

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON REMAINING ISSUES RELATED  
TO PROPOSED RESTART OF MILLSTONE UNIT 2

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PUBLIC MEETING

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Nuclear Regulatory Commission  
Commissioners' Conference Room  
11555 Rockville Pike  
Rockville, Maryland  
Wednesday, April 14, 1999

The Commission met in open session, pursuant to notice, at 11:12 a.m., the Honorable SHIRLEY A. JACKSON, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

- SHIRLEY A. JACKSON, Chairman of the Commission
- JEFFREY S. MERRIFIELD, Member of the Commission
- NILS J. DIAZ, Member of the Commission
- GRETA J. DICUS, Member of the Commission

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

LICENSEE:

- BRUCE KENYON, President & CEO, NNECo.
- MIKE MORRIS, Chairman, President & CEO, Northeast Utilities
- MIKE BROTHERS, V.P. Nuclear Operations
- LEE OLIVIER, Sr. V.P. & Chief Nuclear Officer, Millstone Station
- RAY NECCI, V.P. Nuclear Oversight & Regulatory Affairs
- MARTIN BOWLING, Recovery Officer
- JOHN CARLIN, Vice President, Human Services
- DAVE AMERINE, Vice President, Engineering Services

PARSONS:

- ERIC BLOCHER, Deputy Project Director
- DAN CURRY, Project Director

OTHER SPEAKERS:

- JOHN (BILL) SHEEHAN, Nuclear Energy Advisory Council
- THOMAS SHERIDAN, First Selectman, Town of Waterford
- ROBERT BARRON, Millstone Ad-Hoc Employee Group
- RONALD McKEOWN, Friends of a Safe Millstone
- TINA GUGLIELMO, Standing for Truth About Radiation (STAR)

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

PARSONS: [Continued]

- SUSAN PERRY-LUXTON, Citizen Regulatory Commission
- JOSEPH BESADE, Fish Unlimited
- THOMAS MASTRIANNA

STAFF:

- KAREN D. CYR, General Counsel
- ANNETTE L. VIETTI-COOK, Assistant Secretary

9 SAMUEL COLLINS, Director, NRR  
10 WILLIAM TRAVERS, EDO  
11 EUGENE IMBRO, Chief, Mechanical and Civil  
12 Engineering Br., NRR  
13 HUBERT MILLER, Region I Administrator  
14 WILLIAM DEAN, Chief, Inspection Program Br., NRR  
15 WAYNE LANNING, Director, Div. of Reactor Safety,  
16 Region I  
17 TOM ESSICK  
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P R O C E E D I N G S

[11:12 a.m.]

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3 CHAIRMAN JACKSON: Good morning. I'm pleased to  
4 welcome all of you here today for a briefing of the  
5 Commission on the remaining issues related to the restart of  
6 the Millstone Unit 2. The Commission will be briefed by  
7 Northeast Nuclear Energy Company, Parsons Power Group, Inc.,  
8 which is the independent contractor for the Independent  
9 Corrective Action Verification Program at Millstone Unit 2,  
10 selected public interest groups, a local elected official,  
11 and the NRC staff.

12 Due to the duration of our meeting on Millstone  
13 today, a lunch break has been scheduled for between 12:30  
14 p.m. and 2 p.m. I anticipate, and this is our intent, that  
15 Northeast Nuclear Energy Company and Parsons Power Group  
16 will complete their presentations before the break, and I  
17 will adjust the schedule accordingly.

18 When we return from the break, we will hear from  
19 the Nuclear Energy Advisory Council, First Selectman Thomas  
20 Sheridan, the Millstone Ad Hoc Employee Group, Standing for  
21 the Truth About Radiation, the Citizens Regulatory  
22 Commission, Fish Unlimited, Friends of a Safe Millstone, and  
23 conclude with a presentation by the NRC staff.

24 Commissioner Dicus will be joining us later in the  
25 meeting. She had an unavoidable schedule conflict. But for

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1 the record, she has said that she will make her decisions on  
2 the restart of Millstone on the basis of the full record and  
3 not based just on what she's here to hear.

4 Now I would like to review the background for our  
5 meeting -- Commissioner McGaffigan may or may not be able to  
6 get here today.

7 Now I would like to review the background for our  
8 meeting on Millstone Unit 2 restart. The three Millstone  
9 units were shut down by Northeast Nuclear Energy Company in  
10 late 1995 and early 1996 because of design and operational  
11 issues. All three of the Millstone units were placed on the  
12 NRC's watch list in January 1996 and categorized as Category  
13 3 plants in June 1996. As a result of that Category 3  
14 rating, Commission approval is required prior to the restart  
15 of each of the units.

16 In June 1998 the Commission concurred with the NRC  
17 staff conclusion that Northeast Nuclear Energy Company had  
18 taken appropriate corrective actions to support the restart

19 of Unit 3.

20 In addition to the placement of the facilities on  
21 the NRC watch list, the Commission issued two orders to  
22 Northeast Nuclear Energy Company. The first involved the  
23 development of a comprehensive plan for resolving the  
24 Millstone Station employee safety concerns and requiring  
25 independent third-party oversight of implementation of this

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1 plan. That was actually the second order. And the other  
2 order involved the independent verification of the adequacy  
3 of licensee efforts to establish conformance with the design  
4 and licensing bases of the plants, to establish programs  
5 that would maintain configuration control, and to document  
6 and utilize the licensing and design basis to resolve  
7 identified nonconformances.

8 In a January 1999 Commission meeting the  
9 Commission evaluated the status of the safety-conscious work  
10 environment at the Millstone facility in the context of the  
11 Employee Concerns Program order issued by the Commission on  
12 October 24, 1996. On March 9, the Commission determined  
13 that the current performance of the licensee and the  
14 existing environment at the Millstone Station had improved  
15 sufficiently that employees felt free to raise safety  
16 concerns without fear of retaliation. As such, the  
17 Commission lifted the order requiring third-party oversight.

18 The purpose of this briefing today is to discuss  
19 the remaining restart issues associated with the Unit 2  
20 restart action plan and to provide the Commission with  
21 information pursuant to a determination of whether a  
22 decision should be made to allow the restart of Millstone  
23 Unit 2.

24 Last week the NRC staff provided the Commission  
25 with their assessment of Millstone Unit 2 readiness for

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1 restart in a Commission paper, SECY-99-109. The paper  
2 discusses the restart action plan, which was developed to  
3 include all expected NRC actions required before plant  
4 restart would be approved. The plan augments the two orders  
5 the NRC issued to Northeast Nuclear Energy Company relating  
6 to the Independent Corrective Action Verification Program  
7 and the Safety Conscious Work Environment and Employee  
8 Concerns Program.

9 The restart action plan requires improvements to  
10 the Corrective Action Plan, work planning and control  
11 programs, the procedure upgrade program, oversight and  
12 quality assurance programs, and personnel training and  
13 performance. The plan also provides for the conduct of two  
14 major NRC team inspections, one reviewing the effectiveness  
15 of licensee controls and identifying, resolving, and  
16 presenting problems, and, two, the operational safety team  
17 inspections. These inspections have been completed.

18 The Commission has been reviewing the  
19 recommendations from the staff and other material relating  
20 to the Millstone Station, and is interested in candid  
21 comments, evaluations, and conclusions from all participants  
22 here today.

23 The Commission will consider the information  
24 gathered today as well as all of the documentary record in  
25 deciding whether Northeast Nuclear Energy Company has first

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1 of all satisfied the Independent Corrective Action  
2 Verification Program order sufficiently to allow lifting of  
3 that order, and, second, whether the company has taken  
4 appropriate corrective actions overall to allow restart of  
5 Millstone Unit 2.

6 Having said all that, I understand that copies of  
7 the viewgraphs and the Commission paper are available at the  
8 entrances to the room, and taking note of the fact that we  
9 do have a Commission quorum, unless my colleagues have any  
10 opening comments they wish to make, Mr. Morris, I assume  
11 that you will lead off for Northeast Nuclear.

12 MR. MORRIS: Yes, ma'am.

13 Chairman Jackson and fellow Commissioners, good  
14 morning. I would like to begin by thanking you and your  
15 colleagues in this Agency for making us a better nuclear  
16 operator, and I firmly believe that today much more than I  
17 did some two years ago. We in this process have learned a  
18 great deal, but, as you know, learning never ceases, and we  
19 will continue to learn as we go forward.

20 We are confident in our ability to satisfy your  
21 requirements through the ICAVP process and to operate this  
22 plant, but we're not overly confident.

23 We really are better than we were, but we're not  
24 as good as we think we can become, and we want to make  
25 certain that you appreciate those comments and our

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1 dedication to continue to getting better.

2 The people at the Millstone Station are eager to  
3 demonstrate and to continue to show you and others in a very  
4 professional way that they're prepared to operate Unit 2 as  
5 they have been operating Unit 3 and continue to earn the  
6 trust of this Agency from the resident inspectors to the  
7 region office to the headquarters. In the communities we're  
8 in we do this business because we are convinced that we can  
9 continue on the path that we have been on. And it has been  
10 a long and arduous trail that we've gone down, and as I  
11 said, much has been learned and much remains to be learned.

12 But as you listen to this team of officers today,  
13 all of whom save one are dedicated to be with us long term,  
14 I hope you'll walk away with that same confidence, and I  
15 know not overly confident, but at least some confidence that  
16 we are prepared to do that.

17 With that, if you have no questions of me, I'll  
18 ask Bruce Kenyon to make some comments.

19 MR. KENYON: Good morning, Chairman Jackson and  
20 Commissioners. I am pleased to report that the recovery of  
21 Millstone Unit 2 is essentially complete. Preparations to  
22 repair one valve in the shutdown cooling system are in  
23 progress. Based on our current schedule, we plan to  
24 complete repairs, return the unit to normal operating  
25 pressure and temperature, and have the unit ready for

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1 startup in approximately ten days.

2 Other presenters will review our readiness in  
3 greater detail. I simply want to offer some personal  
4 observations based on having led the recovery of Millstone  
5 over the past 2-1/2 years.

6 First, I am quite comfortable that Millstone has  
7 learned the lesson of how to establish and nurture a  
8 safety-conscious work environment. Yes, it is still  
9 fragile. But the skills and mechanisms are in place to  
10 identify and address problems as they arise. We will

11 continue to measure leadership on its safety-conscious work  
12 environment performance, and we will take action, as we have  
13 on numerous occasions during the recovery, if performance  
14 does not meet our expectations. Also, we have engaged  
15 Little Harbor to periodically assess our performance in this  
16 area for the indefinite future.

17 Second, as one who has been a leader in the  
18 nuclear industry for many years, and who in several previous  
19 briefings to the Commission stated that the fundamental  
20 problems at Millstone were the result of deficiencies in  
21 leadership, I want to give you my personal assurance that  
22 current Millstone leadership, the officers sitting at this  
23 table, our many other directors, managers, and supervisors,  
24 are a strong team, and they are committed to standards of  
25 excellence. In my judgment this team is a much stronger and

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1 more confident team now than it was on the occasion of Unit  
2 3's startup ten months ago. And further I am confident that  
3 this team will be even stronger ten months from now.

4 As a final point, and, Chairman Jackson, this is I  
5 think reflective of how you have led the NRC, we are an  
6 organization which is committed to being open and candid  
7 with the public. The commitment to a ring radiation  
8 monitoring system which will be independently operated and  
9 maintained is a recent important example. And we continue  
10 to look for ways to demonstrate our openness at the new  
11 Millstone, and to have meaningful dialogue with both the  
12 general public and our critics.

13 Shortly we will be ready to resume operation of  
14 Unit 2. Your trust and confidence in this regard will not  
15 be misplaced.

16 This concludes my opening remarks. The next  
17 speaker is Lee Olivier.

18 MR. OLIVIER: Thank you, Bruce, and good morning,  
19 Chairman Jackson and Commissioners. I'll be covering four  
20 major topics in my remarks today. The first is our success  
21 in addressing the root causes of the past performance  
22 problems at Millstone Station. The second is our belief  
23 that Unit 2 is ready for restart. Third is our efforts to  
24 successfully complete our transition from a recovery mode to  
25 an operationally focused station. And fourth is our plan to

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1 ensure that Millstone continues to move forward to achieve  
2 nuclear excellence, what I call achieving best-to-best  
3 performance.

4 Now before I address these introductory topics, I  
5 want to briefly review the rest of our agenda today.

6 Our Marty Bowling will be discussing the Unit 2  
7 corrective action verification process, and in particular a  
8 discussion on the results of the ICAVP for Unit 2.

9 Mike Brothers will talk about Unit 2 readiness for  
10 restart, and he will also be talking about our plans to  
11 ensure that his area of responsibility, nuclear operations,  
12 will continue to improve and achieve excellence in the  
13 future.

14 Ray Necci will review Nuclear Oversight's  
15 assessment of Unit 2's readiness, and he will also be  
16 talking about Oversight's future role in achieving  
17 excellence at Millstone Station.

18 Also with us here today is John Carlin -- he is  
19 our vice-president of human services -- and Dave Amerine,

20 who is our vice-president of nuclear engineering.

21 Now briefly I'd like to review what steps we've  
22 taken to successfully address each of the fundamental  
23 root-cause areas that have led to the decline in performance  
24 of Millstone Station.

