standard review plan and a regulatory guide.

14 Carl Paperiello will discuss the dry cask storage
15 of spent fuel at reactor sites, which is a joint program
16 being coordinated between NRR and NMSS.

17 Tim Martin?

18 MR. MARTIN: Chairman Jackson, Commissioner
19 Rogers, the New York Power Authority's Indian Point 3
20 nuclear power plant was first discussed during the June 1992
21 senior management meeting. Concerns were identified in the
22 areas of procedural adherence and attention to detail, the
23 surveillance testing and corrective action programs,
24 engineering and tech support, information flow, facilities,
25 and site and corporate management guidance, oversight, and

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1 control.

2 In February 1993, the New York Power Authority,
3 NYPA, shut the plant down in response to concerns for the
4 operability of their anticipated transient without scram
5 system. Subsequently, NYPA identified additional technical
6 and staff performance problems, took the plant to cold
7 shutdown, and committed to not restart the unit until the
8 problems had been resolved and NRC had agreed the plant
9 restart. Indian Point 3 was placed on NRC's watch list in
10 June of 1993.

11 Since the February 1993 shutdown, NYPA expended
12 significant efforts and resources on equipment maintenance
13 and modifications, process improvements and management
14 changes, outside assistance with SALP to review programs and
15 performance deficiencies and help determine root causes of
16 those problems. Further, the board of trustees established
17 a nuclear advisory committee to provide expert assessment
18 and advice on the operation of NYPA's two facilities.

19 By early 1995, over two-thirds of the managers at
20 the department head level and above were in new positions or
21 were new to the company. Senior management involvement and
22 oversight of activities was evident. Management had also
23 successfully improved the threshold for problem
24 identification and documentation.

25 The material condition of the facility had been

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1 improved. Noteworthy system modifications and improvements
2 were accomplished on the emergency diesel generators,
3 numerous motor-operated valves, the control room air
4 conditioning system, the power-operated relief valves, and
5 the instrument air system.

6 A large volume of corrective and preventive
7 maintenance activities had been completed and the preventive
8 maintenance program was strengthened. Surveillance test
9 scheduling and test results reviewed were also enhanced.

10 Further, the engineering department staffing and
11 organization changes and the relocation of the staff to the
12 site resulted in enhanced operational focus and a reduction
13 in work backlog. The engineering staff also demonstrated
14 that they could provide timely and effective support for
15 emergent technical issues.

16 Finally, operators appeared more methodical and
17 conservative during plant evolutions, control room formality
18 improved, and the control of routine plant activities was
19 good. The quality in many plant procedures was also
20 substantially upgraded, particularly those required for
21 shift turnover and plant operations.

22 Since the last senior management meeting, NYPA
23 restarted the plant in June, after the NRC agreed that
24 Indian Point 3 was ready for restart. During the start-up
25 and power ascension program, NYPA maintained an around-the-

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1 clock management presence and was generally effective in
2 setting expectations and fostering the significantly
3 improved safety perspective.

4 Further, operations were generally performed in a
5 safe and conservative manner. However, on July 10 through
6 12, 1995, following a turbine run-back event precipitated by
7 a technician implementing an inadequate procedure, the plant
8 was operated at power while it reduced pressure in an
9 attempt to see a leaking pressurizer safety valve. The
10 operations staff did not realize that the plant was being
11 operated in an unanalyzed condition until Westinghouse was
12 contacted two days later.

13 The root causes for this event include a lack of
14 knowledge of the boundary conditions utilized in the

15 accident analysis, a failure to appropriately implement
16 procedures, an inadequate involvement in communications
17 between the plant and engineering staffs. Full power
18 operations was ultimately achieved on July 22, 1995.
19 The results of NYPA's self-assessment of power
20 operations were discussed with the NRC in October in a
21 meeting open for public observation. Following the public
22 meeting, one of several conducted during 1995, the NRC
23 responded to questions from concerned members of the public.
24 In mid-September 1995, in response to an electric
25 generator cooling system leak, the plant was shut down. The

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1 plant has since remained shut down to repair an evolving
2 list of identified equipment problems and performance
3 deficiencies, the latter principally associated with three
4 operational events. The list of equipment problems,
5 including the residual heat removal system check valves,
6 charging system valves, appendix R emergency diesel
7 generator, well channel and containment pressurization
8 system, and containment fan cooler service water system,
9 reflects, in part, NYPA's improving threshold for
10 identifying and resolving issues.

11 The events of concern evidence a weakness in
12 operations department staff performance and include the July
13 operation at reduced pressure, the October heat-up with
14 inoperable equipment, and the December component cooling
15 water leak inside containment.

16 The underlying performance deficiencies revealed
17 by these three events demonstrate continuing weaknesses in
18 teamwork and communications, operations staff knowledge of
19 the licensing basis, procedural adherence, attention to
20 detail, and questioning attitude. These continuing
21 weaknesses illustrate the mixed effectiveness of past
22 licensee corrective actions.

23 Since September 1995, NYPA has implemented
24 extensive equipment maintenance activities and staff
25 performance corrective actions, the latter including several

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1 management changes, acceleration of the procedure upgrade
2 program in the operations area, and remedial personnel
3 training.

4 Management has also undertaken significant
5 additional effort to better communicate performance
6 expectations, particularly in the area of procedural
7 adherence, and enhance observation and assessment of the
8 shift crew performance, using oversight personnel and
9 outside shift mentors, as was done during the power
10 ascension program.

11 In response to the equipment and staff performance
12 concerns, the NRC requested in December that NYPA describe
13 planned or implemented performance improvements and
14 corrective actions prior to the pending restart of Indian
15 Point 3. NYPA's response was provided in mid-January. A
16 special NRC inspection is currently underway to verify the
17 implementation of these actions and to assess their
18 effectiveness.

19 The NRC will also review the resolution of several
20 recent equipment problems, including a January 20 loss of
21 offsite power and the subsequent failure of one of three
22 emergency diesel generators to power its electrical bus.
23 Augmented around-the-clock inspection coverage is planned
24 when the plant is ready for restart.

25 At this time, Indian Point 3 remains a category 2

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1 facility, subject to close NRC monitoring. Are there any
2 questions relative to Indian Point 3?

3 COMMISSIONER ROGERS: Does Indian Point use system
4 engineers?

5 MR. MARTIN: Yes, sir.

6 COMMISSIONER ROGERS: I'm really puzzled, then,
7 why this component cooling water heat exchange leak remained
8 undetected through two shift changes. The system engineer
9 ought to be on the job and certainly know when something
10 like that is taking place.

11 MR. MARTIN: We agree that it should not have gone
12 that long. The plant was in heat-up. Obviously one of the
13 things you're concerned about is reactor coolant system leak
14 rate. It's very difficult to detect it in a plant at heat-
15 up.

16 There was some anticipation by the staff that --
17 they did not do the detailed walk-downs inside containment
18 which should have picked this up, but they had other
19 indications.

20 The problem started when they secured the residual
21 heat removal system, which should have allowed the component
22 cooling water system to cool down and contract. They
23 expected the surge tank level to drop somewhat. They didn't
24 realize an automatic start of one of the component cooling
25 water pumps caused a pressure wave, which caused a relief

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1 valve to temporarily lift inside the containment.
2 Unfortunately, it didn't reseal.

3 So they saw the decline in the surge tank that
4 they kind of expected, but they would fill that surge tank
5 three times over the next two shifts, and the equipment
6 operators were not communicating with the control room that
7 they were doing this. Obviously, this water is then
8 draining into the containment sump, and the sump pump-outs
9 are also another indicator.

10 Unfortunately, if you look on the control panel
11 and the chart where you can see the pump-outs occur, it's
12 one of these charts that folds about every 45 minutes, and
13 unless you happen to be looking at it -- it's in the lower
14 part of the panel -- you will not see that pump-out
15 activity.

16 So finally, after the second shift change, the
17 equipment operator, during the shift briefing as they were
18 taking over, said, "Hey, I notice they have filled this tank
19 several times. What's going on?" And that's when it all
20 started to come together. But clearly that was not the kind
21 of performance we would expect.

22 COMMISSIONER ROGERS: It sounds like the
23 equipment, the recorder equipment is not the best for the
24 purpose, if it can hide something like that easily.

25 MR. MARTIN: Yes, sir. More so, we would expect

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1 the operators to pay a lot more attention. We would have
2 expected them to be touring the containment when it's
3 difficult, from a calculational standpoint, to spot RCS leak
4 rates.

5 COMMISSIONER ROGERS: Your comments -- you didn't
6 make them here, but in writing -- indicated that the
7 engineering backlog is growing. Is that still true?

8 MR. MARTIN: No, sir. They're starting to get
9 back on top of that. That was as a result of a number of
10 the emerging problems they identified since September, it
11 rose, and they put more effort on it. It is now going back
12 down.

13 COMMISSIONER ROGERS: What's your prognosis? Is
14 this something that shows that we just have to wait and see
15 or if there some indication that they are getting control of
16 their plant? The kinds of problems that we see here just
17 seem to indicate a lack of proper management control.

18 MR. MARTIN: I would agree, sir. After they did
19 the restart, there was a lot of indication that they were
20 trying to get back to business as normal, and they did not
21 exercise the tight oversight that we would have expected.

22 After my meeting with senior management in
23 December and our letter to them having them put on the
24 record what they were going to do to turn things around, we
25 saw a lot more management attention and a substantial

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1 investment of resources and time and management attention to
2 get it headed in the right direction.

3 We have seen some positive things in December and
4 January, but we still need the proof of the pudding. That's
5 why I have an inspection time on site now looking at all
6 those performance issues and how they have dealt with them
7 and interviewing operators and observing performance, to see
8 that these corrective actions have taken.

9 COMMISSIONER ROGERS: What do you think the
10 attitude of the staff at the plant is with respect to these
11 things? Do they feel that these are all trivial things and
12 we're making a big fuss about nothing or do they really take
13 them seriously, as an indicator that they're not up to
14 snuff?

15 MR. MARTIN: Recent discussion indicates they're
16 taking them seriously. Obviously they were not exercising
17 the rigor of operations that we would have expected after
18 the original restart activities.

19 CHAIRMAN JACKSON: You mentioned the change-out of
20 a significant number of managers and repetitively through
21 your remarks, and I'm sure we'll hear them with respect to
22 other plants, discussions of management attention, and
23 clearly you think that's important, and this relates to
24 Commissioner Rogers' question.