25 First, in the area of leadership, today our

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1 leadership is effective with strong operational focus  
2 characterized by conservative decision making in all aspects  
3 of our operation. As you know, we've been conducting  
4 leadership surveys in the past, and our most recent  
5 leadership survey, which was the one which was conducted in  
6 November of 1998, shows ongoing improvement. Employees feel  
7 that their leadership is effective, demonstrating high  
8 integrity and a strong commitment to our core values.

9 The second area of significant improvement at  
10 Millstone Station is the establishment of a robust  
11 safety-conscious work environment and an environment that  
12 received constant attention across the site. The threshold  
13 for identifying employee concerns is appropriately low, and  
14 about 60 percent of the concerns that we receive today are  
15 basically issues about personal policy issues and other  
16 human-resourcetype issues. Our latest leadership survey  
17 results show that 96.6 percent of the Millstone leaders were  
18 rated as effective in resolving employee concerns.

19 However, we acknowledge, as Bruce said, the  
20 fragility of the Millstone environment, and because of our  
21 realignment that we have ongoing right now and our later  
22 move to deregulation, we understand and do not underestimate  
23 the amount of effort and energy we will have to place in a  
24 safety-conscious work environment going forward.

25 Now in our last meeting we talked about retaining

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1 Little Harbor Consultants, and we have signed a contract  
2 with Little Harbor Consultants. They will be available for  
3 us to do assessments on a quarterly basis. We are also  
4 committed to making the results of the assessments available  
5 to the NRC and to the public. And Little Harbor will be  
6 available to do independent assessments, investigations, and  
7 intervention as necessary. We will be setting up a 24-hour  
8 employee guidance and assistance toll-free line that Little  
9 Harbor will monitor for us.

10 The third area is nuclear oversight. We have  
11 demonstrated significant improvement in this area. Our  
12 oversight group is involved, independent, intrusive, and  
13 working well with the line organization, and is  
14 demonstrating high standards of performance. Our line  
15 organization respects the role of oversight and values their  
16 advice in helping to solve problems at the plant. The NRC  
17 40500 inspection found the nuclear oversight organization to  
18 be quite active and involved in day-to-day activities, as  
19 well as the other independent oversight bodies such as the  
20 Nuclear Safety Assessment Board, the Plant Operations Review  
21 Committee, and the Site Operations Review Committee. Now  
22 Ray Necci will cover more in this area in his portion of the  
23 presentation.

24 I'd like to turn just briefly to self-assessment.  
25 We now have a very self-critical culture in place at

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1 Millstone Station. We are using self-assessment for our  
2 continuous improvement, and it has really made a difference

3 at Millstone. Condition reports are being generated at an  
4 appropriately low threshold level, and long-term corrective  
5 actions are being implemented and effectiveness for followup  
6 is also in place. We have a new attitude about the  
7 importance of self-assessment, and recently we are putting  
8 together a team to do a combined self-assessment on our Unit  
9 2 readiness for our INPO evaluation, which will take place  
10 later this year on Unit 2, as an example. We're going to  
11 bring in industry peers from across the Nation to support us  
12 in that self-assessment.

13 This is the new Millstone. It's committed to  
14 using the experience and lessons learned from other  
15 successful members of the industry. In the past, Millstone  
16 was accused of being an insular organization. That is not  
17 the case anymore.

18 In regard to standards, our standards have been  
19 raised across the site. The work force at all levels holds  
20 the organization accountable for achieving high standards.  
21 An example of this is that we have just recently started a  
22 sitewide involvement team in preparations of our Unit 3  
23 outage, whereby we're going to have people that are not  
24 directly assigned to Unit 3 make positions available for  
25 them to participate in during the refueling outage. We've

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1 had a huge turnout of people from across the site that want  
2 to participate in the refueling outage, and that's a lesson  
3 learned that we've taken from the South Texas Project. They  
4 are one of our partners.

5 We have conservative decision making across the  
6 site, but most importantly in the operations area during the  
7 move from mode 6 up to mode 3, we noticed conservative  
8 decision makings by our operations people. We also noted a  
9 strong oversight involved in the restart and also  
10 conservative decision makings from our engineering.

11 We have a strong bench-marking program. Right now  
12 we have partnerships with South Texas and also with Virginia  
13 Power. We've been very involved with INPO. We've had a  
14 series of assist visits so far this year. We've had assist  
15 visits in the area of chemistry, steam generator management,  
16 and outage management. Also, Mike Brothers, who is our  
17 vice-president of operations, is a new member of the INPO  
18 Industry Review Group for assistance and events.

19 Now in 1996 Millstone identified 16 key issues  
20 necessary for recovery of the station, and we've been  
21 tracking these issues with the NRC, and they have been the  
22 basis of the briefing books you have received prior to each  
23 meeting with the Commission. In the briefing book we  
24 submitted last week, we reported all but one of the  
25 remaining Unit 2 specific key issues now satisfactory for

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1 restart of the unit. The one remaining issue is the work  
2 control and planning. We're still slightly over our backlog  
3 for online maintenance requests, and we're working on  
4 schedule adherence on Unit 2. And that will be complete by  
5 the time we're ready to enter into mode 2.

6 CHAIRMAN JACKSON: Let me ask you a quick  
7 question.

8 MR. OLIVIER: Sure.

9 CHAIRMAN JACKSON: These are sitewide issues. Of  
10 these, which presented the most challenge to Unit 2?

11 MR. OLIVIER: I would say the one that presented

12 the most challenge would be engineering quality would  
13 probably be the biggest challenge for Unit 2.  
14 CHAIRMAN JACKSON: Where does that fit into here?  
15 I didn't see that.  
16 MR. OLIVIER: Where does it fit into -- oh, yes,  
17 that's an adder into this list.  
18 MR. BOWLING: Chairman Jackson, that was added --  
19 based on the lessons learned from Unit 3 we added that as a  
20 key issue for the restart of Unit 2.  
21 CHAIRMAN JACKSON: All right. That was my  
22 understanding. In fact, I was going to ask you where  
23 engineering quality fits in.  
24 MR. BOWLING: It was not one of the original 16.  
25 CHAIRMAN JACKSON: Okay.

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1 COMMISSIONER MERRIFIELD: Chairman, I had a  
2 question relating to the slide. Is your preference to have  
3 me ask it now or to withhold?  
4 CHAIRMAN JACKSON: Go on. It'll be quick, I know.  
5 COMMISSIONER MERRIFIELD: Given the length of your  
6 shutdown, what have you done in the area of training to  
7 prepare operators to move from a recovery mode to an  
8 operating mode?  
9 MR. OLIVIER: Well, we've taken each crew and we  
10 have given them extensive training in all aspects of plant  
11 operation, both startup, shutdown, normal operations,  
12 testing, and surveillance in our plant simulator as well as  
13 in the control room. But we also have implemented a very  
14 aggressive just-in-time training so that every time we go  
15 through a major evaluation, we have the operators that are  
16 going to do that evolution either do it in the simulator or  
17 in the plant, in the plant using a kind of a simulated  
18 exercise in the plant. So we're training people in the  
19 simulator and also in the plant prior to doing each major  
20 evolution. We look at every major evolution as a first-time  
21 evolution, and that's a lesson learned that we took out of  
22 Unit 3.  
23 MR. MORRIS: And we really saw the results of that  
24 specific training as we brought the plant up to mode 3 and  
25 then have now since stepped it back to mode 5. We're very

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1 satisfied with the operator performance, and we think it has  
2 a lot to do with attention to detail and that specific  
3 training that they've been able to receive.  
4 CHAIRMAN JACKSON: Since you did bring it up, but  
5 it wasn't listed, what are you doing relative to engineering  
6 quality?  
7 MR. OLIVIER: I'd ask Dave Amerine to speak to  
8 that, please.  
9 MR. AMERINE: Good morning.  
10 We have a lot of efforts under way. I described  
11 some of them when I was here before, things like a Quality  
12 Review Board that we've put in place to review all  
13 engineering products such as design changes and so forth.  
14 We've also reemphasized peer review and independent reviews.  
15 These are all things that we've done I'll say as an  
16 immediate reaction to ensure engineering quality of the  
17 products we've had to produce for this outage.  
18 In addition to that we've emphasized with special  
19 training of the engineers what our expectations are and how  
20 they go about them. So where we are right now with respect  
21 to quality, the KPIs or key performance indicators we're



22 using have shown all the trends are in the right direction  
23 with respect to rejection rates from quality review boards  
24 and design changes after issuance of a modification package  
25 and so forth.

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1 I think what we have now is an intellectual  
2 acceptance of what it means to have good configuration  
3 control to generate good products, and my goal over the next  
4 six months, and part of my engineering strategy plan is to  
5 move from intellectual acceptance into where it's an  
6 interstitial part of the fabric of how engineering does  
7 business day to day, and we have that discipline, and the  
8 way we're going to do that is through the training program  
9 which I have laid out for the remainder of this year and  
10 have all the engineers, both the design engineers and the  
11 systems engineers are currently signed up for and will have  
12 to attend.

13 CHAIRMAN JACKSON: Now will you know when you've  
14 succeeded?

15 MR. AMERINE: We have also developed, and I'm in  
16 the process of finalizing, some new key performance  
17 indicators that we will use in trying to make sure that  
18 we're getting the results that I expect over the next six  
19 months. One example that a performance indicator we have  
20 not used heretofore I plan to use is design changes that are  
21 necessary after the product's been issued to the field for  
22 implementation. If that shows us that there are many  
23 changes, then that means the initial issue had some problem  
24 in walkdown or interface with our client or something that  
25 caused it not to be the quality we want. So that will be

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1 one example of a new key performance indicator that will  
2 tell us whether we're making progress or not.

3 CHAIRMAN JACKSON: Do you have folded into that  
4 how the actual -- the plant performance relative to the area  
5 that the particular design change related to as a  
6 performance indicator?

7 MR. AMERINE: Not specifically related to the  
8 change. That's something that is worthy of, you know,  
9 consideration, but I had not thought about doing that. We  
10 do have plant performance indicators that we look at from a  
11 system engineering point of view to see if there's further  
12 enhancements or if there's any other untoward trend that the  
13 engineers need to pay attention to. But as far as the  
14 efficacy, which I think is what you meant, the efficacy of  
15 the change, other than anything required to get it  
16 implemented, no, and that's a good point.

17 CHAIRMAN JACKSON: That's something you may want  
18 to think about. Okay?

19 MR. OLIVIER: Okay. Next slide.

20 With the root causes effectively addressed, and  
21 the 16 key issues satisfactory for restart and safe  
22 operation, we believe that Unit 2 is ready for your  
23 permission to restart. I'd like to elaborate on three  
24 specific areas in support of our belief about the readiness  
25 of Unit 2 for restart. The first is our design basis and

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1 licensing basis has been restored. Restoration is complete  
2 and confirmed by the Unit 2 ICAVP. Our design basis is  
3 accurate, readily retrievable, and consistent with the plant

4 configuration. Higher standards are now in place in the  
5 organization. We have processes to maintain compliance with  
6 our design basis. Nuclear engineering vice-president Dave  
7 Amerine and his team are now responsible for owning,  
8 self-assessing, and enhancing Millstone's configuration  
9 management program.

10 We have conducted significant plant material  
11 condition upgrades during the course of this long outage.  
12 As an example, we did major overhauls on the condensate and  
13 feedwater systems, which are systems important for  
14 reliability. We have overhauled several of our  
15 safety-related pumps. We have overhauled three of the four  
16 reactor coolant pumps completely. And we also did a  
17 complete overhaul of our auxiliary feed pumps for the steam  
18 generator.

19 Backlogs are coming down, and items necessary for  
20 restart and safe operation have been accomplished.  
21 Remaining backlog has been clearly prioritized and is being  
22 worked off. And we have recently sent NRC a letter to  
23 change our previous commitment on backlog because we wanted  
24 to take items that were basically of lower risk significance  
25 and change the schedule and move those farther out so we

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1 could get to items that had greater risk significance and  
2 greater reliability issues and operator challenges.

3 In regards to operational readiness, oversight and  
4 management observations demonstrate that Unit 2 is ready for  
5 restart and safe operation. Our independent verifications  
6 from third parties such as the Nuclear Safety Assessment  
7 Board and other expert contractors also verify that Unit 2  
8 is ready for restart. The operational safety team  
9 inspection exit meeting indicates that the unit is in a high  
10 state of readiness and can assure a safe startup and safe  
11 operations. Operator errors on Unit 2 are declining. We  
12 are closely monitoring human performance through the line  
13 organization and also for the oversight organization.

14 We have applied the lessons learned from Unit 3,  
15 and so far during our change of modes, that has been more  
16 smooth than Unit 3 was. Clearly we are not excellent yet.  
17 We understand this. Much more work needs to be done, but  
18 our team is committed to becoming excellent once again,  
19 proving that we really are a new Millstone organization.

20 CHAIRMAN JACKSON: Where do you stand on operator  
21 workarounds?

22 MR. OLIVIER: Mike Brothers will cover that in his  
23 presentation, or would you like to talk about that?

24 CHAIRMAN JACKSON: I'll wait.

25 MR. OLIVIER: Okay.

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1 COMMISSIONER MERRIFIELD: Chairman?

2 CHAIRMAN JACKSON: Yes.

3 COMMISSIONER MERRIFIELD: The question I have  
4 goes -- you have a lot going on at one time. Right now  
5 there's a proposal to bring Unit 2 back on, you're coming to  
6 the point where you're going to be bringing Unit 3 in for a  
7 refueling outage. That's a lot of work to be accomplished  
8 at the same time. You'll have a lot of evolutions under way  
9 at both units.

10 While you've concluded that Unit 2 is ready for  
11 restart, I'd like you to comment a little bit on the  
12 confidence you have in your organization to be able to  
13 handle the challenge associated with both having Unit 2 come

14 back on line as well as Unit 3 coming off line for refueling  
15 outage and trying to accomplish both of those activities,  
16 very significant activities, at the same time.

17 MR. OLIVIER: Basically we can manage both  
18 simultaneously. We have Mike Brothers, who is responsible  
19 along with Alan Price, who was our Unit 2 Director for the  
20 safe startup and operation of Unit 2. We have a Station  
21 Director that later in this year will be responsible for  
22 both units, who was responsible for Unit 3. We have a Unit  
23 3 recruiting team put together that is dedicated solely to  
24 all of the activities associated with refueling of Unit 3.  
25 We also have dedicated engineering and maintenance support

25

1 for the startup of Unit 2, and of course I am there and I  
2 will overview both the safe startup of Unit 2 and the  
3 refueling outage, so we have dedicated resources to each  
4 activity.

5 COMMISSIONER MERRIFIELD: Just as a quick  
6 follow-up, what kind of timeline have you established for  
7 bringing Unit 3 back online? How long a fueling outage can  
8 you anticipate at this point or have you assigned it a time  
9 period?

10 MR. OLIVIER: Unit 3 will be a 45-day refueling  
11 outage which starts in May, May 1st, and so it will complete  
12 about the middle of June, and we will cover that more in the  
13 presentation.

14 We also do a site-wide coordinating meeting every  
15 day just to coordinate amongst the officers, directors and  
16 managers the activities that will take place during the  
17 course of the week and day on both Unit 2 and 3.

18 With Unit 2's restart readiness nearly complete we  
19 recognize that we need to concentrate on a number of  
20 important activities as we complete our transition from a  
21 recovery mode to an operationally focused organization.  
22 Since our last meeting we have completed the Director and  
23 the Manager cascade selection and the selection of the  
24 supervisors was put on hold to ensure no adverse impact on  
25 the safe startup of Unit 2 or the preparations for the Unit

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1 3 refueling outage.

2 When complete, the results of this effort will be  
3 a truly Millstone team. The remaining recovery officers and  
4 other personnel all have departure dates and turnover  
5 strategies in place. The target exit date for the recovery  
6 teams will be by the end of June.

7 Now if necessary we will keep them longer but  
8 their present target date is by the end of June.

9 CHAIRMAN JACKSON: That's your retirement date?

10 MR. OLIVIER: Yes. Yes. The Millstone Station  
11 Director when the realignment is complete will have  
12 responsibility for both Unit 2 and Unit 3 and we expect that  
13 realignment will be complete on July 9th.

14 My major focus will be to ensure that the new  
15 leadership structure is aligned into an effective and  
16 integrated team to support operational excellence at the  
17 station.

18 CHAIRMAN JACKSON: Let me ask you a quick  
19 question.

20 MR. OLIVIER: Sure.

21 CHAIRMAN JACKSON: At the January meeting with the  
22 Commission you indicated that some employees were raising

23 some concerns about the organizational realignment.  
24 What feedback have you received lately in that  
25 regard?

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1 MR. OLIVIER: We did get a number of issues about  
2 the realignment which were associated with process issues,  
3 people that basically either didn't agree or understand the  
4 process and right now, quite frankly with the realignment,  
5 because of our preparations for the restart of Unit 2 and  
6 also with the RFO coming on Unit 3, the realignment in most  
7 people's eyes has taken somewhat of a back burner.

8 They are looking forward however to completing it  
9 because we have received a lot of value from the realignment  
10 in putting together a Millstone team. I think it  
11 significantly improved the efficacy of the site and people  
12 are now looking forward to go into the future with the new  
13 Millstone team to achieve excellence as a dual unit site.

14 CHAIRMAN JACKSON: Okay.

15 MR. OLIVIER: Since we have talked the last time  
16 in our January 19th meeting, Unit 3's operating performance  
17 has improved. As a result of the work that we did in our  
18 December outage and also a refocusing of our online work,  
19 Unit 3 is operating at a very high capacity factor. It has  
20 been online over 100 days and we have had very few  
21 challenges to our operators.

22 The errors are decreasing. Our ownership has been  
23 clearly established in Unit 3 and we have reduced the number  
24 of challenges to the operators during this period.

25 CHAIRMAN JACKSON: Now I have to understand what

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1 you mean by challenges. You did have four reactor trips and  
2 one forced outage, so what do you mean when you say  
3 challenges to the operators?

4 MR. OLIVIER: The challenges are entering into 303  
5 conditions due to equipment that had reliability problems.  
6 We had a number of valves, which are manually operated  
7 valves, that were leaking, by example, to isolate our  
8 condensate demineralizers. It was difficult for operations  
9 to get in isolation when they decharged the demineralizers.

10 During our outage in December we did major  
11 overhauls of many of those valves. The remainder of those  
12 will be complete in the upcoming refueling outage, so we  
13 looked at reducing annunciators, out of service  
14 annunciators, operator work-arounds throughout the site. As  
15 a result of that we have had less challenges to the  
16 operators.

17 CHAIRMAN JACKSON: Explain the four reactor trips  
18 and the one forced outage.

19 MR. OLIVIER: Explain the four reactor trips?  
20 Well, we had an automatic trip for the MSIV, main steam  
21 isolation valve, failure. We had an automatic trip due to  
22 the seawater -- not seawater intrusion but a seaweed buildup  
23 on the screenhouse. We had two manual trips associated with  
24 a chloride intrusion into the hot well.

25 CHAIRMAN JACKSON: And the forced outage?

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1 MR. OLIVIER: And the forced outage was actually  
2 an outage prior to my coming here and that was to do with  
3 the aux feedwater valve, an isolation valve that was  
4 leaking.

5 CHAIRMAN JACKSON: So you don't consider any of

6 those challenges, you are saying?

7 MR. OLIVIER: Actually I am speaking from the  
8 point of December to now.

9 CHAIRMAN JACKSON: Okay.

10 MR. OLIVIER: Yes. Yes, those were certainly  
11 challenges, which is why we became much more aggressive in  
12 reducing operator challenges.

13 CHAIRMAN JACKSON: So you mean on your watch the  
14 challenges have been reduced?

15 [Laughter.]

16 MR. OLIVIER: You could say that.

17 Now we understand that as we move towards our  
18 refueling outage that we have to balance, as Commissioner  
19 Merrifield said, the startup of Unit 2, the refueling  
20 outage, and also ensure safe operations on Unit 3 and that  
21 has the full attention of the organization including myself.

22 Our RFO 6 starts on May 1st, as I said earlier.  
23 It is a 45-day outage. I think the key thing here is that  
24 we are committed to do a safe, high quality outage. We will  
25 not be driven by schedule and we will do it right.

30

1 Preparation is underway. After a late start we have  
2 identified the appropriate scope of work to further improve  
3 our reliability and reduce our operator challenges.

4 CHAIRMAN JACKSON: Are you going to reduce your  
5 backlog?

6 MR. OLIVIER: Yes, we are. Yes, we are.  
7 Absolutely. We want to start up out of that outage in a  
8 very clean state with the plant.

9 Now when I was here the last time we talked about  
10 the need to do process improvements and we are putting  
11 together a very aggressive benchmarking and process of  
12 improvement plan for the second half of 1999. We have  
13 received very clear messages across the site from our people  
14 that they want to see further improvements in our processes  
15 and also through the culture survey.

16 When I meet with our employees, which I do on a  
17 regular basis, having small department meetings, one of the  
18 key messages is improved processes make you more efficient.

19 Now to do this we are going to utilize  
20 crossfunctional teams to do benchmarking, design, and  
21 implementing of the processes. The people that use the  
22 processes will be the people that will benchmark them and  
23 make the process changes and this is a departure from the  
24 past.

25 Now when Bruce Kenyon came here, he established

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1 seven critical success objectives for the recovery of  
2 Millstone Station.

3 COMMISSIONER MERRIFIELD: Before you get to that,  
4 I have a question about the organizational alignment and the  
5 effect on the workers. You are talking -- you know, when  
6 you resume, when you are approved to resume operation on  
7 Unit 2, it's your intention to continue with the  
8 organizational alignment. Now later on in your slide you  
9 talk about Focus '99 --

10 MR. OLIVIER: Yes.

11 COMMISSIONER MERRIFIELD: -- and issues associated  
12 with the restructuring of the electrical generating market  
13 as a result of deregulation and other activities in  
14 Connecticut and the rest of your market.

15 How are you and what are you doing to ensure that  
16 the issues related to reorganization in NU as well as issues  
17 associated with Focus '99 and electricity restructuring  
18 aren't going to have an impact on the employees at the site  
19 given the activities that are on their way both at Unit 2  
20 and Unit 3?

21 MR. OLIVIER: Well, one of the things that we are  
22 doing on a regular basis is communicating with the employees  
23 and communicating with them what restructuring means and  
24 also communicating to them how other successful plants have  
25 gone through restructuring and have also achieved high

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1 performance.

2 We are going to complete our realignment, get our  
3 realignment in place, achieve a level of stabilization, and  
4 after we have achieved that level of stabilization then we  
5 will look at moving the plant forward in terms of major  
6 changes in the processes and benchmarking.

7 We believe that the best way to approach  
8 restructuring and industry deregulation is to move towards  
9 operational excellence, and that is benchmarking ourselves  
10 in the key areas and also making the major process changes  
11 and having our people involved in all aspects of the change.  
12 I think that is the key solution to make this a success.  
13 That is something I have done in my previous plant. I was  
14 getting the people involved at all levels into the changes  
15 we were going through, so there is ownership and buying in  
16 and an understanding of why you are making that change and  
17 that they can be successful in a restructured environment.

18 MR. MORRIS: What we have learned, and I think it  
19 is just basic human nature and clearly part of the safety  
20 conscious work environment, if you take a competitive  
21 environment and try to, from a management perspective, tell  
22 a group of employees this is what has to happen, versus if  
23 you lay out a competitive environment that clearly is going  
24 to unfold across this nation, and ask the employees to help  
25 you figure out how to be competitive, it is a huge

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1 difference in the perspective of people and I hope you  
2 appreciated what Lee mentioned when he said that the  
3 employees have come to us and said make the processes better  
4 so that we can do things more quickly and more cost  
5 effectively so that we can remain competitive.

6 That is very different from me or Bruce sitting at  
7 the Headquarters and saying you need to get the cost down by  
8 "x" percent. It is a total different feeling and it is the  
9 foundation of the safety-conscious work environment, because  
10 the people have huge ideas, great ideas, cost effective  
11 ideas, and they want to be listened to, and they want to  
12 have those good ideas implemented, so it is a huge  
13 difference.

14 MR. OLIVIER: I think the other aspect too is the  
15 employees, when we talk to the employees, they are not  
16 afraid of restructuring, but what they do want is to be able  
17 to participate in positioning Millstone during that  
18 restructuring and that is a commitment we have given them.

19 So in regards to the seven critical success  
20 objectives, we have met these at this time. Our focus now  
21 must be to build on these to accomplish our accomplishments  
22 so that our commitments to achieve nuclear excellence  
23 translates into becoming the best of the best in our  
24 industry.

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1 key areas will enable us to fully achieve long-term  
2 excellence at Millstone. These three key areas are  
3 improvements in our people, our processes, and our plant  
4 material condition.

5 As the Chief Nuclear Officer I will be building on  
6 the progress reflected in Bruce Kenyon's seven critical  
7 success objectives for recovery and will be focusing on  
8 moving to excellence by supporting our people, fixing our  
9 processes and continuously upgrading the material condition  
10 of our plants. This is a concept and a philosophy that is  
11 used in the best utilities and the best nuclear power plants  
12 in the country.

13 Though we have successfully addressed our 16 key  
14 site issues, our programs and processes now must undergo  
15 continuous improvement to reach long-term excellence. We  
16 also know that the key to this effort is our people at  
17 Millstone. When I arrived at the site I told the team that  
18 I wanted to establish an environment of inclusion and  
19 collaboration both internally and externally, and as Bruce  
20 mentioned earlier with the implementation of this  
21 re-monitoring system I think that is a good example of  
22 listening to the people in the community and we are going to  
23 install this remonitoring system later this year.

24 Now I firmly believe that we will achieve  
25 excellence by getting the entire workforce involved in

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1 overcoming our challenges. We are going to focus even more  
2 on listening to what our people have to say and then acting  
3 on the ideas and suggestions that they will make so we can  
4 achieve nuclear excellence at Millstone Station going  
5 forward.

6 We have already made significant improvements in  
7 all three -- in our people, all of the people on site have  
8 attended the Setting the Winning Standard Workshop, which is  
9 a workshop that teaches the values of teamwork, shared  
10 vision and a mission statement.

11 We also have had major improvements in our  
12 processes. The corrective action process was a process that  
13 was troubled in the past. That process is working rather  
14 well now and we are ready to make the next stage of  
15 improvements in that.