25 Do you have evidence that with all of this

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1 management change-out that A, the managers are really out
2 there into the plants and B, that there's a propagation down
3 through the staff of management expectations?

4 I should ask, as a preface to that, are there
5 clear management expectations articulated? And then are
6 these expectations being propagated through the organization
7 and reflected in the work of the staff?

8 MR. MARTIN: The expectations are articulated. I
9 am not as confident that they are accepted, understood and
10 being implemented, and that is one of the major purposes of
11 our inspection activity right now, to make sure that those
12 things are occurring.

13 We have seen improvement there, but there is more
14 to be done and I'm not here to tell you that I'm ready to
15 support restart until we see that these corrective actions
16 have, in fact, been effective.

17 Clearly, in my discussions in early December with
18 the plant staff and examination of the events up to that
19 time, there were individuals in the operation organization
20 that had not adopted the new way of doing business.

21 MR. RUSSELL: I would comment that following the
22 long outage and the management efforts to oversee activities
23 with a lot of management time in the facility and close
24 oversight, that when Tim and I were on site more than a year
25 ago now, things were quite positive. They had laid out

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1 plans. They were tracking performance against those plans.

2 And what may have occurred was that there was some
3 reduction in that intensity of oversight after the restart
4 activities last summer, and we saw some examples of that
5 through events and other things.

6 So while they have articulated what they intend to
7 do and how they're going to oversee it, I think we need to
8 be very careful in how we monitor it so that we see the
9 results of that work. And that's why we have gone through
10 another assessment, similar to what we did for the earlier
11 start-up. That's why the team is there, and we'll be
12 sharing the results of those reviews publicly. And we will
13 be providing augmented coverage for start-up activities to
14 assess how effectively they are doing in finding and
15 identifying their own problems and addressing them.

16 CHAIRMAN JACKSON: Why don't you go on?

17 MR. MARTIN: The next plant I wish to talk about
18 is the Millstone facility. The performance at the Millstone
19 nuclear power station has been discussed during nine senior
20 management meetings since June of 1991.

21 In March of 1991 NRC met with Northeast Utilities,
22 NU, to discuss our conclusions that performance had declined
23 and that longstanding problems with procedure quality and
24 implementation, untimely reportability and operability
25 determinations, ineffective corrective actions, and

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1 inadequate handling and resolution of employee safety
2 concerns, required management's attention.

3 In early 1992, the licensee implemented a
4 performance enhancement program. Despite this effort,
5 significant operational performance problems continued,
6 particularly at Unit 2 and more recently at Unit 1.

7 Following the January 1995 senior management
8 meeting, NRC senior managers met with NU's board of trustees
9 to communicate NRC's concern with the lingering performance
10 problems at the Millstone facility. During the last five
11 years, significant deficiencies were identified in facility
12 material conditions, licensee processes and procedures, the
13 handling of employee concerns, including two cases of
14 confirmed harassment, intimidation and discrimination,
15 procedural adherence, corrective action process
16 effectiveness, competition and communication between units,
17 a lack of operational focus, and an historic emphasis on
18 justifying the status quo versus resolving identified
19 problems.

20 These deficiencies precipitated or contributed to
21 a number of significant events, including the Unit 1
22 shutdown to facilitate the retraining of operators after the
23 licensed operator requalification program was declared
24 unsatisfactory, a 12,000-gallon drain-down of the Unit 1
25 reactor vessel to the dry well spray header while performing

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1 an inadequate reviewed and approved surveillance test
2 procedure, the destruction of the let-down system check
3 valve at Unit 2 during repetitive, uncontrolled leak seal

4 activities, which resulted in an unisolatable reactor
5 coolant system leak and required reactor shutdown, four
6 examples of line failures due to inadequate erosion-
7 corrosion programs, multiple examples of failure to perform
8 timely corrective action, and conservative operability and
9 reportability determinations, and numerous examples of
10 failure to appropriately implement licensing processes and
11 procedures.

12 In response, NU made a number of programmatic and
13 management changes. Also, the site and corporate
14 engineering organizations were integrated and moved to the
15 site.

16 Unit 3 is currently operating, and overall
17 performance continues to be generally good. Subtracting from
18 this assessment were continued problems with procedure
19 quality and implementation, recurrent personnel errors
20 involving containment integrity, primary system dilution,
21 untimely corrective actions for long-standing high failure
22 rates of MSIB stroke tests, containment personnel hatch
23 seals and auxiliary feedwater check valves, and
24 rationalization of license requirements leading to
25 violations of technical specifications for auxiliary

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1 feedwater system operability and for control room and
2 secondary containment integrity.

3 Recently, management has initiated a number of
4 actions to address these issues.

5 Unit 2 shut down for refueling in October 1994 and
6 almost immediately experienced several significant
7 performance errors, including a loss of spent fuel cooling,
8 a service water spill on an energized switch gear, and the
9 opening of a pressurized hydrogen line.

10 Millstone subsequently established an augmented
11 work observation program, expanded pre- and post-job
12 briefings, reduced the work pace, and extended the outage
13 for 10 months, during which a number of performance
14 improvement initiatives were implemented to effect
15 equipment, procedural and work control improvements and to
16 instill an operational focus in the plant staff.

17 Additionally, the licensee developed the improving
18 station performance plan to address broad station problems.

19 The readiness assessment team inspection conducted
20 in May 1995 concluded that there were no significant
21 barriers to Unit 2 start-up. The team also noted improved
22 root cause evaluations and quality assessment audits and a
23 conservative approach toward ensuring safety-significant
24 work items were completed prior to restart.

25 Since the plant restart in August 1995, Unit 2's

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1 operational history has been generally good, including their
2 voluntary shutdown in December to repair an unisolatable
3 flange leak.

4 Unit 1 is currently in a refueling outage that
5 started in November 1995. Over the last year, the quality
6 of procedures, procedure adherence and work control practice
7 have been of continuing concern, particularly in the
8 maintenance area.

9 These concerns were evident in the work on the
10 zinc injection line that exceeded the work order
11 assignments, the operation of the reactor beyond analyzed
12 pressure limits, the operation of the plant at power in an
13 unanalyzed condition with two safety-related electrical
14 busses tied together, the failure to leak test five
15 containment isolation valves, although an exemption had been
16 denied several years prior, the full core off-load of
17 reactor fuel to the spent fuel pool outside the design basis
18 for nearly 13 operating cycles, and the seriously degraded
19 material condition of rad waste storage and processing
20 systems, the latter evidencing a substantial period of
21 inadequate maintenance, engineering involvement and
22 management oversight.

23 It is noteworthy that there have been few
24 significant performance problems during the current Unit 1
25 refueling outage.

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1 The NRC remains concerned about the volume of
2 allegations received and the continued evidence of
3 unresolved employee concerns at Millstone. The licensee has
4 enhanced training for managers and supervisors, replaced a
5 number of supervisors, and established a more responsive
6 nuclear safety concerns program.

7 However, the continuing volume of allegations
8 received by the NRC and two 2.206 petitions filed in the

9 last year indicate that the licensee is still struggling to
10 appropriately address concerns raised by its personnel.
11 As a result of recently identified examples where
12 Millstone has not complied with all safety-related aspects
13 of its FSAR and portions of other regulatory requirements,
14 on December 13, 1995 the agency issued a demand for
15 information regarding what action the licensee has taken to
16 ensure that future operations of Millstone Unit 1 will be
17 conducted in accordance with the terms and conditions of the
18 Millstone Unit 1 operating license.

19 Additionally, the EDO directed NRR to initiate an
20 independent review of Millstone Station and NRC handling of
21 employee concerns and allegations.

22 Earlier this month, NRC took action to increase
23 the resident staff at the site 6 with a senior resident and
24 resident inspector for each of the three units. In
25 addition, NRC assigned a senior executive for the site to

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1 direct oversight of licensee performance and assure
2 coordinated review and identification of root causes of the
3 licensee's continuing performance problems.

4 In summary, although we recognize significant
5 variations in performance of the three units at the
6 Millstone nuclear power station, in view of the history of
7 serious operational problems at the site and management's
8 inability to consistently sustain performance improvements
9 across all three units and to effectively resolve many
10 employee safety concerns, the senior managers concluded that
11 the Millstone Station would be placed on the watch list as a
12 category 2 facility.

13 Are there any questions relative to Millstone?

14 CHAIRMAN JACKSON: Commissioner Rogers?

15 COMMISSIONER ROGERS: No. I think that you've
16 given us a litany of a large number of problems that have to
17 be watched and I don't think there's any specific questions
18 that I have, but I think that this whole site needs very
19 strong attention. There's no question about that.

20 MR. MARTIN: Yes, sir.

21 CHAIRMAN JACKSON: Well, you know that my concern
22 is that not only does the specific site get attention but
23 that lessons that come out of this, in terms of expectations
24 that are clearly propagated to licensees, in terms of their
25 responsibilities, as well as any changes that we might

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1 suggest in our processes, be applied across the board. And
2 I think you've already begun some steps in that regard, but
3 I just wanted to take this opportunity to reinforce that
4 message here. And I think --

5 MR. MARTIN: We received it.

6 MR. RUSSELL: I will be addressing the generic
7 actions that we're taking as a result of lessons learned,
8 after the plant discussions, and we'll come back to this
9 issue.

10 CHAIRMAN JACKSON: Okay, very good.

11 MR. TAYLOR: Stew?

12 MR. EBNETER: Good morning. Browns Ferry is a
13 three-unit boiling water reactor owned and operated by the
14 Tennessee Valley Authority. Units 2 and 3 are operating and
15 Unit 1 is defueled and shut down.

16 Unit 3 has been in a recovery program since it
17 shut down in the spring of 1985. It was placed on the watch
18 list as a category 3 unit in 1986. Unit 3 finished its
19 recovery program in the fall of 1995 and on November 15,
20 1995 the Commission authorized the regional administrator to
21 approve the restart of Unit 3 when TVA demonstrated
22 readiness to operate.

23 That approval was granted on November 19, 1995 and
24 the unit achieved criticality about noon on November 19.

25 The restart and power ascension testing program

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1 were successfully completed with minimal problems, and power
2 ascension was completed on December 14, 1995.