16 We have a detailed program being put together now  
17 for both benchmarking and process changes and we had  
18 selected systems that will be the first processes rather to  
19 undergo benchmarking and processes changes.

20 Our plant material condition is we have set  
21 aggressive targets which Mike Brothers will talk about in  
22 his presentation and we have a goal, to continue to reduce  
23 the challenges to operators by improving the plant material  
24 condition of both Unit 2 and Unit 3 and the support systems.

25 COMMISSIONER DIAZ: Excuse me. I am going to

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1 borrow something from Chairman Jackson since, you know, we  
2 have been hearing it for two and a half years now --

3 CHAIRMAN JACKSON: Four.

4 COMMISSIONER DIAZ: There's a lot of statements in  
5 here and I think that's fine. It shows your philosophy and  
6 your direction and your goals and where you are going, but

7 the question always comes, you know, do you have metrics for  
8 these statements --

9 MR. OLIVIER: Yes.

10 COMMISSIONER DIAZ: -- and if any one of us, and I  
11 am sure maybe the Staff will be able to answer this for any  
12 one of the statements somebody could come and say, yes, the  
13 statement is substantiated by some metrics. Is that --

14 MR. OLIVIER: We have extensive metrics and we  
15 will be putting together metrics on process improvements but  
16 extensive metrics on backlog, plant material condition  
17 issues, operator work-arounds, and so forth, very extensive.

18 COMMISSIONER DIAZ: I probably have preempted half  
19 of Chairman Jackson's questions but --

20 CHAIRMAN JACKSON: Wishful thinking.

21 [Laughter.]

22 MR. MORRIS: We thank you if you have.

23 [Laughter.]

24 CHAIRMAN JACKSON: Doesn't work that way. Since  
25 you did talk about -- thank you for segue-ing into metrics.

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1 I noted that there was a chart that had to do with success  
2 objectives and one of them was effective self assessment,  
3 and I guess I am interested in what that means and whether  
4 you could give me some examples of improvements that have in  
5 fact occurred as a consequence of effective self-assessment.

6 MR. OLIVIER: I think there's several good  
7 examples.

8 One good example is the self-assessment that we  
9 did, a big self-assessment that we did back in '97, which  
10 was on our operator training programs. As a result of that  
11 self-assessment we found widespread issues with that, which  
12 we took corrective action and our operator training programs  
13 now are significantly improved. We have received very  
14 favorable feedback both from NRC inspections of our license  
15 operator requalification training classes.

16 We received favorable evaluations from INPO, and I  
17 think most importantly our operators feel that training has  
18 never been better than it is now. That is a good example of  
19 self-assessment.

20 We did a very similar self-assessment in the  
21 technical training organization --

22 CHAIRMAN JACKSON: So your training program is no  
23 longer on probation?

24 MR. OLIVIER: We have a meeting with the  
25 accreditation board on I believe it is May 19th --

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1 MR. MORRIS: 20th.

2 MR. OLIVIER: And at that time we believe that we  
3 will come off of the probation status.

4 MR. MORRIS: We had a presentation to our full  
5 Board of Trustees yesterday on the issue of training and  
6 where we stand. We are still in probation and surely hope  
7 that at this meeting soon to happen that that's changed, but  
8 there was a critical statement made, a presentation was made  
9 by Chris Shores, who is the Unit Director and Denny Hicks,  
10 who is the Training Director and there has been a  
11 breakthrough in the training issue at the station where the  
12 line organization is convinced that the trainers are now  
13 being helpful, that they are learning, that it is a  
14 constructive use of their time, and as you know, until you  
15 have that breakthrough you have a barrier to learning  
16 because you are always believing that you are wasting your



17 time and it has been a pretty substantial change. We hope  
18 that INPO recognizes that we hope that they would remove  
19 those training programs from probation.

20 CHAIRMAN JACKSON: Does that breakthrough relate  
21 to a specific area of weakness that INPO had identified,  
22 that the accrediting board --

23 MR. MORRIS: No. Actually when the accrediting  
24 board came out they noticed some major improvements from a  
25 historic process and they saw the germination of planted

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1 seeds in that regard, and what they have asked us to do is  
2 to continue to monitor that process as we go forward and I  
3 do think that it came closer to full bloom yesterday, when  
4 you see the Director of the Unit Operations and the Director  
5 of Training doing a handoff in a complementary approach to  
6 this is what they have taught us and this is what we have  
7 learned from them -- Training saying they are learning from  
8 the line -- the line saying that they are really getting  
9 value out of the training, so INPO is on an evaluation that  
10 says has that progress sustained and grown, and if that is  
11 the case we again are hopeful that they would remove that  
12 probationary treatment.

13 MR. OLIVIER: I think two more good examples of  
14 self-assessment is our work control schedule adherence,  
15 which had been low, approximately 60 to 70 percent. We did  
16 a major self-assessment on that and improved some of the  
17 processes that went with it and now we are maintaining the  
18 schedule adherence of over 90 percent, which gets to the  
19 plant material condition, the third "P" in terms of reducing  
20 the backlog. That is another good example.

21 We also have had good self-assessments in human  
22 performance on Unit 3 and Unit 2, which have changed the way  
23 we do our business in terms of danger tagging, having peer  
24 evaluations for danger tagging is an example, so there's  
25 been major changes due to self-assessment.

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1 CHAIRMAN JACKSON: Have you considered having an  
2 augmented or assisted self-assessment in your 17th area,  
3 namely engineering quality?

4 MR. AMERINE: Two things. One is that we just  
5 completed a major self-assessment in the engineering area  
6 with respect to the adherence to the design change manual  
7 and that report is not issued but I have a draft of it in my  
8 briefcase and there were some lessons learned there that we  
9 plan to incorporate into training I mentioned earlier.

10 In addition, Lee was talking about process  
11 improvements. That is one of our strategic plans within the  
12 engineering envelope that is a subset of the process  
13 improvement effort that Mike Brothers is the executive  
14 sponsor for. I have INPO scheduled to come in and look at  
15 what we are doing in the month of June to help with that  
16 effort.

17 CHAIRMAN JACKSON: Okay.

18 MR. OLIVIER: To get us started on the right path  
19 to nuclear excellence, we have prepared what we call Focus  
20 '99, and we sent you a copy of this booklet, which is the  
21 particular one here. You have a copy in your briefing book.

22 Focus '99 was specifically designed to let our  
23 people know exactly what was expected of them for the  
24 balance of this transition year and Focus '99 is not a grand  
25 plan for years to come. It also dovetails in with our

1 business plan and our operational plan. It was distributed  
2 to every member of the Millstone site including all of our  
3 permanent contractors, mailed directly to their homes. We  
4 have received much positive feedback about this type of  
5 distribution and also we did a series of meetings throughout  
6 the site.

7 We did station update meetings of several hundred  
8 people at a time with a very detailed slide presentation to  
9 go through it, and also lots of small group meetings that  
10 have been conducted between myself, the other officers, and  
11 the Directors.

12 I would like to just touch on three key items in  
13 Focus '99.

14 The first one is safety. Focus '99 constantly  
15 reinforces the importance of safety in all that we do to  
16 achieve excellence at Millstone Station. Throughout  
17 Millstone today you will find the senior team commitment  
18 that's signed by myself and all of the other officers, and  
19 that senior team commitment, the first item on there, is  
20 that we place safety first in all that we do.

21 We know and are continually communicating to all  
22 members of the Millstone team that the most successful  
23 plants, those that have achieved nuclear excellence, all  
24 have strong safety records, and they are also strong in  
25 safety, reliability, cost and regulatory reputations.

1 Now Focus '99 defines the actions or stakes in the  
2 ground we have set to be on the path to excellence. This  
3 phrase reflects my strong feeling that the team has to know  
4 exactly what we need to do to be ready for the industry  
5 changes that we face in the future.

6 It also puts perspective on the challenges of  
7 electric restructuring and puts them into a proper  
8 perspective for the entire Millstone team. We recognize  
9 that this is a sensitive area and we are communicating to  
10 our people again that safety and excellence go hand-in-hand,  
11 especially in the competitive environment because shortcuts  
12 are very, very expensive.

13 Management is committed first to listen to the  
14 comments and suggestions of our workforce. After all, they  
15 are the people that are most familiar with what needs to get  
16 done, and later this year we will have other site-wide  
17 involvement teams put together to go after the key result  
18 areas that we need to change. These are processes and other  
19 issues on the site.

20 Beyond listening, we are committed to acting on  
21 these good ideas no matter where in the organization that  
22 they come from.

23 Now in my closing remarks, I would like to say  
24 really briefly that we are now closing in on the most  
25 unprecedented recovery in the history of our industry and I

1 can assure you that the people of Millstone have learned the  
2 lessons of the past and now we are clearly focused on  
3 achieving operational excellence, becoming the best of the  
4 best and we really believe and I believe personally after  
5 being there six months that the Millstone Station has truly  
6 changed. It is a new Millstone Station.

7 CHAIRMAN JACKSON: Let me ask you this kind of  
8 summary question. You believe this has been the most

9 unprecedented recovery in the history of the industry.  
10 Other plants have shut down for multi-year shutdowns and  
11 they have had to work through a number of issues and have  
12 spent a lot of money. What has made this the most  
13 unprecedented recovery?

14 MR. OLIVIER: In my mind there were two issues. I  
15 think the restoration of trust with the employees I think  
16 was a significant effort. I think re-establishing the  
17 safety conscious work environment that I think was really  
18 damaged in the past is different than any other plant that I  
19 have known, at least of the magnitude of what we had at  
20 Millstone Station.

21 Also, the recapturing of the licensing and design  
22 basis effort, the conduct of the independent corrective  
23 action verification program, bringing in two totally  
24 independent contractors to go through and reverify and make  
25 sure that we do have compliance with design and licensing

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1 basis and they are consistent with the plant configuration  
2 and the procedures and guidelines that we operate the plant  
3 with.

4 I think that has been a truly huge effort, and I  
5 think it has paid off.

6 CHAIRMAN JACKSON: Mr. Kenyon looks like he wants  
7 to say something.

8 MR. KENYON: I would just like to emphasize one  
9 aspect of Lee's answer. I think the challenge of all of us  
10 who came to Millstone and coming into an environment that  
11 was from a relationship perspective between employees and  
12 management was extremely difficult, and the trust  
13 relationship that you would want to exist between employees  
14 and management had been damaged very badly, and thus the  
15 challenge of re-establishing that relationship, which you  
16 can't legislate. You have to earn it. Doing that in  
17 conjunction with all that we had to do to restore confidence  
18 in the licensing and design basis and deal with the issues  
19 that came out of that, I think was truly a monumental  
20 effort, and I think that is what distinguishes this recovery  
21 from any others.

22 CHAIRMAN JACKSON: Okay.

23 MR. BOWLING: Chairman Jackson, if I might add  
24 some perspective in addition to Bruce and Lee's comment  
25 about the loss of trust in management.

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1 I would like to also add that we had really lost  
2 your trust as well and also the trust of the public, so I  
3 think from my perspective what has made this unprecedented  
4 is not only having to restore the trust of our employees but  
5 having to restore your trust and to restore the trust of the  
6 public.

7 MR. OLIVIER: Now I would like to turn it over to  
8 Marty Bowling, who will discuss the Unit 2 Corrective Action  
9 program and also give us the results of the independent  
10 corrective action verification program for Unit 2.

11 MR. BOWLING: Thank you, Lee.

12 Today I would like to provide you our basis for  
13 closure of the ICAVP order for Millstone Unit 2. The bases  
14 are founded on our ability to both proactively identify and  
15 effectively resolve issues.

16 My presentation will cover two of the eight  
17 restart affirmation criteria provided in our briefing book,

18 specifically Criterion 2, restoring compliance with the  
19 design and licensing basis and Criterion 4, developing  
20 effective programs to identify and resolve problems.

21 This slide provides our self-assessment of the  
22 Unit 2 corrective action effectiveness for restart and  
23 focuses us on the attributes that make up the key elements  
24 of problem identification, evaluation, resolution and  
25 effectiveness.

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1 Overall, Millstone Unit 2 is now demonstrating  
2 effective corrective actions. From a programmatic  
3 standpoint, problem identification, the first element, is  
4 characterized by a low threshold, self-identification by the  
5 line, and a strong self-assessment program.

6 This slide shows the low threshold for problem  
7 identification for Unit 2, which has been continuously lower  
8 during the past three years. That is the number of  
9 condition reports written each year has increased. As you  
10 can see, Millstone Unit 2 is identifying about 4,000 new  
11 issues per year. This should be compared to 1992, in which  
12 there were less than 200 issues identified.

13 The number of condition reports submitted per year  
14 directly reflects the lower threshold for problem  
15 identification and increased emphasis on self-assessment.

16 Millstone 3 has also showed the same trend. What  
17 is expected -- the number of condition reports identified  
18 for Unit 3 have not been at the same rate after it restarted  
19 last July as it was during the recovery. However, the rate  
20 of identification projected to be about 3,000 per year is  
21 still impressive and underscores the fact that a strong  
22 self-assessment culture continues to exist at Millstone.

23 As a comparison the rate of problem identification  
24 at Virginia Power's North Anna or Surry station is only  
25 about half the Millstone 3 rate.

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1 This slide shows that most of the issues are being  
2 self identified. Our goal has been to self-identify 90  
3 percent of the issues. That is only 10 percent are  
4 identified by the NRC or actual events. Overall, we are now  
5 consistently meeting this goal and therefore we have  
6 recently raised the goal to 95 percent.

7 CHAIRMAN JACKSON: So your definition, I just want  
8 to be sure, of self-identification means non-NRC identified  
9 and/or not event identified?

10 MR. BOWLING: That is correct.

11 Problem evaluation, the second element, is  
12 characterized first by timely operability and reportability  
13 reviews, usually within 24 hours, and second, by timely  
14 assignment of corrective actions. Our criterion is to  
15 assign corrective actions within 30 days and we are meeting  
16 this criterion. It is currently about 26 days.

17 CHAIRMAN JACKSON: What about the work-off of the  
18 corrective actions?

19 MR. BOWLING: This is strongly influenced by the  
20 large amount of corrective actions that have to be done  
21 during this recovery, so we have this in two categories.  
22 One is to assign the corrective action. The other is to  
23 complete the corrective action.

24 The corrective action required for restart of the  
25 unit has essentially been completed. Mike Brothers will

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1 give you the specific remaining but tens of thousands of  
2 corrective actions have been completed during this recovery.

3 This slide shows that we are also sustaining a  
4 high quality rating for condition report evaluations for  
5 root causes and assignment of corrective actions. We  
6 evaluate quality on a scale of zero to 4 with an average of  
7 3 -- no significant quality issues being the goal. We have  
8 consistently met this goal as well.

9 CHAIRMAN JACKSON: How do you arrive at the  
10 scoring and what is good and what is not good?

11 MR. BOWLING: We have a management review team  
12 which reviews the line's determination of the root causes  
13 and assignment of corrective action and this team is in  
14 place permanently so that it looks at all of the corrective  
15 actions. They have a good baseline.

16 CHAIRMAN JACKSON: Do you have any benchmarking  
17 and is there any industry agreed-upon methodology for --

18 MR. BOWLING: I am not sure there is for this.  
19 This is one of the initiatives that we undertook in the  
20 recovery and although the evaluation of quality is  
21 qualitative or subjective, by having the same team look at  
22 many, many corrective actions you build in consistency, and  
23 so on this scale "4" would be excellence, "3" is only minor  
24 administrative problems, and that has been our goal, to have  
25 high quality from a technical standpoint and very few

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1 administrative issues.

2 Probably resolution, the third element, is  
3 characterized by strengthening the site program areas  
4 identified as key issues. The 16 key issues, and really 17  
5 as you know, that have been discussed in our briefing book  
6 and earlier by Lee, are now satisfactory for the restart of  
7 Unit 2 and continued operation of both Unit 2 and Unit 3.

8 Problem resolution effectiveness is also measured  
9 by addressing the restart backlogs in a technically sound  
10 fashion by having a low percentage of overdue corrective  
11 actions and by resolving long-standing and repetitive issues  
12 that have been identified as significant issues in the NRC's  
13 manual chapter 0350 process.

14 CHAIRMAN JACKSON: Are you satisfied with your  
15 restart backlog?

16 MR. BOWLING: The restart backlog is essentially  
17 eliminated.

18 CHAIRMAN JACKSON: So it is gone?

19 MR. BOWLING: Yes. All the things that were  
20 needed to restore operability, restore compliance to design  
21 and licensing basis have been completed with a few  
22 exceptions which Mike Brothers will address.

23 The restart backlogs are substantially complete,  
24 as I just mentioned. The percentage of overdue corrective  
25 actions are less than our acceptance criteria of 3 percent,

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1 and as was done for Unit 3, with the Unit 2 restart this  
2 criterion will be tightened from 3 percent to 1 percent.

3 Lastly, the technical closure packages for the  
4 manual chapter 0350 significant items, have been submitted  
5 to the NRC for closure.

6 Corrective action effectiveness, the final  
7 element, is assessed by our own internal self-assessment  
8 programs and by nuclear oversight. Performance indicators  
9 have been developed and are being trended to provide early

10 recognition of performance changes. Our overall assessment  
11 as well as the NRC inspections such as the OSTII and the  
12 40500 have also assessed and confirmed the effectiveness of  
13 the corrective actions programs.

14 I want to now elaborate on the effectiveness of  
15 the Configuration Management Program, the CMP. The effort  
16 involved to perform the Millstone Configuration Management  
17 Project, which restored compliance with the design and  
18 licensing basis, and our response to the ICAVP findings has  
19 been comprehensive. For Millstone Unit 2, 61 maintenance  
20 rule systems, 19 topical areas and over 100 programs have  
21 been restored to compliance.

22 The ICAVP contractor and NRC reviews of our work,  
23 which have been ongoing for almost two years, have now been  
24 satisfactorily completed. Both the ICAVP contractor and the  
25 NRC have now confirmed that the Millstone Unit 2 CMP was

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1 effective in restoring compliance with the design and  
2 licensing basis.

3 As a result of the ICAVP review, there were no  
4 confirmed Level 1 or 2 DRs, the highest safety significance  
5 levels, and the corrective action for the Level 3 DRs, the  
6 lowest safety significance, have now all been completed.  
7 Also, 44 percent of the non-restart ICAVP DR corrective  
8 actions have also been completed as of this date.

9 I do need to make note of the fact that Unit 2 did  
10 have 75 confirmed Level 3 DRs. As you know, this result is  
11 greater than the 22 DRs that were confirmed for Unit 3.  
12 There are two primary reasons I believe for the higher  
13 number on Unit 2 than on Unit 3.

14 First, Unit 2 is an older vintage plant with a  
15 less well documented design and licensing basis. Second,  
16 because of resource limitations, several technical programs  
17 were not complete when the ICAVP started, resulting in  
18 Parsons finding items before we did.

19 Examples of technical program areas not yet  
20 complete at the time Parsons initiated the ICAVP review were  
21 MOVs, electrical separation, environmental quality and high  
22 energy line break.

23 As part of the comprehensive approach, the CMP  
24 scope on Unit 2 was expanded based on ICAVP findings and  
25 lessons learned from Unit 3. The key scope expansion areas

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1 are shown on this slide.

2 From the Unit 3 CMP and the ICAVP reviews by  
3 Sargent & Lundy a number of important lessons were applied  
4 to Unit 2. This included performing integrated system  
5 reviews which looked at system to system interactions rather  
6 than just the vertical slices, addressing operational  
7 experience applicability from NRC information notices,  
8 ensuring that the licensing basis in Section 6 of the  
9 technical specifications -- these are the administrative and  
10 program requirements -- were properly implemented, ensuring  
11 that the commitments of NUREG-0737, the post-TMI  
12 requirements were still being complied with, and finally,  
13 reviewing the engineering design modification packages to  
14 ensure quality and functionality.

15 I am very pleased to say that there were not any  
16 significant new issues found from these lessons learned from  
17 Unit 3 that were applied to Unit 2.

18 CHAIRMAN JACKSON: Are there any crosconnects  
19 between the two plants that need to be evaluated as part of

20 the ICAVP?

21 MR. BOWLING: The major one is the effect of  
22 certain design basis accident analysis in terms of radiation  
23 releases from one unit on the other. Those were thoroughly  
24 evaluated as part of the safety analysis but in terms of  
25 hardware systems, Mike?

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1 MR. BROTHERS: Between Unit 2 and Unit 3 they are  
2 minimal. However, between Unit 2 and Unit 1, primarily in  
3 the electrical area we have some interdependence that was  
4 evaluated as part of CMP for Unit 2.

5 CHAIRMAN JACKSON: Let me take you back to  
6 something. It really has to do with backlogs again and  
7 restart backlogs.

8 You revised your commitment in a letter to NRC  
9 associated with the completion with any ICAVP discrepancy  
10 report corrective actions. You use risk insights, I assume,  
11 in making these -- in prioritizing this, is that correct?

12 MR. BOWLING: Right. The backlog that we're  
13 referring to in our revised commitment is the backlog that  
14 was deferred from the restart of Unit 3. Now that backlog I  
15 think in order to properly characterize it in terms of risk  
16 and safety significance was all below the threshold of  
17 meeting or requiring compliance to design and licensing  
18 basis. It was all below that, so for example the  
19 administrative findings from Sargent & Lundy was Level 4s  
20 and other non-risk, non-maintenance rule maintenance work  
21 orders and design issues that did not have any risk or  
22 safety significance, at least at a level above design and  
23 licensing basis, but that is the population that we are  
24 talking about.

25 CHAIRMAN JACKSON: Now you know in many plants

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1 circulating water causes a problem, and you had a manual  
2 trip because of clogging of the circulating water screens.

3 MR. BOWLING: Right.

4 CHAIRMAN JACKSON: And my understanding from the  
5 Staff is that at least a contributing factor had to do with  
6 an inability to reverse the screens, and that had to do with  
7 some degraded equipment that was pending repair.

8 MR. BOWLING: I think the lesson learned from that  
9 specific example and then several others that we had was  
10 that we were dealing with a rather large deferred backlog  
11 and in the first six months after restart, significant  
12 progress was made in reducing the bulk numbers of that  
13 backlog, but clearly it was taking resources away from the  
14 operational focus and I think that was one of the reasons  
15 for the challenges we were having in the second half of '98,  
16 so we needed to target that backlog with what was really  
17 important, and that is what we have done with the revised  
18 commitment, so the bulk may be deferred but those key things  
19 that would challenge, and that is from our perspective what  
20 we call not having a good operational focus, that that is  
21 what we now have our resources focused on.

22 CHAIRMAN JACKSON: You say you have drawn that  
23 lesson from this event and others?

24 MR. BOWLING: Yes, the lesson from the first few  
25 months of operation after Unit 3 went into service, even

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1 though we made substantial progress in reducing the backlog

2 as we had committed to.  
3 MR. AMERINE: Chairman Jackson, if I might add to  
4 that, when Commissioner Dicus and Commissioner Merrifield  
5 visited Millstone I gave them the projections for a majority  
6 of that backlog, which is the engineering backlog. I am  
7 happy to report that for Unit 3 we are on track. Just since  
8 that time we have gone from, in the design engineering  
9 technical support area, we have gone from a roughly 1800  
10 down to 1400 and the DR portion of that, that coming out of  
11 Sargent & Lundy, has gone from approximately 500 down to  
12 about 350, so we are right on track with the projections  
13 that I showed you at that time in Unit 3.

14 In the projections I showed you for Unit 2, of  
15 course, was what we would expect the backlog to be at the  
16 time of startup, and in the area of design, engineering and  
17 technical support we are probably going to be about 400  
18 under what we thought it would be, and I think that is  
19 simply one, because of the extra time involved, and the  
20 other one because again the lessons learned from Unit 3,  
21 there's been a focus on closing things as soon as they come  
22 up if at all possible.

23 CHAIRMAN JACKSON: Actually, you know, what is of  
24 less import to me than your numerical quotes is what  
25 undergirds them and I bring up circulating water because

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1 that in many places, you know, where you have debris, you  
2 have grass intrusion, whatever it is, and particularly it is  
3 exacerbated whenever there's storms or high winds and so  
4 forth, and so an issue to me is being able to have an  
5 operational and a risk focus and a focus on those things  
6 that would cause operational challenges, and not numbers.

7 I mean you could have, you know, 1500 things and  
8 you could have worked down 1300, and in that last 200  
9 there's one thing that has the greatest risk and/or  
10 operational significance, and that is what I am interested  
11 in hearing you say but I am not hearing you say it.

12 That is of concern --

13 MR. BROTHERS: Chairman, if I could add --

14 CHAIRMAN JACKSON: Hold on. Let him speak and  
15 then we'll let him speak -- let you speak.

16 MR. OLIVIER: As a result of the operator  
17 challenges that we had with seaweed and some of the other  
18 issues, we did implement some major changes.

19 Number one, the first one, is -- it gets back to  
20 what we talked about earlier, and that is listening to the  
21 people, especially the shift manager, the operations crews,  
22 the PEOs.

23 One of the things we did in the December outage is  
24 we went to them and said what needs to get fixed? You are  
25 the right people to tell us what needs to get fixed. We

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1 worked down a lot of that backlog and you can see the  
2 results of how well the plant is running now.

3 The other thing we did is we set up daily meetings  
4 for Unit 3, which is chaired by the Station Director, but  
5 the shift manager opens that meeting and talks about plant  
6 conditions and what his needs are of the site to support  
7 safe and reliable operations.

8 Mike Brothers has put together an aggregate impact  
9 indicator and it did a lot as far as listening to the  
10 organization and not just relying on KPIs.