3 The start-up and power ascension program was
4 completed in a deliberate and methodical manner. It was
5 characterized by minimal equipment problems and very few
6 personnel errors. Those that did occur were not significant
7 and did not cause operational issues or schedule delays.

8 Operational issues were handled well by the
9 operating crews, and equipment problems were dealt with
10 promptly and adequately. Root cause analyses were broad and
11 in-depth and the corrective actions were prompt and
12 effective.

13 Unit 3 was operated concurrently with Unit 2 and

14 there were no interactions between these two units, and
15 there were no interferences. The unit crews worked
16 effectively as teams and they both worked cooperatively to
17 do the maintenance and surveillance actions on both units.
18 The licensee self-assessments were effective and
19 timely. Management involvement and oversight were thorough.
20 The operating staff performed well throughout the program.
21 There were some weaknesses observed in the work
22 control maintenance area and with status planning and
23 configurations, but these were not major issues.
24 The power ascension program progressed rapidly and
25 effectively through hold points. The NRC resident staff,

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1 assisted by regional staff, provided inspection coverage for
2 these and we provided around-the-clock coverage on
3 significant evolutions.

4 Browns Ferry 3 is listed as a category 2 plant on
5 the watch list and will remain 2 until they demonstrate a
6 period of sustained operational performance concurrent with
7 Unit 2 operations.

8 TVA's plans -- let me talk quickly about 1 --
9 TVA's plans for Unit 1 are indeterminate and they remain on
10 the watch list as category 3. They have addressed Unit 1 in
11 their integrated resource plan and that has been issued and
12 it's under consideration by the TVA board and senior
13 managers. We don't have any additional feedback on that
14 unit at this point.

15 Are there any questions on Browns Ferry?

16 CHAIRMAN JACKSON: Commissioner Rogers?

17 COMMISSIONER ROGERS: Well, not a question but I
18 just note that we've just heard about two category 2 sites;
19 they're extremely different, in my view. One, the Millstone
20 site, which we really are very concerned about, whether
21 they've got hold of things or not, and I haven't heard
22 anything that says that there's a trend one way or the
23 other. I mean, there's just a lot of problems that are
24 being dealt with.

25 On the other hand, I take it that the Browns Ferry

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1 3 site is a category 2 plant because it's been down for a
2 long time and we're watching it carefully but that the
3 readings on that site are entirely different than those for
4 Millstone, while they are both category 2 plants.

5 So I think it simply illustrates that category 2
6 is a very broad category in many ways and being in that
7 category, by itself, doesn't tell one a lot. One has to
8 really look to see what is going on.

9 MR. EBNETER: It's true, Browns Ferry is coming
10 out of an extended problem and Millstone is entering into.
11 But it is a broad category and Browns Ferry 3 also -- you
12 know, it was a cookie cutter of Unit 2 recovery and the same
13 programs that were used on Unit 2 have been used on Unit 3.
14 So there's been a lot of lessons learned and experience, so
15 it should go smoothly. I would be very unhappy if it didn't
16 go smoothly.

17 A little further, if you go back to the 1985 time
18 frame, those symptoms that Tim discussed with Millstone 3
19 were the very same symptoms we saw at Brown Ferry in those
20 days, but they have been primarily corrected.

21 CHAIRMAN JACKSON: I have some questions that I
22 will actually defer until later, having to do with the
23 categorization.

24 MR. EBNETER: You're going to keep us in suspense.

25 CHAIRMAN JACKSON: That's right. Stay tuned.

29

1 Mr. Taylor?

2 MR. TAYLOR: Hub Miller.

3 MR. MILLER: Good morning, Chairman, Commissioner
4 Rogers.

5 Dresden was placed on the watch list for the first
6 time in June 1987. ComEd responded with the Dresden station
7 improvement plan and following a period of improved
8 performance, the plant was removed from the watch list in
9 December 1988.

10 Performance problems surfaced again and the plant
11 was returned to the watch list in January 1992. Since that
12 time, efforts have been under way to address station
13 problems.

14 During the June 1995 senior management meeting, we
15 noted ComEd had lost momentum in these improvement efforts.
16 This was exhibited by a significant event involving
17 violation of technical specification limits which occurred
18 at the beginning of 1995.

19 Over the past six months, ComEd intensified its
20 improvement efforts. Significant management changes were
21 made. These include the senior vice president for BWR
22 operations assuming the role of site vice president to more
23 closely guide and oversee site activities. These changes
24 also include changes in operations, maintenance, engineering
25 and work planning senior management positions.

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1 Over the past six months, station management
2 refocused attention on operation standards and
3 accountability. As a consequence, marked improvement has
4 been observed in control room activities.

5 While Unit 3 was hampered with equipment problems
6 coming out of an extended forced outage, each of three
7 start-up evolutions on the unit was conducted in a
8 deliberate error-free manner. Priority was given to
9 resolving operator work-arounds and control room
10 deficiencies, with positive results. Overall, a more
11 conservative approach to decision-making has been observed
12 at the station.

13 Units 2 and 3 were both shut down for most of the
14 past six months. Unit 2 has been in an extended refueling
15 outage and Unit 3 was shut down to repair a failed turbine
16 generator.

17 Steps were taken to resolve a number of long-
18 standing equipment problems during these outages. These
19 include, for example, reestablishing a three-element
20 feedwater control system design feature that had not worked
21 for many years and unplugging a reactor vessel bottom head
22 drain that similarly had been a problem for many years. The
23 latter is significant, as the plugged vessel drain
24 contributed to the tech spec violation I mentioned a moment
25 ago.

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1 Efforts to reduce radiological hot spots and
2 overall source term have produced positive results.

3 While these steps were taken, considerable work
4 remains to be done with respect to material condition. The
5 backlog of equipment deficiency remains high while problems
6 with work planning and coordination persists. Station
7 management acted to improve work control and planning but
8 significant results have yet to be observed.

9 Weaknesses in worker skill levels continue to
10 hamper progress. Management mapped out an extensive worker
11 training and requalification program early in 1995 but it
12 was delayed by unanticipated outage work. Plans now are to
13 complete the program by the end of this summer.

14 The number of maintenance and radiological
15 protection-related personnel errors continued to be high,
16 particularly during the dual unit outage, indicating efforts
17 to communicate management standards and expectations have
18 not been fully effective.

19 Engineering support to the station improved
20 through increased staffing and involvement in plant
21 activities, but efforts to better identify equipment
22 problems through plant walk-downs and system reviews need to
23 continue.

24 Continued significant management attention is
25 needed to assure improvement efforts are sustained and

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1 effective at Dresden. This is particularly important in
2 light of the long time that Dresden has been a category 2
3 plant and its history of cyclic performance.

4 While performance improvements have again been
5 observed in some areas, effectiveness of recent management
6 changes and improvement efforts will only become clear as
7 the Unit 2 outage is completed, the unit is started up and
8 operated, along with Unit 3, for a period of time. Dresden
9 will continue as a category 2 plant.

10 CHAIRMAN JACKSON: Commissioner Rogers?

11 COMMISSIONER ROGERS: Well, not so much on
12 Dresden, although it's really a question about the past in
13 the sense that Dresden first went on the watch list in June
14 of '87 and came off in December of '88 and in retrospect, it
15 looks as if that was much too quick a decision to take them
16 off that.

17 MR. TAYLOR: It was. I agree.

18 COMMISSIONER ROGERS: And I wonder whether you
19 have been able to develop some sense of, on the average, how
20 long it really does take a plant to get to a point, when
21 it's gone on the watch list, that we feel reasonably
22 comfortable we can take it off. I know it'll vary from
23 plant to plant. I'm sure there are many variables. But

24 nevertheless, I think that we may be able to have some
25 feeling about when a very early decision is pending on

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1 taking a plant off a watch list, based on what our past
2 experience might be.

3 MR. TAYLOR: When we did that the first time, we
4 really didn't have reasonable spell-out of criteria. We do
5 now. We do have a series of what you might call tests, test
6 indicators, so to speak, to try to help us guide our
7 decision. That's been a more recent development and I think
8 they're actually utilized by the staff as we go through how
9 far have they come, have we seen what we think we need to
10 see to make that decision. It's a little more discipline.

11 COMMISSIONER ROGERS: Well, if you have any sort
12 of general observations that you could communicate to me on
13 that, I'd appreciate it. I'd just like to understand that.

14 MR. TAYLOR: Do you want to add something?

15 MR. RUSSELL: I'll be discussing a study that we
16 have under way that will broadly address your question, but
17 I would agree with Jim. I think the major lesson learned
18 from both Dresden and Turkey Point, both of which were
19 facilities that were on, came off, and went back on, is that
20 we did not do as thorough a review to ensure ourselves that
21 the changes that had been put in place would be lasting, and
22 there may have been some anticipation of progress continuing
23 to be made without having actually seen it in performance of
24 the facility.

25 So we now have a very rigorous process that we go

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1 through to determine whether a plant is ready to be removed
2 and we can return to a more normal level of monitoring of
3 performance.

4 So once you go on, we need to see actual evidence
5 that performance has changed so that we will be comfortable
6 in reducing resources as relates to NRC oversight.

7 CHAIRMAN JACKSON: Have you identified appropriate
8 actions to be taken when plants remain on the problem plant
9 list for an extended period of time? What does it mean for
10 a plant to remain on the problem plant list? Presumably
11 we're expending -- you're expending greater resources, and
12 if a plant remains long enough, are we putting ourselves in
13 somewhat of an untenable position?

14 MR. RUSSELL: That issue has been discussed. We
15 are currently working with OGC to evaluate options for
16 actions we may take for an extended period without showing
17 progress because one of the things that becomes obvious is
18 that you get commitments back, things are going to be done
19 to change performance, and you don't see the results of that
20 performance change.

21 So we've been discussing it internally. We have
22 accelerated our schedule for doing that and hope to have a
23 paper that has been well coordinated within the staff and
24 with the General Counsel's Office to the Commission in about
25 two months.

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1 I don't have, other than my personal views, I
2 don't have a collective position on it now but it is one
3 we're giving a lot of attention to.

4 CHAIRMAN JACKSON: So two months from now is May
5 1.

6 MR. TAYLOR: Got it.

7 COMMISSIONER ROGERS: Just one other general
8 observation. It does seem to me, and it always has seemed
9 to me that how well a plant is performing on radiation
10 protection is a pretty good indicator of -- we are concerned
11 about the health of the people who work at the plant, but it
12 tells you much more than that. It tells you how assiduously
13 they are conforming to procedures and the care which they're
14 taking in their every-day activities, so that by itself,
15 it's a sensitive indicator.

16 MR. RUSSELL: Yes.

17 CHAIRMAN JACKSON: Actually, I would like to have
18 you address, and I think we should finish going through the
19 plant list, but in the follow-up conversation, address the
20 issue of how do you really monitor or determine the
21 effectiveness of the propagation of management expectations
22 through the staff, and are there, in fact, staffing or
23 training issues -- I don't want to suggest an answer for you
24 because I want you to give me an answer.

25 We hear you talking many times about management

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1 expectations and management changes but, in the end, it's
2 people who operate these plants. We spend a lot of time

3 talking about the operators and conservative operations, and
4 that has to be a key focus, but you've also heard me say
5 that if the equipment isn't operated appropriately, if there
6 are too many operator work-arounds -- we focus on the
7 operators because they have to be the ones to safely shut
8 down, manage a transient, shut down a plant if there's a
9 problem. But we, de facto, put them into that position, or
10 the people who operate the plants, who work on the
11 equipment, if the overall performance of the plant is not
12 appropriate.

13 So I'm really interested in to what extent you've
14 evolved your thinking in terms of evaluating the
15 effectiveness of the propagation of management expectations
16 to the staff.

17 MR. RUSSELL: I'll be discussing that when we come
18 back to the generic discussion.

19 CHAIRMAN JACKSON: Okay.

20 MR. MARTIN: Chairman, Commissioner, at this time
21 we're going to move on into the trending plant. Hope Creek
22 nuclear generating station was first discussed at the
23 January 1996 senior management meeting, in recognition of a
24 declining trend in performance. In 1994, the NRC increased
25 attention to the Hope Creek performance following a series

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1 of plant events.

2 Although the material condition at Hope Creek is
3 substantially better than at the licensee's Salem facility,
4 many of the performance concerns exhibited there had been
5 identified, including weaknesses in control of plant
6 activities and adequate communications, mixed procedural
7 adherence and ineffective resolution of identified problems
8 due to weak root cause analysis.

9 While no functional area was assessed as category
10 3, the SALP for the period June 1993 through April of 1995
11 identified declining performance in operations and
12 maintenance, continued good performance in engineering, and
13 superior performance in plant support.

14 After completing a refueling outage in May 1994, a
15 series of five reactor scrams occurred over the remainder of
16 the year. Weak maintenance practices contributed to three
17 reactor trips and inadequate training of operators by
18 engineering on the characteristics of a new digital
19 feedwater control modification contributed to another.

20 In April 1995 an unmonitored radiological release
21 involving the decontamination solution evaporator revealed
22 weaknesses in system engineering, design review, operations,
23 procedures and practices, management oversight and control,
24 communications and integration of facts, and assessment of
25 cause.

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1 As a result, the evaporator was operated
2 improperly and contrary to the FSAR; radioactive liquid was
3 released through a ventilation system, effectively bypassing
4 the stacked radioactivity monitors; and the scope of the
5 resulting contamination was not determined until after one
6 low level contaminated vehicle had left the site.

7 In July of 1995 a partial loss of shutdown cooling
8 occurred as a result of inadequate procedural guidance, poor
9 operator training, and inadequate staff performance. Other
10 factors that contributed to this event were poor on-shift
11 communications and procedural adherence, inadequate
12 integration and assessment of information, and inadequate
13 corrective action and training for earlier shutdown cooling
14 events.

15 Also, senior plant management failed to properly
16 assess the significance of this event in a timely manner,
17 delaying the start of a comprehensive evaluation of the
18 event and proper notification of the NRC.

19 Prior to commencing the current refueling outage
20 in November and continuing through the end of 1995, a series
21 of plant problems arose, indicating that performance decline
22 was continuing. These included personnel errors and
23 equipment failures resulting in a 22,000-gallon spill of
24 non-radioactive water in the turbine building, reactivity
25 mismanagement as a result of operators not using all

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1 available indications, frequent emergency diesel generator
2 surveillance testing deficiencies which resulted in the
3 diesel generators being declared inoperable, frequently
4 unavailable process and effluent radiation monitoring
5 systems, mishandling of highly radioactive local power range
6 monitor detectors that were being transferred to the storage
7 pool, inadequate operating procedures leading to failure to

8 implement technical specification requirements for shutdown
9 operations, and repeat snubber and pipe support degradation
10 of the residual heat removal shutdown cooling system that
11 indicated prior corrective actions had been ineffective.

12 Although the material condition in Hope Creek is
13 generally better than that of the Salem unit, there are
14 indications that the material condition at Hope Creek may be
15 deteriorating. A review of recent licensee event reports
16 indicates an adverse trend in safety system failures.
17 Recurrent failures of high pressure coolant injection
18 system, emergency diesel generators, and vital equipment
19 room cooling and ventilation have occurred. Non-safety-
20 related equipment degradation has also led to more frequent
21 challenges to the operators.

22 The licensee announced the development of a
23 performance improvement plan in August 1995, similar in
24 content to the Salem improvement plan but of lesser scope.
25 By the end of 1995, most of the corporate and site managers

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1 were replaced or reassigned.

2 The new management team made an important decision
3 in the fall of 1995 to expand the scope of the Hope Creek
4 refueling outage. New management expectations fostered
5 changes to ensure that equipment deficiencies were
6 identified and corrected. As a result, a number of planned
7 activities for the refueling outage tripled.

8 Also, steps are being taken to change the work
9 control process to better manage the backlog of outstanding
10 maintenance and engineering issues in support of operations.

11 Hope Creek is currently in a refueling outage.
12 Significant progress has been made by the licensee to
13 identify problems and assess the need for corrective
14 actions. The new management team has clearly communicated
15 higher performance expectations to the staff. Much still
16 remains to be done.

17 The current schedule projects restart in late
18 February. The NRC plans to conduct a restart readiness
19 assessment team inspection prior to start-up. Longer-term
20 improvements outlined in the licensee's improvement plan
21 will not be completed until mid- to late 1996.

22 In summary, the senior managers determined that
23 the performance at Hope Creek was trending downward and that
24 Public Service Electric and Gas Company should receive a
25 letter requesting a meeting to discuss NRC's concerns.

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1 For the sake of completeness, if I can, I'd like
2 to go into the Salem --

3 COMMISSIONER ROGERS: I have just one question.
4 On the July '95 partial loss of shutdown cooling, how long
5 was the delay before they notified NRC of this event?

6 MR. MARTIN: Ultimately, it would be several
7 weeks.

8 COMMISSIONER ROGERS: Several weeks?

9 MR. MARTIN: Yes.

10 COMMISSIONER ROGERS: How did that notification
11 come about?

12 MR. MARTIN: The problem was identified during the
13 weekend by the shift personnel and treated as another
14 example of a personnel error. The quality assurance
15 organization did a preliminary review of the problems and
16 were concerned that there was much more to this event than
17 had been shared. The acting plant manager was informed of
18 this and did not support the QA organization's conclusions.

19 When the plant manager returned -- he was moving
20 his family to the site; he'd recently been appointed
21 there -- and was apprised of this information, he recognized
22 there was more to it and launched a much more aggressive
23 review of the material.

24 It was three or four days after that when he got
25 the preliminary results of that, he recognized the

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1 significance of it. He called the resident inspector in and
2 informed him.

3 COMMISSIONER ROGERS: Well, that's enough of the
4 detail, but I'm pleased to hear how that evolved. At least
5 it looks as if there's an improvement in the management
6 judgment with respect to how conservative they ought to make
7 their calls.

8 MR. MARTIN: Yes, sir.

9 COMMISSIONER ROGERS: Okay.

10 MR. MARTIN: At this point I would like to discuss
11 the performance of the Salem facility, which is also
12 operated by Public Service Electric and Gas and it is

13 located adjacent to the Hope Creek facility.
14 As you may recall, the Salem facility has never
15 been on the NRC's watch list; nor has it been designated a
16 downward trending facility. However, following the January
17 1995 senior management meeting, NRC's senior managers met
18 the licensee's board of directors on March 21 to communicate
19 our concern for Salem's continuing poor performance and
20 management's apparent inability to resolve the underlying
21 root causes.

22 In April 1995, Public Service Electric and Gas
23 Company announced their issues management and prioritized
24 action plan, which described their program for resolution of
25 long-standing performance concerns. The licensee

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1 subsequently shut down Salem Unit 1 to comply with technical
2 specification requirements in response to degraded emergency
3 switch gear ventilation equipment.

4 In June 1995, Salem Unit 2 was shut down to comply
5 with technical specification requirements in response to
6 degraded residual heat removal minimum flow recirculation
7 valves.

8 In both cases Salem's staff had previously failed
9 to appropriately determine safety equipment operability in
10 response to the initial identification of component failures
11 that had occurred, in this case, in December and January of
12 that year.

13 Subsequently, a \$600,000 civil penalty was levied
14 on Salem as a result of six severity level 3 violations,
15 five of which were associated with the licensee's failure to
16 promptly correct conditions adverse to quality over an
17 extended period of time.

18 On June 9, 1995, Region I issued a confirmatory
19 action letter delineating Public Service Electric and Gas's
20 commitment that must be satisfied prior to the restart of
21 either Salem unit. PSE&G subsequently embarked on a
22 comprehensive program intended to identify and address
23 equipment deficiencies for safety-related systems, systems
24 important to safety, and systems likely to challenge
25 operators and reliable plant operations.

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1 PSE&G also put in place a new management team,
2 replacing 20 of the top 31 senior managers in the nuclear
3 business unit with responsibility for the Salem activities.

4 The new management team has implemented a number
5 of measures to improve the standards of performance of the
6 nuclear business unit staff. Preliminary indications show
7 that they have met with some success in improving the safety
8 focus of the Salem organization.

9 Some of the results of their efforts include a
10 large increase in the number of documented degraded plant
11 conditions, a graded approach to performing root cause
12 determinations, management accountability for the quality
13 and timeliness of root cause determinations, and
14 implementation of a departmental self-assessment program.

15 The system readiness review process, to identify
16 equipment deficiencies and determine which must be addressed
17 prior to restart, is essentially complete, and the results
18 appear to encompass NRC's independent assessment of needed
19 equipment performance improvements.