11 CHAIRMAN JACKSON: Okay. Mr. Brothers?



12 MR. BROTHERS: Yes, thank you. If I could have  
13 back up Slide Number 41, Dick, please.  
14 This slide here is demonstrating exactly what  
15 Marty and Lee have been talking about. This is the Unit 3  
16 backlog. June 1998 was our final submittal for the  
17 post-restart backlog status for Unit 3. As you can see, in  
18 the bulk numbers dramatic progress has been made, but what  
19 was happening in this, and I have talked about it and we  
20 have adjusted the commitment for Unit 2 is in the key areas  
21 there -- the small numbers, temporary mods, operator  
22 workarounds, control room deficiencies -- you are not seeing  
23 a whole lot of movement, okay?  
24 What was happening is that our commitment on low  
25 significance backlog was actually distracting us from

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1 working on those things that have impact to operations, so  
2 in December, following the automatic trip from MSIVs, we put  
3 together a unit team with several SROs on it called the  
4 UDIC, which goes back to, evaluates the backlog once again  
5 and repriorizes that based upon operational impact.  
6 We then went and talked to the region and  
7 subsequently submitted a letter asking for a change in the  
8 commitment with this in mind. We think it's the right thing  
9 to do.  
10 CHAIRMAN JACKSON: Okay.  
11 COMMISSIONER DIAZ: If I may jump on that and I am  
12 going now to the bottom line, I can see that you have  
13 developed an extraordinary set of what I would call overview  
14 and assessment devices that are above the line workers, but  
15 like Chairman Jackson was saying, the bottom line remains  
16 can the people on the line perform at the level that is  
17 adequate, and that is one thing that is critical for the  
18 Commission to know, that it's not all the organization.  
19 Those are fine. You have done obviously a good job in  
20 providing layers to assess and move and correct, but is the  
21 core group of people at Millstone capable of performing the  
22 functions as they should? That is a key question.  
23 The second thing is you all appear to be quite  
24 satisfied with the progress and my question is are the  
25 workers satisfied with the progress? If you could answer

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1 those two questions --  
2 MR. OLIVIER: I think in terms of the people, in  
3 terms of having the motivation, the desire, the skill set,  
4 you know, they've got it. These people are top-notch  
5 nuclear professionals. They have also been through a rough  
6 time. They have been through a rough two to three years.  
7 They never want to go back there again. They want to be  
8 known as one of the best dual unit operating sites in the  
9 country.  
10 When they look at themselves they compare  
11 themselves to ANO, because that's a plant, that's a site  
12 where there's two large plants, totally different design,  
13 that end up producing world class numbers over and over  
14 again. They want to be like ANO. they want to benchmark  
15 against facilities like that. They really do want to move  
16 forward, so I think in terms of the skill set, the desires,  
17 the motivation, it is clearly there, perhaps here more than  
18 any other site that I have visited.  
19 The line organization and executive management is  
20 supporting our people and have told our people that they are

21 going to be part of the solution, part of the change  
22 process, so I think we have alignment with ourselves and the  
23 workers.

24 COMMISSIONER DIAZ: Do they believe it?

25 MR. OLIVIER: They believe it. In fact, I had a

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1 meeting -- I meet with the various organizations early in  
2 the morning, 7 a.m. -- I had a meeting with 80 to 100 people  
3 in maintenance on Friday morning and we talked just about  
4 this issue. We talked about safety-conscious work  
5 environment, how they feel about safety-conscious work  
6 environment. How do they feel about Focus '99 and the  
7 direction that the plant is going in? -- and we got a lot  
8 of good feedback, you know, some of it critical but most of  
9 it on board and aligned with where we want to go.

10 COMMISSIONER DIAZ: Okay. Are there lessons  
11 learned from Unit 3 regarding not giving too much attention  
12 to very low items? Are they being now used for the startup  
13 of Unit 2?

14 MR. OLIVIER: We have taken the lessons learned  
15 there with, again as part of our commitment change to NRC we  
16 have included Unit 2 as well, and we are putting together a  
17 key group of people of operations, engineering, maintenance  
18 people to make sure that when we go back on line that the  
19 online maintenance is prioritized appropriately to reduce  
20 the risk to reliability and challenges to the unit.

21 MR. BOWLING: Okay. Let me pick up the briefing.

22 The next item has to do with the Technical  
23 Requirements Manual, which is a document where the technical  
24 specifications are relocated when no longer required and in  
25 some cases for further clarifying existing technical

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1 specification requirements.

2 We did have one significant finding by the NRC  
3 with one of these clarification of requirements for allowed  
4 outage time of the auxiliary feedwater system. As a result  
5 the NRC cited this as a Level 3 violation. We have taken  
6 comprehensive corrective action to address this violation.  
7 In addition, we reviewed the entire Technical Requirements  
8 Manual for similar problems. We did not find any.

9 Finally the scope was expanded due to the ICAVP  
10 contractor findings in the area of single failure  
11 assumptions and control of safety analysis inputs to ensure  
12 that programmatic controls were adequate and that the extent  
13 of condition was known. No new significant issues were  
14 identified from these reviews either.

15 Another good measure of effectiveness which is  
16 shown on this slide is the ratio of self-identified to  
17 ICAVP-identified items as well as the safety significance of  
18 the ICAVP identified items. Based on these criteria, the  
19 Unit 2 Configuration Management Reviews did identify most of  
20 the safety significant issues. During the past several  
21 years we have submitted 119 Licensee Event Reports, LERs.  
22 Of these, 114 LERs or 96 percent, were self-identified.

23 With respect to safety significance, we have  
24 utilized risk-informed insights to classify these LERS as  
25 low, moderate or high safety significance. Most were of low

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1 to essentially no safety significance.

2 Also, there were no LERS identified during the  
3 ICAVP reviews that were of high safety significance.

4 In addition to restoring compliance with the  
5 design and licensing basis, we have also had to put in place  
6 the organization and processes to maintain compliance. A  
7 permanent Configuration Management organization now resides  
8 in the Nuclear Engineering Department under Dave Amerine,  
9 and is responsible for owning, enhancing and self-assessing  
10 the Configuration Management Programs.

11 Also provided by the Configuration Management  
12 organization is a unit configuration control function which  
13 helps monitor and ensure that configuration control is  
14 maintained across the site.

15 Finally, an Engineering Assurance function has  
16 been put in place to assess engineering adherence to the  
17 design control program. Appropriate training has also been  
18 provided site-wide for Configuration Management and 50.59  
19 safety evaluations.

20 Ongoing line assessment, engineering assurance and  
21 unit configuration team reviews as well as nuclear oversight  
22 findings are being used to monitor performance.

23 A complete description of our going forward  
24 Configuration Control Program was provided in our February  
25 5th submittal to the NRC Staff. It should be noted that the

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1 Unit 2 and Unit 3 configuration control programs are  
2 essentially identical now, as we transition to a single site  
3 focus.

4 In closing, I would like to say that Millstone  
5 does have a firm basis for the closure of the ICAVP order  
6 and informed the NRC Staff on March 23rd that all the  
7 requirements of the order have been completed.

8 Also, the corrective action program is healthy and  
9 will support safe operation. The extraordinary effort over  
10 the last three years to restore compliance with the design  
11 and licensing basis is now complete. The effort will serve  
12 Millstone well because it has resulted in higher standards  
13 for maintaining both regulatory compliance and design  
14 configuration control.

15 Millstone now has a deeper understanding of its  
16 design basis and safety limits and as a result will be able  
17 to better reduce risk and preserve safety margins. I am  
18 confident that Millstone will meet these expectations, and  
19 with that my role over the past two and a half years in  
20 helping to recover Millstone is now also complete.

21 If there are no further questions, I turn it over  
22 to Mike Brothers.

23 CHAIRMAN JACKSON: Are you preparing to leave?

24 MR. BOWLING: Yes.

25 MR. BROTHERS: Thank you, Marty. Good afternoon.

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1 I am pleased to have the opportunity today to discuss  
2 Millstone Unit 2's readiness to resume operation. My  
3 presentation today will give an overview of the amount of  
4 work accomplished since Millstone Unit 2 shut down in  
5 January of 1996. Our current assessment of departmental  
6 readiness, human performance, as well as a discussion of our  
7 proposed startup backlog that will exist when Millstone Unit  
8 2 resumes operation.

9 This slide gives an overview of the amount of work  
10 accomplished since Unit 2 shut down in 1996. These numbers,  
11 shown in the left-hand column, are current as of April 5th.  
12 They have mostly come down. For instance, in the area of

13 restart tasks, April 5th we had 88. We now have 29 restart  
14 tasks allowed out of almost 17,000.

15 The right-hand column is to give some sense of the  
16 amount of work done in each category during this shutdown.  
17 I am not going to cover every category in this slide.  
18 Suffice it to say that all the categories with the exception  
19 of temp-mods and operator workarounds will be at zero prior  
20 to entry into Mode 2. The goal for both of these remaining  
21 two categories is less than or equal to 10. Both of these  
22 will be at goal prior to entry into Mode 2.

23 This slide gives our organizational assessment of  
24 effectiveness as of April 5th as well. As of today all of  
25 our assessments are satisfactory with the exception of work

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1 planning and outage management, as Lee Olivier discussed  
2 earlier. Work planning an outage management will remain in  
3 attracting a satisfactory mode until all activities are  
4 complete to support the restart of Unit 2.

5 As you know, a decision was made on April 5th to  
6 cool the plant down to Mode 5, which is cold shutdown, to  
7 effect a repair on a shutdown cooling valve. That repair is  
8 in progress, but the evolution to cool the plant down,  
9 repair the valve and send this to normal operating  
10 temperature and pressure has delayed our completion of all  
11 restart related activities. We had planned to be done  
12 today.

13 Work planning and outage management however will  
14 be satisfactory for restart prior to entry into Mode 2.

15 This form of assessment, as I have talked before,  
16 is different and complementary to the Nuclear Oversight  
17 Verification Plan. For instance, what we look at here is  
18 departmental readiness and what Ray will look at is  
19 programmatic readiness. The distinction would be like for  
20 instance corrective action here being rated Green as looking  
21 at the effectiveness of the corrective action departments,  
22 whereas Ray Necci and the Nuclear Oversight Verification  
23 Planning is looking at the overall effectiveness of the  
24 corrective action program.

25 This slide does indicate that we will be ready to

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1 organizationally enter Mode 2.

2 This next slide shows our percentage of low  
3 significance precursors as a percentage of all human errors.  
4 We continue to meet our goal of having greater than or equal  
5 to 95 percent of all human error events be of a low  
6 significance precursor type.

7 I have discussed this in several previous meetings  
8 and what this means is that a low significance precursor  
9 event is an event in which a barrier breaks down but no  
10 consequences result. Having a high percentage of human  
11 error events be of a low significance precursor type allows  
12 us to implement corrective actions at a lower level which  
13 further decreases the probability of human error occurring  
14 which results in significant consequences. This metric is  
15 acceptable to support restart.

16 This slide shows our current online corrective  
17 maintenance backlog. In a fashion similar to Millstone Unit  
18 3 and in fact typical of all outages, the online backlog is  
19 increasing as the outage draws to a close. That's because  
20 we now focus on work that has to be done while the unit is  
21 shut down and let deferrable items that can be done while  
22 the unit is online increase. This increase was anticipated

23 and as the indicators shows we're still meeting our goal for  
24 maintenance rule or safety significance backlog.

25 If I could have backup slide Number 42.

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1 MR. BROTHERS: Performance on Millstone 3 was  
2 similar. In fact, I will talk about the background numbers  
3 on Millstone Unit 3 when we returned to service. We had 583  
4 power block and about 320 maintenance rule items. We have  
5 steadily reduced that backlog since we have been on line.  
6 In fact, we have not only reduced it, but we have reduced  
7 our goal. The goal on Unit 2 right now is 500 power block,  
8 350 maintenance rule.

9 As you can see on this metric, the goal for Unit 3  
10 is 400 power block and 200 maintenance rule, which we are  
11 meeting both. In fact, we have 370 corrective maintenance  
12 items at this time in a backlog, which is a very good number  
13 for a plant Millstone's size. Of that, only 145 are  
14 maintenance rule AWOs. Similar performance is expected on  
15 Millstone Unit 2.

16 This population of corrective maintenance backlog  
17 has been assessed and found acceptable to support restart.

18 COMMISSIONER MERRIFIELD: Mr. Brothers, going back  
19 to slide 30, I notice that there is a spike for the week of  
20 April 2nd. Now, I take you say that that was anticipated  
21 that there would be a spike?

22 MR. BROTHERS: Yes. At the end of Unit 3's period  
23 the same thing happened. What is happening, the way I  
24 described this before, and I did remove it from my remarks,  
25 but I will use it again. What happens, and if you look at

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1 outage backlog and non-outage backlog, they are like a sine  
2 and cosine curve, they are out of phase. When you are  
3 online, your online backlog goes down and your outage  
4 backlog goes up because you can't get to it. And when you  
5 are offline, your outage backlog goes down and your online  
6 backlog goes up because you have the opportunity to get to  
7 it once you get back online.

8 We still, however, applied the same deferral  
9 criteria that we applied throughout our assessment, and  
10 anything that was in fact identified as doing online or  
11 deferrable met that criteria.

12 COMMISSIONER MERRIFIELD: Okay. Do you have any  
13 information about the week of April 9th, whether there has  
14 been a further spike?

15 MR. BROTHERS: No, in fact, it is coming down. It  
16 has turned. That was 683, it is 674 now, so it is coming  
17 back down. We have added resources to this. We are going  
18 to make every effort to get it to 500, but similar to Unit  
19 3, we probably will miss it by 60 or 70, but it coming down  
20 now, it is not going up anymore.