20 The action plans to address people and process
21 problems have been developed and plant management has begun
22 implementation of the resulting actions.

23 On December 11, 1995, PSE&G presented the Salem
24 restart plan at a public meeting. The Salem restart plan
25 consists of nine individual action plans addressing

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1 performance improvements in the areas of human performance,
2 self-assessment, corrective action, operations, system and
3 equipment reliability, maintenance, work control,
4 engineering and training.

5 The NRC Salem assessment panel will monitor the
6 effectiveness of the licensee's restart activities. Unit 1
7 restart is currently planned for this summer.

8 In summary, the history of performance problems at
9 Salem have been of continuing NRC concern. Salem Units 1
10 and 2 are currently shut down and the licensee is engaged in
11 a comprehensive performance improvement program. PSE&G has
12 also committed to not restart either unit until they are
13 ready and we agree.

14 Any questions?

15 COMMISSIONER ROGERS: I just might comment that
16 the Chairman has recused herself from any actions or
17 considerations involving PSE&G and that's one reason why

18 she's left. She will be back for the other presentations.
19 I just have a question about the decision to
20 include a comment regarding Salem 1 and 2 in the letter to
21 Hope Creek in the sense that it seems as if we're almost
22 creating a new category here of --
23 MR. TAYLOR: That's not the intent.
24 COMMISSIONER ROGERS: I understand but I just
25 wonder whether there is a little question of consistency

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1 with how we deal with licensees on matters of some concern
2 to us as far as future records of the past are concerned,
3 because the record does not show any trending letter ever
4 going to Salem, yet there is mention of Salem in a Hope
5 Creek trending letter. Therefore, what does that say?

6 MR. TAYLOR: We might have issued them a trending
7 letter.

8 COMMISSIONER ROGERS: I would ask you to give some
9 thought to that. I don't know if the general counsel has
10 any comments on it or not but it does seem to me that we
11 want to be very careful about our consistency in approach
12 with respect to communications, particularly when one looks
13 back at the record. And in the record here of plants
14 discussed and trending letters issued, Salem did not ever
15 appear in the trending letters issued, and yet it did appear
16 in -- it was included in a Hope Creek letter.

17 So I'd just ask you to give some thought to
18 consistency here and --

19 MR. TAYLOR: It's somewhat inconsistent.

20 COMMISSIONER ROGERS: There's a little bit of a
21 difference there.

22 I think perhaps we might go on.

23 MR. RUSSELL: I would agree that there's some
24 inconsistency. We did publicly acknowledge the meeting
25 earlier with the board of directors.

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1 COMMISSIONER ROGERS: Yes.

2 MR. RUSSELL: And the actions taken since that
3 meeting, as described by Tim, have been quite positive with
4 respect to addressing the concerns. We have not yet seen
5 plant performance in operation to be able to judge the
6 effectiveness of those, but clearly actions have been taken
7 to address the issues we discussed with the board.

8 In that context, from a factual standpoint
9 regarding plant performance, the circumstances are similar.
10 We are inconsistent in how we have communicated it.

11 MR. TAYLOR: Many of their issues have been
12 material issues, too, I mean material condition of the
13 plant. So the activities that are now on-going, we're
14 looking to correct some of the troubles which have
15 contributed significantly to some of their past events. But
16 the consistency question is --

17 COMMISSIONER ROGERS: And there is the question of
18 the significance of a trending letter. As I recall, Hope
19 Creek's performance a few years ago was really quite good
20 and its overall capacity factor and so on and so forth was
21 quite high.

22 So what we're doing in issuing a trending letter
23 is they're dropping off from that position, and we want to
24 let them know that we're concerned about it, and that's a
25 very proper thing for us to do.

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1 On the other hand, I think we've seen a succession
2 of problems with Salem that goes quite far back, and they
3 have not, maybe because we haven't seen a trend, either up
4 or down, we haven't sent them a trending letter, and yet
5 maybe I think the very fact that they were mentioned in the
6 Hope Creek letter indicates we have a concern about them, an
7 official concern.

8 I do think it again illustrates that these
9 categories of having issued a trending letter, being
10 category 1 or 2 and so on and so forth represents a rather
11 broad range of possibilities and one has to be careful in
12 concluding exactly what the status of a plant is when
13 they're issued a trending letter or put in a category 2
14 because there could be very substantial differences in the
15 status of those plants.

16 I do think, with Salem, that we keep hearing about
17 it; there have been a number of incidents of various kinds
18 that have raised our attention to that plant, and the
19 public's attention to that plant over the last few years.
20 And while that did not generate a trending letter, it
21 certainly did generate interest on our part and concern.

22 So I do think we may have no solution to this

23 ambiguity of what the meaning is of a category or a trending
24 letter, but I do think it is important that the public
25 understand that these are broad categories.

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1 MR. MARTIN: Commissioner, I might add one more
2 thing. As you recognize, we've kind of evolved into these
3 tools we now have. The trending letter was one of the more
4 recent additions.

5 Obviously, for Salem facility, we have had
6 concerns about the performance for some time and we've had
7 four augmented inspection teams in as many years. The SALP
8 early '90s articulated a decline in performance back then.

9 Had we had a trending letter back then, we
10 probably would have used it at that time but at that time
11 you're either on the watch list or you're not, so we used
12 our SALP process to communicate our concerns about decline.

13 When we found ourselves, a number of senior
14 management, discussing are they a problem plant, I have to
15 admit I was probably one of the more optimistic individuals,
16 representing what I had seen at the site, in terms of
17 corrective action by the licensee, and we did not conclude
18 that they were on the problem plant list.

19 However, last January, when we met to discuss the
20 performance of the facility, we were concerned about their
21 inability to move away from the edge and felt that although
22 we couldn't point to a downward trend which would have given
23 us the opportunity then to use the trending letter, we had
24 to get on the record and we had to meet with this board and
25 tell them our concerns.

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1 As a result, instead of a trending letter, we sent
2 a letter on the record indicating we need to speak with the
3 board of directors. The outcome of such a letter is the
4 same as a trending letter in that it announces, "We need to
5 talk to you."

6 We met with them and, to be quite frank, we've had
7 some positive results from that meeting. But today we find
8 ourselves still in a situation where they're not in a box.
9 They're not binned as having previously received a trending
10 letter or not. We felt that we had to correct the record,
11 and we obviously still want to see some additional
12 improvements in that licensee's performance, and so
13 articulated in the letter for completeness. I don't think
14 it would have appeared logical to just list Hope Creek,
15 knowing Salem was shut down next door to it.

16 COMMISSIONER ROGERS: Yes. Well, I think it was
17 well that you did something but I do think maybe it raises a
18 question about whether we might think a little bit about
19 perhaps enlarging that category of letters.

20 I think perhaps we should just move on. The
21 Chairman does know that we will be continuing here, so
22 she'll be back when she's ready to come back.

23 MR. RUSSELL: I will continue with the discussion
24 of program areas and generic issues. The first program area
25 relates broadly to plant performance evaluation.

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1 Let me start by saying that our current processes
2 are not as integrated as I would like. We have discussed
3 with the Commission in the past the systematic assessment of
4 licensee performance process. We've discussed the new
5 inspection initiative associated with the integrated
6 performance assessment program and the team inspections.
7 And we've had activities under way to improve our plant
8 performance reviews which are conducted each six months,
9 which are the principal tool used to allocate resources.

10 We also need to take these three pieces, integrate
11 them together to identify their relations to the senior
12 management assessment overall of plant performance, both in
13 the context of the screening meetings, which I conduct twice
14 a year, in which we review the performance of all facilities
15 in the United States, as well as the processes which are
16 used for the senior management meeting.

17 We are working on two management directives, one
18 which will address the processes and procedures related to
19 the senior management meeting process and, as a parallel
20 activity to the development of that directive, we are also
21 conducting a case study of the historical performance of a
22 number of facilities which have, in the past, been on the
23 watch list and comparing their performance to norms of
24 performance at that time to assess whether there are
25 potential quantitative indicators which may help us in our

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1 assessment process.

2 In addition, we are working on a directive as well
3 as revisions to our inspection procedures to integrate
4 inspection activities with performance assessment activities
5 In the past we have done quite a good job I think
6 of inspecting and finding things, issues, sometimes handled
7 in isolation, and we have not been as effective at

8 understanding what that means and applying it.
9 This is the area that we have spent the most time
10 on over the last 18 months or so, since we have discussed it
11 at a number of senior management meetings, and March of '95
12 I issued guidance to the regions which basically identified
13 the types of factual information to be reviewed and
14 considered in the semiannual plant performance review
15 processes.

16 These were inspection reports, licensee event
17 reports, the results of licensee self-assessments,
18 enforcement actions, et cetera.

19 We consciously decided not to constrain the
20 assessment process. That is, here is the information to be
21 reviewed and allow the region some flexibility in trying
22 different approaches to see what works and what doesn't
23 work.

24 We have done that now, and we were to meet prior
25 to the senior management meeting to review the results and

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1 look at a standardized process and program guidance as to
2 how these should be conducted. Unfortunately, the blizzard
3 delayed that. We are now going to be meeting tomorrow.

4 But let me say that there have been some
5 significant successes. We discussed a number of facilities
6 in our meeting which I think the insights from the screening
7 meetings and from the revised process provided us insights
8 and we will be redirecting some inspection resources to
9 those facilities.

10 I think particularly useful has been the process
11 of a site issues matrix, as that is being used in one of the
12 regions, where you collect with time the technical issues
13 that come up, whether they come from an inspection report, a
14 licensee event report, et cetera, where they relate to
15 either hardware, performance problems, or people performance
16 problems. This information is then kept current and so that
17 you have the factual information which the NRC is reviewing,
18 from which it draws its conclusions about performance.

19 We have also seen different approaches for
20 integrating that information. Some regions have tried using
21 a focus group. That is with a few inspectors focusing on
22 exchanging information and we have tried processes of
23 instead of issuing individual inspection reports in
24 functional areas or silos to go to an integrated report for
25 a shorter period of time to force the integration of

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1 information.

2 We have not completed that review process. We
3 expect to do that starting tomorrow and then issue guidance,
4 but our objective is to identify trends in performance
5 earlier, even if it means that we err on the side of
6 identifying a problem -- at worst, all we'll do is spend
7 some additional resources and confirm that the problem is
8 not there.

9 On the other hand, if we are not conservative in
10 making judgments about performance and we miss a trend, then
11 we have the situation where performance may go on and
12 afterward we look back and look for a tool that we could
13 have used to have identified it, so this is a major area of
14 emphasis and performance assessment underpins how we use our
15 resources for the entire program.

16 This is an important element.

17 CHAIRMAN JACKSON: Let me just ask a question and
18 sort of make a comment implicitly.

19 I realize the desire to allow the different
20 regions to try out different things, but it seems to me that
21 at a certain point you have to iterate to a methodology that
22 allows you to assure some consistency in plant evaluations
23 across regions or can at least justify the broadness of the
24 categories into which you place different plants in
25 different regions and in the process identify the

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1 boundaries.

2 If you don't, the process is not going to be one
3 that will at least on the outside be viewed as credible, and
4 so I think that as you are trying out these different
5 methodologies for doing this total performance assessment

6 that you have a process that is structured to iterate to
7 having consistency as much as possible across the regions
8 and lays out what the broad boundaries are for the various
9 categories in which you place plants so that there isn't an
10 apparent inconsistency.

11 MR. RUSSELL: We agree with that. We did discuss
12 the need for that and we believe the time has come to now
13 provide potentially some more detailed guidance on the
14 assessment process and the tools to be used and also the
15 criteria for the various types of categorization and so we
16 are going to be working on that in the near term, starting
17 with tomorrow's meeting and I am pleased we had this
18 discussion because it is a nice kickoff for tomorrow's
19 meeting.

20 CHAIRMAN JACKSON: Let me follow up with
21 something. There was a memo that the Commission got where
22 the Staff identified the following things -- a high rate of
23 operational events, inadequate engineering and technical
24 support; and management ineffectiveness -- as dominant
25 characteristics which have occurred with reasonable

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1 consistency among the plants that have been placed on the
2 problem plant list.

3 To what extent do you have objective data to
4 support these observations, and have you done that -- some
5 kind of a categorization with respect to these observations?

6 MR. RUSSELL: We have done some earlier studies
7 where we have looked at plants that were previously on the
8 problem plant list and what were the characteristics of the
9 problems from SALP reports, et cetera.

10 We have not done it to a level of detail that we
11 are now anticipating conducting.

12 From the standpoint of looking at what has been
13 the history, for example, of licensee event reports
14 involving performance problems and whose performance -- is
15 it licensed operators, equipment operators or others --
16 procedural problems, et cetera, so we are jointly, between
17 NRR and AEOD, looking back at that factual data to see if we
18 can't quantify this better.

19 We have also started looking at some cases where
20 we have some norms and then it appears that in some areas an
21 individual plant may be an outlier as it relates to events
22 during shutdown, et cetera, so these are some of the
23 indicators that are in our current system, performance
24 indicators, and we are going to go back and relook at some
25 of that historical data to see if we can't quantify it, to

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1 see if there are some trends.

2 The easiest one to use I think is reactor trips
3 and significant events, clearly where they are complicated
4 with problems.

5 That is probably the indicator that caused us to
6 start looking much harder, for example, at Hope Creek and
7 what was happening in the '94 timeframe, so we are looking
8 to see if based upon particular events occurring or the
9 combination of events individually which are not significant
10 but in collection tells us we ought to look harder to see if
11 that might lead us to identify a trend sooner as it relates
12 to the volume of data that does come in.

13 CHAIRMAN JACKSON: Well, that is one kind, but
14 there's this issue of inadequate engineering and technical
15 support as well as management ineffectiveness, and if these
16 are dominant characteristics that have shown up with some
17 degree of consistency with problem plant list plants, if you
18 are gathering data, should you not try to make some either
19 historical look or going forward to look to see to what
20 extent there is some binning that occurs for plants that
21 either historically have been on the watch list, problem
22 plant list, or going forward to see what happens.

23 Again, if these are criteria that de facto get
24 folded into a total performance assessment, then you need to
25 see to what extent the plants that have been of most concern

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1 have these as dominant characteristics.

2 MR. MILLER: Chairman, if I could just remark, I
3 think when it comes to individual plant assessments,
4 certainly if we are making those kinds of characterizations
5 I think it's always the case I believe that we will give the
6 examples -- I think you may be talking broader but certainly
7 I feel it is important to understand that as we are doing
8 SALP reports or inspection reports when we make
9 characterizations like that, it is our practice to provide
10 the evidence, if you will, the events, the hardware failures

11 and the like, that would support those kinds of
12 characterizations.

13 CHAIRMAN JACKSON: Okay. Well, let me just try to
14 make sure you understand where I am.

15 You know, one could argue that, you know, except
16 for some small frequency that any hardware failure is a
17 human factors issue, and so when you talk about engineering
18 and technical support and you talk about management
19 effectiveness, those are human factors issues. All I am
20 saying is that you can't just look at the equipment failures
21 because apparently you are not anyway when you do your
22 senior management evaluation process, and so I am just
23 trying to push you as you are looking for consistency as
24 well as taking a historical look at these plants that you
25 think about it in terms of a template, particularly if you

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1 are looking for trends, but I mean it's your job.

2 MR. RUSSELL: The issue with respect to trends and
3 engineering in particular is going to be quite difficult,
4 because we have only recently within the last five years or
5 so really modified our core inspection programs to start
6 focusing on engineering with a refocusing of the SALP
7 process, and usually they are case specific. That is, you
8 see cases where corrective actions were not sufficient and
9 it had in its root causes engineering issues.

10 We are also looking at engineering in the context
11 of what is the licensing basis of the plant and issues I'll
12 talk about in just a moment with respect to the FSAR and
13 design basis information.

14 Those core modules were revised only a few years
15 ago, so whether we have sufficient data to go back and look,
16 it may be that we weren't collecting the data sufficiently
17 with the exception of specific examples to illustrate
18 concerns which we found only after the fact through root
19 cause analysis. So I think this is a fruitful area because
20 it may indicate that we need to revise our information
21 gathering on the front end as it relates to engineering
22 types of inspections, understanding of the design basis,
23 operator work-arounds become an issue of the last year or
24 two.

25 Prior to that, if it was concluded operable but

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1 you were substituting human performance for design, that
2 wasn't seen as an engineering material problem, so these are
3 issues that we have come to recognize need focus. The
4 objective of the study that we are going to undertake is to
5 look at those and then see where that folds back into
6 potential modifications to the inspection program so that we
7 can collect the data to potentially see the trends, to pick
8 them up before they degrade to the point where it is obvious
9 that you have an engineering problem at the facility, so
10 that is the objective. We have some work to do to get to
11 that point.

12 Let me shift now to generic issues.

13 The first issue I would like to discuss is a
14 short-term inspection activity which we'll be initiating
15 tomorrow. The instructions have gone out to the field. It
16 relates to the adequacy of the updated final safety analysis
17 reports of the facilities and the 5059 change process.

18 By way of background, issues associated with
19 refueling practices at Millstone Unit 1, have indicated
20 concerns with respect to conformance to the final safety
21 analysis report, not only as it relates to conduct of
22 refueling activities but, as Tim mentioned, a request that
23 the company look broadly at Unit 1 operations and provide a
24 response that would give me confidence that they are in fact
25 conducting activities consistent with 5059, which

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1 specifically references the FSAR.

2 But it is not limited to Millstone. We have had
3 other facilities where in the course of engineering
4 inspections we have found differences between the design
5 basis documentation and procedures and what is in the FSAR.

6 As a result, we have embarked upon a two-part
7 approach to determine the extent of the problem.

8 The first is to look specifically at spent fuel
9 pool cooling systems and refueling practices, and we are in
10 the process now of reconstituting the licensing basis for
11 those systems for each of the operating reactors.

12 This is going on at Headquarters, using technical
13 resources and project manager resources. We have also
14 requested that the senior residents or the regional staffs
15 forward to us the current procedures that are used at the

16 facilities as it relates to operation of fuel pool cooling
17 systems and refueling practices, and then we are going to do
18 a review of those procedures against the licensing basis to
19 identify areas for specific referral back to the region for
20 follow-up.

21 We have prioritized, prior to the review to
22 complete this prioritizing activity prior to the spring
23 refueling outages. So, as we know what the outage schedules
24 are, we have given those plants priority.

25 The second part of the approach is a broad scope

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1 inspection activity that, for each inspection conducted over
2 the next 60 days, the first activity in preparing to conduct
3 that inspection by the inspector, whether it be a resident
4 inspector or a region-based inspector or a headquarters
5 inspector will be to review the relevant inspections of the
6 updated FSAR to understand what are, in fact, the
7 commitments and requirements in that area and then to
8 conduct the inspection and make judgments as to whether they
9 are or are not being conducted consistent with the updated
10 FSAR.

11 CHAIRMAN JACKSON: How resource intensive is this
12 for you?

13 MR. RUSSELL: This should be, depending upon the
14 ease of access in getting to the FSAR, it should be
15 background information to be used prior to the inspection.
16 The inspection activity, that is what activity is to be
17 conducted, will not change. So if you are going to be doing
18 an engineering inspection in a particular area, you would
19 read that portion of the FSAR for the description of the
20 system and then you would conduct your inspection in the
21 normal manner of looking at the procedures and other things
22 on site.

23 So there will be some preparation time prior to,
24 but this will not shift the projection focus. Rather, it is
25 to ensure we gather information as to whether we have a

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1 broad-based problem or whether this is a problem associated
2 with fuel pool cooling shutdown events, et cetera.

3 Each inspection report will have a separate
4 section in the inspection report which will document the
5 results of the findings. That is, having reviewed the FSAR
6 and making a judgment as to whether activities were
7 conducted consistent with it or not.

8 Now, it may be that the current version of the
9 FSAR is not consistent with the activities but they have a
10 review that has been completed under 10 CFR 5059 that
11 justifies either a change in the design or a change in the
12 procedure and our requirements only require that be updated
13 each refueling cycle. So there may be some case where what
14 he reads, what is in our library or the models may be
15 different from the activity he observes and he may have to
16 go that next step to determine if there is a 5059 that
17 justifies that difference.

18 We will then take the information from those
19 inspections and from the results of the fuel pool cooling
20 system refueling practices reviews and fold that into the
21 ongoing action plan that we are developing related to 5059
22 and we will make judgments as to whether we need to modify
23 our inspection practices or what other steps need to be
24 completed. Our target for doing that is by early summer, to
25 have that activity completed both from the standpoint of the

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1 planning process and then be into implementation.