21 COMMISSIONER MERRIFIELD: Thank you.

22 COMMISSIONER JACKSON: Thank you.

23 MR. BROTHERS: Could I have slide 31, please?  
24 This slide gives a breakdown of our restart backlog. The  
25 final numbers are planned to be transmitted to the NRC

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1 approximately 30 days following entry into mode 2, as our  
2 final response to 10 CFR 50.54(f), question number 2.

3 These numbers are in rough agreement with the  
4 numbers submitted for Millstone Unit 3 on June 30th, 1998,

5 and I showed that slide earlier. As a comparison, the  
6 corrective action assignments for Millstone Unit 2 at 3,036  
7 was 3,915 for Millstone 3. Corrective maintenance ABO was  
8 664, was 583 as I discussed earlier. In rough agreement  
9 across the board.

10 Two areas, however, in the Millstone Unit 2's  
11 backlog, they are not listed, is nonconformance reports were  
12 57 on Unit 3, which are already at zero. And configuration  
13 management which was included as a separate category,  
14 effectively doubled-counted on Millstone Unit 3 is now  
15 included as a part of the corrective action assignments.

16 Our performance in backlog reduction, as I  
17 discussed earlier, has been good on Unit 3 and similar  
18 performance is expected on Unit 2. This population has been  
19 reviewed both internally and externally with no significant  
20 findings. As I said before, our backlog has been assessed  
21 both individually and on an aggregate basis using risk  
22 insights and found acceptable to support restart.

23 COMMISSIONER JACKSON: You have an asterisk and  
24 you say 254 of the 664 are risk significant. How do you  
25 justify restart with any risk significant items?

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1 MR. BROTHERS: That 254, going back to the  
2 previous slide 30 is the bottom bar in the corrective  
3 maintenance. Go back to slide 30, please. The solid  
4 portion of that bar is the 254. That is the counting of  
5 those items right there. Corrective maintenance backlog for  
6 maintenance rule systems. So, in other words, you can have  
7 a corrective maintenance item, for instance, for a  
8 temperature indicator on a maintenance rule system. You  
9 have to assess individually that it is acceptable for  
10 deferability. However, you still have to effect both  
11 reliability, operability and reportability and they have to  
12 meet all those rungs before you can, in fact, defer it.

13 COMMISSIONER DICUS: Let me follow up on that  
14 question because on the same situation you say that your  
15 goal is to get down to less than 350. But what part of that  
16 goal would be those that you are getting to that you call  
17 risk significant?

18 MR. BROTHERS: The definition is only that it is  
19 on a risk significant system. There is no -- it is simply  
20 an indicator that it is a corrective maintenance item that  
21 is on our risk significant system. Each of those is in fact  
22 evaluated individually for deferability, and it has to meet  
23 deferable criteria in order to be on this, otherwise, it has  
24 to be worked. It is just an indicator of health of the  
25 maintenance rule systems, as well. In other words, we want

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1 to track both power block, corrective maintenance, and in  
2 the subset of that, maintenance rule corrective maintenance.

3 COMMISSIONER DICUS: Okay.

4 COMMISSIONER JACKSON: I am giving an  
5 advertisement that I am going to ask the staff about this.

6 MR. BROTHERS: Slide 32.

7 COMMISSIONER MERRIFIELD: I have one question, one  
8 last question about slide 31. As systems return to service,  
9 obviously, you may have emergent problems that may come  
10 about that may affect temporary mods, operator work-arounds,  
11 control room deficiencies. To what extent prior to restart  
12 do you intend analyze that to determine whether they may  
13 present some kind of an undue challenge to the operators who  
14 are getting ready for those restart activities?

15 MR. BROTHERS: We are required as part of our  
16 special procedure for restart, changing each mode to do a  
17 mode change assessment which does exactly that. It looks at  
18 the health of systems. It looks at operator impact. It  
19 looks at all of those items prior to making a mode change.  
20 So we are in mode 5, we will do for mode 4, for mode 3, for  
21 mode 2 and for power ops. We have already done up to and  
22 including mode 3 and we will do it again as we transition  
23 back through those modes again. But that is really the  
24 purpose of the mode change assessment, the unit leadership  
25 looks at and assesses the ability of the unit to go into the

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1 next mode on an aggregate standpoint.

2 COMMISSIONER JACKSON: Okay.

3 MR. BROTHERS: Okay. The path to nuclear  
4 excellence issue includes the following near term  
5 milestones. First, and our highest immediate priority is  
6 the safe return to power operation to Millstone Unit 2. To  
7 address the goal of safe return operation, we have applied  
8 the principal lessons learned from the startup and early  
9 power operation of Millstone Unit 3. The preliminary  
10 results of operational safety team inspection validate our  
11 conclusion that we are ready to safely return Millstone Unit  
12 2 to service.

13 Second, our next priority as a station is the safe  
14 conduct of the scheduled Millstone Unit 3 refueling outage  
15 in May and June of this year. Although outage planning  
16 began late on Unit 3, outage planning is progressing and  
17 expected to be complete by April 17th.

18 Third, after the completion of Millstone Unit 3  
19 refueling outage, we will complete our transition to the  
20 site organization previously discussed by Lee Olivier. The  
21 structure of the new organization is devised to provide a  
22 structured operational focus by providing clear lines of  
23 responsibility for operations, engineering, maintenance and  
24 support organizations.

25 Our fourth priority this year is to start a

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1 program of process improvement at Millstone Station. This  
2 process improvement program will make extensive use of  
3 industry benchmarking to make process improvements in  
4 several key processes, including work control and asset  
5 management.

6 My final slide shows the two milestones which  
7 remain to return Millstone Unit 2 to service. Due to the  
8 need to cool down and repair a leaking valve, our mode 2  
9 readiness date has been reevaluated and is expected to occur  
10 approximately April 24th, with mode 1 following by  
11 approximately two days.

12 What remains are a handful of items out an initial  
13 population of thousands to be ready for restart. It is  
14 essential that we keep in mind that simply being ready for  
15 restart is by no means excellence. After being shut down  
16 for 39 months and learning from the restart experience of  
17 Millstone Unit 3, this is simply the next step in our path  
18 to excellence in nuclear operations. That step, however,  
19 signifies a monumental effort by the men and women of  
20 Millstone station.

21 I am personally proud today to tell you that we  
22 believe that, following the repair to the shutdown cooling  
23 valve mentioned earlier, the unit will be physically ready,

24 the organization is adequately staffed and trained, and the  
25 operations organization is ready to safely return Millstone

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1 Unit 2 to service.

2 That concludes my presentation. If there aren't  
3 any further questions, I will turn it over to Ray Necci to  
4 discuss nuclear oversight's assessment of Millstone Unit 2's  
5 readiness.

6 MR. NECCI: Thank you, Mike.

7 Good afternoon. I would like to provide nuclear  
8 oversight's independent assessment that Millstone 2 is ready  
9 for a safe restart and for continued safe operation. We  
10 have reached this conclusion by combining the results of our  
11 audits, assessments and management observations. These  
12 results are an integral part of our regular review of the  
13 unit's readiness for restart, the nuclear oversight  
14 verification plan, or NOV P as we call it.

15 As we have discussed at previous Commission  
16 meetings, the NOV P review process evolved from the oversight  
17 assessment of the 16 key issues that were the basis for the  
18 Millstone recovery plan.

19 COMMISSIONER JACKSON: Can you all start calling  
20 them the 17 key issues?

21 MR. NECCI: Yes, Chairman.

22 MR. BROTHERS: Yes, we can, and will.

23 MR. NECCI: As I was saying, oversight's  
24 assessment of the 17 key issues --

25 [Laughter.]

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1 COMMISSIONER JACKSON: Sixteen of the 17.

2 MR. NECCI: That were the basis for the Millstone  
3 recovery plan that Lee Olivier spoke about earlier. After  
4 the restart of Millstone 3, the NOV P continued to cover 10  
5 key issues specific to Millstone 2 and four common site  
6 programs. In all these areas, nuclear oversight believes  
7 that Millstone Unit 2 is ready for restart.

8 Nuclear oversight's review of Unit 2's readiness  
9 included the NOV P reviews and a close tracking of open  
10 issues on the oversight mode issue list. Oversight was  
11 actively involved in evaluating the unit's readiness to  
12 change modes by interfacing with the line on key issues and  
13 by independently evaluating results.

14 In addition to the above activities, we  
15 established control room coverage prior to the entry into  
16 mode 4 and we will continue to maintain coverage through the  
17 power ascension test program. This coverage involved  
18 control room observations and in-plant rounds with equipment  
19 operators. Oversight approval was required prior to the  
20 entry into mode 4 and then mode 3, and will be required  
21 prior into the entry into mode 2.

22 The next slide shows the NOV P results from our  
23 March 24th review. I would like to point out that  
24 operations and engineering were rated satisfactory or green  
25 at our April 7th NOV P meeting held last week. Millstone 2

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1 operations has continued to improve their performance as  
2 they move the unit from mode 5 up to the point of being  
3 ready to enter mode 2.

4 Nuclear oversight's around the clock coverage has  
5 shown positive observations related to the conduct of  
6 operations. Operator diligence and procedure



7 implementation, questioning attitudes and control of  
8 operational evolutions is evident across all of the shifts.

9 In addition to control room observations, nuclear  
10 oversight observed valve line-ups and the placing of  
11 equipment into service as the unit heated up.

12 During the transition to mode 4 there were several  
13 cases of operational configuration control lapses and a  
14 missed technical specification surveillance. Although unit  
15 management's response to these were timely and strong,  
16 continued vigilance is needed in this area. Recent  
17 performance in mode 3 and then in the return of the unit  
18 back down to mode 5 has been acceptable.

19 The performance of engineering was also rated as  
20 satisfactory to support restart at the April 7th NOVP.  
21 Also, nuclear oversight's review indicates that the  
22 necessary process and procedures are in place to support the  
23 unit's configuration management on a going forward basis.

24 The independent reviews performed by the system  
25 engineers to support system readiness were generally good.

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1 We do see the need for system engineers to shift more fully  
2 into an operating plant mode. This will ensure that system  
3 performance will be closely monitored and will start to move  
4 the unit towards industry leadership levels. This was a  
5 lesson learned from Millstone 3, and the ability for the  
6 system engineers to monitor plant performance on a going  
7 forward basis. So this is a lesson that we have learned and  
8 moved to Millstone 2.

9 Our assessment of the restoration and  
10 documentation of the key aspects of the unit's safety  
11 analysis showed that key critical parameters were adequately  
12 documented in a safety functional requirements manual. This  
13 issues was identified by Parsons as part of the ICAVP.  
14 Based on oversight's review, and the line's expansion of  
15 scope, we believe that this is now acceptable for restart.  
16 Engineering will continue to meet the focus on the quality  
17 of engineering products, as was discussed earlier today.

18 The environmental monitoring program is ready for  
19 restart in the area of compliance with NRC regulations. We  
20 continue to show the yellow window on the NOVP because our  
21 environmental performance in meeting State of Connecticut  
22 discharge permit requirements needs to continue to improve.

23 Additional efforts that are being implemented  
24 include site-wide training for our personnel and the  
25 establishment of a quick response environmental team. This

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1 quick response team was modeled on our people team concept,  
2 which was successful in addressing safety conscious work  
3 environment issues, and will be used to quickly address  
4 environmental issues as they arise.

5 In conclusion, I would restate that oversight  
6 believes that Millstone 2 is ready for a safe restart and  
7 for safe continued operation. Also, we have judged that we  
8 have met the restart affirmation criteria number 7, which  
9 was titled, "Management Control and Oversight Assurance That  
10 Performance Will Be Maintained."

11 This means that an integrated set of assessments  
12 and management controls are in place to set priorities,  
13 reinforce standards and to take appropriate corrective  
14 action. These assessments and controls included effective  
15 self-assessment and corrective action programs, strong

16 independent assessments by nuclear oversight and an  
17 affective Nuclear Safety Assessment Board which provides  
18 independent oversight of the line and internal oversight  
19 functions. These controls will ensure that Millstone's  
20 performance will not backslide.

21 Additional controls include an Executive Review  
22 Board which ensures that safety conscious work environment  
23 factors are considered with any significant personnel  
24 actions. Engineering Quality Review Boards continue to set  
25 or reinforce Millstone's commitment to high standards. And

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1 the Nuclear Committee of the NU Board of Trustees and the  
2 Nuclear Committee Advisory Team provide support and  
3 oversight on nuclear issues.

4 I see that nuclear oversight will play a key role  
5 in improving our future performance. I am extremely pleased  
6 with the tremendous progress that oversight has made during  
7 this recovery in being intrusive, by focusing the line on  
8 the right issues and of setting high standards. And I can  
9 assure that this would continue.

10 As the next slide indicates, we will continue to  
11 help Millstone move to a higher level of performance by  
12 evaluating that performance against a criteria that is  
13 higher than the restart criteria. We will base our reviews  
14 on industry and IMPO standards. This raising of the bar  
15 will move both units to higher levels of performance and  
16 eventually up to a level that is amongst the best in the  
17 industry.

18 If there are no questions, I would like to turn it  
19 back to Lee.

20 COMMISSIONER JACKSON: Well, I have a general  
21 question before, Mr. Oliver, you summarize. In the January  
22 meeting we discussed several drain down events that  
23 occurred. Have you been able to assess the significance of  
24 those events and do any of them meet any of the IMPO  
25 criteria for significant events?