2 CHAIRMAN JACKSON: Might you consider a way, if it
3 not unduly resource intensive to propagate forward something
4 like the second phase where as part of the inspection
5 preparation --

6 MR. RUSSELL: Clearly, if we identify that there
7 are significant disconnects between what the FSAR says and
8 the activities that are being observed, we will continue to
9 follow up on those in the context of potential enforcement
10 acts and other activities and we may be in the mode of
11 revising our inspection guidance first.

12 CHAIRMAN JACKSON: That is what I am really
13 talking about.

14 MR. RUSSELL: And not waiting for the action plan,
15 so it is going to be a function of what we learn over the
16 next two or three months.

17 The next issue that I would like to discuss is the
18 generic issue related to steam generator performance.

19 Our discussions focused principally on experience
20 from the fall 1995 outages. That experience included

21 additional cases of circumferential cracking of steam
22 generator tubes, both increases in the numbers of tubes at
23 some plants up to a few thousand tubes, for example, at one
24 Commonwealth facility, as well as the number of facilities
25 that are finding some indications of circumferential

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1 cracking.

2 We also had a few isolated cases of free span
3 cracking. That is, not within the support plates or down at
4 the tube sheet region.

5 With the senior managers, we discussed the safety
6 significance of these findings as it relates to margins that
7 are required for tube integrity. We discussed the
8 potentials for containment bypass, the accident analysis.
9 We did this in the context of an information exchange such
10 that the regional administrators were up to speed on what
11 the issues are that we are dealing with.

12 We also described a process that we are going to
13 follow and we are going to start this with a meeting, a
14 three-day workshop, closed, internal to NRC for some of the
15 middle managers as well as the inspectors that are involved
16 in followup of these activities. It will be conducted for a
17 three-day period and it will include some hands-on
18 activities at the NTE research center and this has been
19 coordinated with EPRI.

20 We also discussed the approach to rulemaking and
21 where we stand with the rulemaking and how performance-
22 based approach may be used.

23 The next area that we discussed was related to the
24 PRA action plan and the staff's activities to accelerate its
25 schedule related to the PRA action plan in the areas of

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1 developing a standard review plan for use of a PRA in
2 meeting regulatory requirements whether it be narrow on a
3 relative basis or it be a broad application as well as
4 completing and issuing a regulatory guide.

5 We also had a significant discussion amongst
6 ourselves that relates to the policy statement and a
7 reemphasis that probabilistic risk assessment techniques are
8 not to be used to justify not meeting requirements. In
9 particular, rules, regulations and other regulatory
10 requirements. So use of a PRA to identify that something is
11 not safety significant is not a basis for failure to take
12 action to comply with the rules and regulations. It may
13 provide an insight that can be used to change the
14 requirement but the requirement is to be followed until such
15 time as it is changed.

16 We spent quite a bit of time amongst ourselves
17 discussing both specific cases and examples that have
18 occurred and there are some in each region and so we are
19 reemphasizing that at this meeting that PRA is to be used to
20 the extent justified. We are accelerating our internal
21 procedures to provide guidance for those uses but, in the
22 short term, it should not be used as a tool to justify not
23 complying with existing regulatory requirements.

24 Those were the significant issues in the reactor
25 area that we discussed. There is one that is a joint effort

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1 between NMSS and NRR related to dry cast storage at reactor
2 facilities and unless there are questions on the items I
3 have discussed, I propose to pass it to Carl.

4 CHAIRMAN JACKSON: Commissioner Rogers, do you
5 have any questions?

6 COMMISSIONER ROGERS: Well, I did have a couple of
7 comments on some things and maybe this is a good time to do
8 it rather than at the very end.

9 That is, coming back to the FSAR familiarity with
10 FSARs, a couple of questions.

11 What you indicated was that if you are going to
12 have an inspection, that those areas that are going to be
13 subject to inspection would be those parts of the FSAR which
14 are read by the people participating in the inspection.

15 That is fine but it does seem to me that at some point, in
16 particular resident inspector and the project managers,
17 really ought to be familiar with the entire FSAR and what
18 mechanisms do you have for ultimately seeing that that is in
19 fact the case?

20 MR. RUSSELL: Right now, I would characterize that
21 that is one of the weaknesses that we have in our process,
22 that we have not emphasized the FSAR except through the
23 reviews that are done under 5059 and then as generally to
24 look at changes that have been made to see if they are
25 adequately captured in the FSAR for the updates.

1 It is not the reverse process. That is, look at
2 the FSAR and determine whether the activities are currently
3 being conducted consistent with that and whether the design
4 is consistent.

5 COMMISSIONER ROGERS: Now, I take it that the tech
6 specs are items which the resident inspectors and the
7 project managers are expected to be and are thoroughly
8 familiar with; is that correct?

9 MR. RUSSELL: Absolutely. The tech specs and the
10 bases to the tech specs, yes.

11 COMMISSIONER ROGERS: So the FSAR has sort of off
12 on the side apparently and now we are coming back to that as
13 an additional important document to be familiar with.

14 MR. TAYLOR: I agree. And, Commissioner, I would
15 add one other thing. We recently found an instance where
16 there was a constraint written into the license, not into
17 the tech specs, that was missed by both the licensee and our
18 Staff and there is another thing that we need to make sure
19 that they are aware of the suite of regulatory requirements.

20 CHAIRMAN JACKSON: You talked about the short
21 term -- excuse me a second -- actions. The question is, are
22 you going to be addressing the broader FSAR issue in the
23 long term?

24 MR. RUSSELL: Yes. In my view, I think there are
25 a number of things that we need to do. Clearly, we are

1 going to be changing some of our inspection guidance and
2 this is, particularly in hindsight, if we look back to the
3 rulemaking that we just completed on tech specs in 5036, we
4 said it is not necessary for everything to be in the tech
5 specs. There are other regulatorily required documents
6 which control operations and they include the FSAR, they
7 include the quality insurance plan which is governed by
8 license condition. They include the physical security plan.

9 While some of those we use routinely in our
10 inspection activities and our procedures call for those to
11 be reviewed, we did not have broad guidance as it relates to
12 use of the FSAR. That was generally used as a licensing
13 document, kept up to date and current as a reference, but we
14 are re-looking at that area. I expect that there will be a
15 number of long-term actions coming out of this.

16 COMMISSIONER ROGERS: It really comes back to this
17 whole question that we discussed some time ago of the
18 current licensing basis of the plant, which really is the
19 totality of these things and maybe it is time to go back and
20 look to see where that stands, you know, what the current
21 licensing, the completeness, the availability and the
22 familiarity of everybody with what really is the current
23 licensing basis of the plant. I know it is a tricky
24 question because there are lots of little bits and pieces of
25 things that go way back in history. But, in fact, that is

1 really what we rely on.

2 CHAIRMAN JACKSON: Well, it actually has import
3 for something else and that is that before I came here, the
4 Commission had put into place Part 54, which is the license
5 renewal regulation. And it strikes me that in order for any
6 Commission to be able to consider the renewal of the
7 license, one has to understand the current licensing basis
8 of any operating reactors.

9 So it is something that in the end is going to
10 have to be done one way or the other but, more importantly,
11 in the context of our inspection programs. I think it is
12 interesting that the inspectors -- that is new
13 information -- are not familiar with the FSARs as they are
14 with the tech specs.

15 MR. EBNETER: There is absolutely no excuse for
16 inspectors not to use FSARs. We have taught this in our
17 training courses in the past, so they should use it.

18 The reason they don't use it is sitting right here
19 at the table. The regional administrators and the regional
20 managers aren't enforcing it. That is where the problem is.

21 The FSAR is a document required by the
22 regulations. It is the reference, the baseline reference to
23 the plant. It is where we go, fundamentally, to get this
24 information to inspections.

25 The inconsistency is, as I said, right here and

1 that is where we have to work. All the guidance in the
2 world is not going to solve this problem if the managers
3 don't force the consistency.

4 CHAIRMAN JACKSON: So that is good, thank you.

5 I am glad to hear you say that, but more than that
6 if you are saying it, is that then a commitment?

7 MR. EBNETER: Absolutely and, you know, Bill is
8 going to help us but clearly it has to come from the
9 regions. Inspectors work for us and you know I have talked
10 about -- we used to teach this in our course. We taught the
11 regulations, the FSAR is the implementation of that, with
12 other things, with those commitments that you talked about
13 in there and that is the basis for the inspection planning.

14 Now, I must tell you it is probably not reasonable
15 to expect the senior resident to know everything in the
16 FSAR. The current FSARs take up two volumes on a shelf.
17 But, clearly, he ought to have that available and he should
18 be using it when he is doing work that is relevant to the
19 inspection process.

20 MR. MILLER: I think also the broad inspections
21 that we do of engineering and technical support, for
22 example, ostensibly you could make an argument that one
23 would have to know the whole FSAR to do an inspection like
24 that. The thing that I have been emphasizing recently is
25 that you have to be smart about it and focus on those areas

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1 that -- you are always going to be focusing on certain areas
2 even if you are doing a broad inspection and you have to at
3 least be aware of those sections and it is a challenge for
4 these broad inspections but I agree with Stu, I think it is
5 something we have to reemphasize and I am not sure a whole
6 lot of additional guidance is --

7 COMMISSIONER ROGERS: And probably it is very
8 important to look at the exceptions, you know. Look within
9 an FSAR for a particular plant, what deviates from what
10 might be the norm at every other plant. This turned up with
11 the Millstone situation there and illustrated that.

12 MR. EBNETER: What has to be used in conjunction
13 with this FSAR is the agency's SER which is what accepts the
14 FSAR and they have to be used in conjunction. We need to do
15 some work in the regions and that is clear. We will use
16 Bill's guidance.

17 CHAIRMAN JACKSON: So when might we expect to be
18 able to follow up, to see where things are with respect to
19 this?

20 MR. RUSSELL: Right now, the short-term actions
21 are to complete the inspection activities over the next 60
22 days, broad-based. Those reports are typically issued 30
23 days following the completion of the inspection so that
24 would put us out into probably the May time frame.

25 So I am hoping that we will have both an action

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1 plan and a clear understanding of extent of problem so that
2 we can base the actions we take upon known problems and
3 discuss this at our next senior management meeting. So I am
4 looking at having essentially the bulk of the work and
5 information gathering completed between the two senior
6 management meetings.

7 CHAIRMAN JACKSON: Let me speak to Mr. Taylor
8 because this involves both NRR in house and the regions.

9 Mr. Taylor, are you willing to tell me when we
10 might expect to be able to have another discussion because I
11 am going to schedule it as an open Commission meeting.

12 MR. TAYLOR: I would suggest May. That sounds
13 reasonable. We will be prepared in May.

14 CHAIRMAN JACKSON: All right, so then I will
15 schedule this as an open Commission meeting for us to talk
16 about these factors.

17 MR. TAYLOR: One footnote. The FSARs have varied
18 as the plants have been licensed. That is important.
19 Earlier plants had much, for various reasons, and it was
20 only about 10 years ago that the Commission passed a rule
21 requiring an annual update of the FSARs by licensees because
22 things are modified, are changed. I think it was about 10
23 years ago, roughly, in my memory. At that time, FSARs then
24 were given considerably more stature through the regulatory
25 end.

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1 But it is required. I believe it is annual.

2 MR. RUSSELL: At least each refueling outage to be
3 completed within so many --

4 CHAIRMAN JACKSON: I ask that whatever changes or
5 actions we would put into place will reference the reality
6 of what is and then that is what we will expect to hear
7 about.

8 COMMISSIONER ROGERS: Yes, and just one other
9 question before we move on to the cask and that involves the

10 steam generator situation, cracking situation.
11 You are going to have an internal meeting on this.
12 I hope that somehow that fully includes the research people
13 involved with questions here because I know these are
14 difficult issues and NRR folks are grappling with them in
15 one way, maybe the research people are grappling with them
16 in a different way.
17 It does seem to me very important that you finally
18 come to something where pretty much you are all in agreement
19 if there is any area in which initially you are starting out
20 with some divergence.
21 MR. RUSSELL: They are involved and the issue that
22 I am most concerned about is what I would characterize are
23 criteria associated with repair standards for
24 circumferential cracking. We currently don't have criteria
25 for that at this point in time and when detected and

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1 confirmed, the tubes are removed from service or repaired.
2 That is a conservative but appropriate way to act but it is
3 causing us to potentially get into mid-cycle inspections.
4 That is, if you find significant numbers of
5 circumferential cracks, even though you repair the ones you
6 know about, you are then into, well, what others are there
7 that we have not detected yet and how long do you operate
8 until the next inspection. And we have processes to go
9 through to promulgate new requirements and that is going to
10 take some time.

11 So the spring and fall outages of '96 are going to
12 be very reactionary. So it is important that we communicate
13 what is going on, until such time as we get processes in
14 place. So that is why I chose that issue to highlight
15 amongst the regional administrators and why we are starting
16 the communication at the inspector middle manager level.

17 CHAIRMAN JACKSON: I think it is time for the
18 Dr. Paperiello show.

19 [Laughter.]

20 DR. PAPERIELLO: Agency managers were briefed on
21 the status of the NRR/NMSS dry cask storage action plan.
22 The purpose of the action plan is to enhance NRC oversight
23 of dry cask spent fuel storage and ensure utility users
24 understand, accept and implement their responsibilities
25 under 10 CFR 72 as either specific or general licensees.

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1 Lead office responsibilities for various
2 activities under the plan have been delineated with NRR
3 being responsible for in-plant activities while NMSS is
4 responsible for activities at independent spent fuel storage
5 installations, vendor activities, the standard review plan
6 for cask certification and the cask inspection plan and
7 procedures.

8 Since the senior management meeting, final
9 inspection procedures have been issued. Some examples of
10 office lead responsibilities include, for NRR, heavy load
11 control and crane issues, seismic requirements for storage
12 pads, cask loading and unloading and inspection of reactor
13 site activities. For NMSS, the lead activities are
14 independent spent fuel storage installation licensing and
15 inspection as well as the standard review plan for such
16 licensing, the cask design and safety reviews, cask testing
17 requirements such as hydrostatic testing, safeguards
18 concerns, Part 72 reporting requirements and the vendor and
19 fabricator inspections as well as the inspection procedures
20 for vendors. That procedure isn't final but it will be
21 revised based on our experiences by mid-'96.

22 Both NRR and NMSS share responsibility for
23 providing guidance on sort of the integrated 5059 and 7248
24 change process. NRR and NMSS plan to discuss dry cask
25 issues at the regulatory information conference in April of

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1 this year and several weeks later, NMSS will conduct a
2 workshop in this area.

3 Since the senior management meeting, NMSS has
4 developed a plan for enhanced staff involvement with
5 utilities prior to initial cask fabrication by the vendor
6 and storage facility operations by the utility. This is to
7 ensure plans are in place for the utility to assure the
8 proper fabrication of the cask, utility assurance of proper
9 Q.A. activities by vendors and fabricators and development
10 of appropriate procedures for testing and use.

11 Through this whole process, there is continual
12 staff discussions between NRR and NMSS and about every six
13 weeks Bill Russell and I meet to review the action plan and
14 we provide periodic written reports to Mr. Taylor on the

15 status, the last one being earlier -- January 25.
16 Thank you.
17 CHAIRMAN JACKSON: Thank you.
18 I just -- my main comment is I think you are
19 moving in the right direction. Make sure that when you are
20 looking at procedures that you are looking at how you off
21 load as well as how you load a cask.

22 DR. PAPERIELLO: We are not only looking at that
23 but we are going -- we plan on going back and looking at
24 people who have -- we haven't looked at it in recent years
25 but people who have existing installations that we have not

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1 been involved with recently, so we are going to look at
2 everybody.

3 CHAIRMAN JACKSON: Commissioner Rogers, do you
4 have comments?

5 COMMISSIONER ROGERS: Nothing on this. I do have
6 a general question.

7 CHAIRMAN JACKSON: Why don't you ask it.

8 COMMISSIONER ROGERS: Okay, with respect to power
9 reactors, have you any sense about where the industry is
10 going? I think in the last few years we have more or less
11 had the feeling that things were getting better little by
12 little, year by year in performance and general ability of
13 licensees to do a good job in running nuclear power plants.

14 On the other hand, also during that time, the
15 industry has started to move into a state of turmoil with
16 respect to its economic future in some ways. I wonder
17 whether you are seeing any indications at all, for one
18 reason or another, you may not even be able to tell what
19 reasons, whether there is any slackening off in the quality
20 of performance management, operations, et cetera, in our
21 nuclear plant licensees.

22 MR. RUSSELL: At this point in time, we have not
23 really done any comprehensive reviews of that issue. What
24 we are focusing on is observing and monitoring performance
25 of the licensees. We have identified recently some

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1 facilities whose performance is of concern to the regional
2 administrators and myself. They have not yet come to the
3 level where we would be discussing those facilities at
4 senior management meetings.

5 On the other hand, we have more facilities that
6 are performing better. So the only statistic I can use to
7 relate to this is how we expend our resources based on
8 these. The difference between resource expenditure at the
9 top quartile performers and the second quartile is
10 relatively small, 20 percent or so, for the median. Once
11 you go down to the third quartile, you are seeing about a
12 doubling of the inspection resources.

13 When you get into the bottom quartile, that is
14 where the significant resources are being expended and the
15 bottom quartile is getting 40 percent of the total agency
16 resources. So we are generally still seeing good
17 performance amongst the upper half of all the facilities and
18 it is not requiring us to spend significant resources on
19 them.

20 There are, however, facilities which are not
21 performing as well and our inspection resources are going
22 up. But whether we can correlate that to overall trends, we
23 are seeing -- I think if Ed were here, Ed Jordan that is, he
24 would characterize that most of the indicators have pretty
25 flattened out. That is, when you look at SCRAMs and other

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1 objective data that we use. That is on average.

2 Unfortunately, some plants that previously were
3 considered to be quite good performers are now coming on the
4 radar horizon from the standpoint that the performance is
5 not being sustained. So what is causing that we are not
6 sure. We are starting dialogue with those licensees earlier
7 than we ever have in the past and I think that is one of the
8 real successes of the October '95 screening meetings. We
9 have started that action now before we get to the point of
10 them being discussed at a senior management meeting.

11 COMMISSIONER ROGERS: I think it is a time to be
12 sensitive to this possibility.

13 Thank you.

14 CHAIRMAN JACKSON: Yes, it takes an integrated
15 team and an integrated approach to operating facilities just
16 as we take an integrated look at the facilities.

17 Before I close, I would like to make a couple of
18 comments going back to a comment you made when you were
19 talking about PRA. And that is true, I would like to

20 reinforce that the regulatory environment that is in place
21 is the regulatory environment that is in place and it is the
22 one that we live with even as we may be changing our
23 regulations and you know, and I have communicated it to you,
24 how strongly I feel about not regulating by exemption.

25 Having said that, we have a responsibility, of
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1 course, to lay out what our expectations are in a clear way
2 as well as to change them as appropriate if they don't make
3 sense, which is why the staff has been asked to accelerate
4 the development of a standard review plan and other things
5 in the PRA area so that we don't use that as an excuse not
6 to make changes when change is appropriate.

7 However, one doesn't regulate by exemption. So I
8 just make that point.

9 Let me thank you for a very informative briefing
10 this morning. In closing, I would like to follow up on a
11 previous Commission request that the staff clearly
12 communicate both to the industries that we regulate and to
13 the public the overall evaluation process we use,
14 particularly the plant evaluation process. And I know as
15 part of this effort that staff has drafted, an NRC
16 management directive on evaluating the performance of
17 nuclear power reactor licensees which identifies the
18 interrelationships of the existing processes that the NRC
19 has been using to assess licensee performance.

20 However, the senior management meeting process
21 itself is currently not described in agency procedures or
22 policy documents so I believe it is important to complete
23 the drafting of another management directive on the senior
24 management meeting process which, in completing, the staff
25 should ensure that it is as explicit as possible about NRC

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1 assumptions and evaluations for putting a plant particularly
2 on the watch list or, as discussed earlier, sending a
3 trending letter which makes use, as much as possible, of
4 objective data which, as you say, you are still in the
5 process of gathering, and which identifies appropriate
6 actions to be taken when plants remain on the NRC problem
7 plant list for an extended period of time.

8 If there are no further comments, we are
9 adjourned.

10 [Whereupon, at 12:00 noon, the briefing was
11 concluded.]

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