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1 MR. OLIVIER: This was with the spent fuel pool?

2 COMMISSIONER JACKSON: Yes.

3 MR. OLIVIER: We have made the assessment, and to  
4 the best of my knowledge, they do not meet any of the IMPO  
5 criteria.

6 MR. BROTHERS: That is correct. There were two  
7 events in which we had water move from our safety injection  
8 tanks into the reactor coolant system associated with motor  
9 operator valve testing and then, finally, the procedural  
10 inadequacy which resulted in two inches of water from a  
11 spent fuel pool to what we call clean liquid rad waste. We  
12 have run that past and it does meet the threshold for SOER.

13 COMMISSIONER JACKSON: Okay. So now.

14 MR. OLIVIER: In closing, I would like to touch on  
15 two issues. Number one, we have had a lot of discussion on  
16 backlog reduction. We have made a commitment to you to  
17 reduce the backlog. We will keep that commitment. We will  
18 put together a plan, work the plan, and we are going to  
19 monitor the plan with KPIs, our key performance indicators.  
20 We will work on the backlog. We understand that working  
21 down the backlog is the best way, one of the best ways we  
22 can reduce our risk and help focus the organization on items  
23 that are more important.

24 The second issue is that we are committed to our  
25 people. We believe we have the right people. We are

1 committed to listen to our people, to make sure that they  
2 have the skill set that they need to go forward, so that we  
3 can be successful together, and also to make sure that our  
4 people participate with us in moving forward and creating  
5 alignment, and achieving best of best practice. Thank you.

6 COMMISSIONER JACKSON: Thank you. Any further  
7 comments?

8 [No response.]

9 COMMISSIONER JACKSON: We will take our 12:30  
10 break and reconvene at 2:00. Thank you.

11 [Whereupon, at 1:00 p.m., the briefing was  
12 recessed, to reconvene at 2:15 p.m., this same day.]

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1 A F T E R N O O N S E S S I O N

2 [2:15 p.m.]

3 COMMISSIONER JACKSON: Good afternoon. We will  
4 continue with our meeting. We have with us Mr. Eric  
5 Blocher, the Deputy Project Director on the ICAVP Project  
6 from Parsons, and Mr. Dan Curry, the Project Director, and  
7 Vice President of Nuclear Services, Parsons Power Group.

8 So, gentlemen, please proceed.

9 MR. CURRY: Good afternoon, Chairman Jackson and  
10 fellow Commissioners. I am pleased to be here today to  
11 present our results from the Unit 2 ICAVP. We did in  
12 December of last year submit our executive summary, followed  
13 up on January 12th by volume 2 of our report on the ICAVP.  
14 On March the 19th we submitted a supplement which dealt with  
15 our review of a number of corrective action issues that were  
16 generated out of the level DRs that we had generated during  
17 the inspection. Northeast has responded to each one of  
18 those documents to the staff in docketed correspondence.

19 I would like to review just a little bit to kind  
20 of give you an idea of the objectives and the extent to  
21 which we inspected Unit 2. As you see from the order in  
22 1996 the objectives were to verify for the selected systems  
23 that Northeast Utilities' configuration management program  
24 had identified and resolved existing problems with the  
25 design and licensing basis, and that Northeast Utilities had

1 documented and utilized the design and licensing basis for  
2 those systems properly and that Northeast had established  
3 programs and procedures and processes for effective  
4 configuration management in the future.

5 Just a slight clarification to make sure we  
6 understand that because of the Unit 3 going first, the  
7 site-wide programs were reviewed as part of Unit 3, whereas,

8 we looked at specifically those configuration management  
9 changes that have been done on Unit 2 alone.

10 Our structure for the ICAVP was done with three  
11 tiers, plus our corrective action organization. By far the  
12 largest was our tier 1, which performed an in-depth review  
13 of 11 selected system groups to verify that the systems meet  
14 the design and licensing basis. Tier 2 was to verify that  
15 the system design parameters relied upon to mitigate the  
16 consequences of the potential accidents were consistent with  
17 the performance of the current system configuration.

18 I would certainly comment that this is something  
19 unique to the ICAVP from the inspections that have been done  
20 in the past, and proved to be a very important portion of  
21 the inspection.

22 Our third portion was a verification of the  
23 configuration control processes and making sure they had not  
24 introduced any changes to the unit that might have put them  
25 in nonconformance with the design and licensing basis. And

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1 this was extensive and I think starts to show the depth and  
2 the breadth of our inspections.

3 The tier 1 scope, we were assigned four systems  
4 and, really, they comprised 11 of those maintenance group 1  
5 and 2 systems. Auxiliary feedwater, high pressure safety  
6 injection were selected for our first two system groups, and  
7 then radiological release control and the emergency diesel  
8 generator were selected secondly.

9 COMMISSIONER JACKSON: Can we have --

10 MR. CURRY: If I can just give you some idea of  
11 the magnitude, when we look at the licensing and design  
12 basis issues, 992 calculations, 1700 components were  
13 reviewed, 236 modifications were reviewed in-depth, 337  
14 operating maintenance and test procedures. We combined that  
15 with physical configuration by plant walkdowns, utilizing  
16 the application of all the regulatory, programmatic  
17 requirements, and you start to see the thoroughness with  
18 which this plant has been inspected.

19 COMMISSIONER JACKSON: How does the magnitude of  
20 this project compare to others you have been involved in?

21 MR. CURRY: Certainly, I think the closest thing  
22 for us to compare it with would be the support we provided  
23 utilities when they were looking at EDSFIs or SSFIs. And I  
24 am not sure I can give you just how tremendously much -- how  
25 much larger this is. I mean factors of -- give me help

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1 here.

2 MR. BLOCHER: Well, the simply comparison is  
3 typically in an EDSFI or other inspection, it is a sampling  
4 process. This was comprehensive to the point of all design  
5 attributes, and the key word being "all."

6 MR. CURRY: Maybe a team of seven very senior  
7 engineers for five weeks on an SFFI. We spent significantly  
8 more man-hours on that, on this effort.

9 COMMISSIONER JACKSON: Did you review include  
10 emergency operating procedures?

11 MR. CURRY: We looked at all the procedures that  
12 would be affected by the design and licensing basis.

13 Just one last point, if you look at -- not only  
14 were the systems, 11 systems we looked at, but you had to  
15 touch the interfacing systems was part of the protocol. So  
16 you had to go into those interfacing systems and that  
17 required 562 interfacing points to be reviewed as well. So

18 when you look at the 61 maintenance rule systems, we looked  
19 at this plant.

20 COMMISSIONER JACKSON: Good.

21 MR. CURRY: Tier 2 was the accident mitigation  
22 systems review. In this particular regard, there are 29  
23 Chapter 14 design basis events, and we looked at every one  
24 of these. We didn't sample these, we looked at every one of  
25 these. And that also included the 16 that were gone, where

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1 they went back and did reanalysis during the configuration  
2 management program performed by the licensee.

3 This review, again, was extremely extensive,  
4 touching 56 of the 61 systems, where we looked at the  
5 critical design characteristics, and those are the ones that  
6 are required to make sure that when the accident, postulated  
7 accident, should it occur, you are able to mitigate that  
8 once it has been initiated. As well, we looked at the  
9 initial characteristics to make sure that the accident, it  
10 would start within an analyzed initial set of conditions.

11 A tremendous review that ties the important  
12 accident analysis into the design and licensing basis of the  
13 plant.

14 The tier 3 process was to verify the adequacy of  
15 the Millstone Unit 2 CMP to identify and correct design and  
16 configuration management deficiencies that had occurred  
17 previously. As you are aware, this is a much older unit and  
18 what we did was we developed five year intervals from the  
19 time it came online and sampled all those change processes  
20 that occurred, and we tried to have an even distribution  
21 across each one of those five year intervals.

22 Here we have indicated we looked at 460 past  
23 changes, and we broke them down into three major areas and  
24 14 subareas. As you see, underneath the three major areas  
25 are examples of the type of things we looked at under each

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1 one of these.

2 Finally, the corrective action sample review.  
3 This is an independent corrective action verification  
4 program, so the corrective actions were extremely important.  
5 The extent of this, we broke them down into separate  
6 corrective action reviews. For the tier 1 systems that we  
7 were assigned, we did a sampling. We looked at 330 of the  
8 1900 corrective actions that had been initiated on those  
9 particular systems.

10 Then the staff picked non-tier 1 systems for us to  
11 do some items of special interest to them, and we reviewed  
12 the corrective actions related to those particular items,  
13 not related to anything that we had specifically inspected  
14 under the ICAVP.

15 And, finally, we looked at the level 3 DRs that we  
16 had generated and the corrective actions related to them.  
17 These are things that we found that had not been identified  
18 by NU and to examine their ability to take the appropriate  
19 corrective action based upon things that we found that they  
20 had not picked up.

21 In our review of these corrective actions in many  
22 cases, we were able to look at the actual implementation as  
23 it was done. Because of the status of the plant, some of  
24 those, we were able to look at the technical plan, all the  
25 technical backup calculations, because in some cases, they

1 had not yet reached the mode to actually make that testing.  
2 Certainly, it has not been done.

3 COMMISSIONER JACKSON: And how would you  
4 characterize the actual corrective actions and the efficacy  
5 of them?

6 MR. CURRY: I think -- and we will talk about that  
7 a little bit later, I have got some more statistics. If I  
8 could move and do that later.

9 COMMISSIONER JACKSON: Fine. Yes.

10 MR. CURRY: I will talk a little bit about  
11 deficiency reports, because, clearly, with the protocols the  
12 way they were, I mean you are doing an inspection and you  
13 are communicating back and forth. We have found some  
14 discrepancies. The findings were identified during our  
15 review and at that point, when we identified something, we  
16 termed it to be preliminary, and we forwarded these  
17 preliminary findings to the Northeast Utilities, to the NRC  
18 staff, to Connecticut Nuclear Energy Advisory Council, NEAC,  
19 and to the public via Parsons web site.

20 We closed these discrepancy reports based upon a  
21 review of Northeast Utilities' response. In many cases  
22 these were written responses supporting by monitored phone  
23 calls by both NEAC and the NRC staff to resolve, make sure  
24 we really understood -- they understood our issue and that  
25 they had resolved it. So we would close that based upon an

1 agreement on the proposed corrective action to be performed.

2 The DR categories were closed in various  
3 categories. A confirmed was one that they had not previous  
4 identified, and we agreed that indeed it was a discrepancy.  
5 There were some discrepancies that after we were provided  
6 additional information, that we were able to establish that  
7 they indeed had previously identified this and placed this  
8 in one of their corrective action programs.

9 The other set was discrepancy reports that later,  
10 after receiving additional information, we convinced  
11 ourselves that they were non-discrepant.

12 And, finally, we had a set that were invalid, and  
13 those were ones that a team member had written. Upon  
14 further review by other team members, up through Mr.  
15 Blocher's level, it was determined that that was not a valid  
16 discrepancy.

17 I would like to talk a little bit about the  
18 results of the review of the findings, as this is one way to  
19 measure their performance. 773 valid preliminary DRs were  
20 issues, 51 of the invalid DRs, as I had mentioned previously  
21 in that category. The level 2 or level 1 and level 2  
22 discrepancies for DRs involved loss of a system, a train  
23 functionality. These are the most severe DRs that were  
24 categorized.

25 Level 3 discrepancies would indicate that they had

1 less than full compliance with the design and licensing  
2 basis, but that system functionality was still maintained.  
3 The level 4 DR represented minor discrepancies which did not  
4 affect the plant design or licensing basis.

5 We found no level 1s confirmed, no level 2  
6 confirmed, 75 confirmed level 3s on Unit 2. We did go back  
7 and do a review of the corrective actions, and I will speak  
8 on those later. We had 521 confirmed level 4 discrepancies  
9 which primarily were comprised of errors in calculation or

10 errors in drawings, or other types of documentation which  
11 did not directly affect the design licensing basis of the  
12 plant. 58 were deemed to be preliminary, that were  
13 previously identified, and 119 turned out to be  
14 non-discrepant.

15 COMMISSIONER MERRIFIELD: I have a question about  
16 this. This morning, in the presentation we heard from NU,  
17 one of the presenters stated that some of the reason that  
18 there was an increased level of DRs in the ICAVP was in part  
19 because their program was slow in getting started, and so  
20 you sort of go ahead of where they otherwise would have  
21 been.

22 MR. CURRY: Yes, sir.

23 COMMISSIONER MERRIFIELD: To what extent do the  
24 773 DRs, to what extent do you think that may indicate  
25 errors of that nature? If you can't answer it that way --

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1 MR. CURRY: It has been a long time. I am  
2 trying --

3 COMMISSIONER MERRIFIELD: Is it a little or a lot?  
4 I mean, you know, is that --

5 MR. CURRY: There were certainly, I mean I think  
6 the level 3s were impacted that way because of some  
7 programmatic issues that the licensee had identified that he  
8 had a problem in his programs, but yet had not gotten into  
9 the detail necessary to determine exactly what the programs  
10 were.

11 MR. BLOCHER: Clearly, there was a group of DRs in  
12 here that were indicative of the licensee declaring a  
13 program finished too early. In fact, there was one system,  
14 the aux feedwater system and several programmatic --

15 COMMISSIONER JACKSON: Can you move that  
16 microphone?

17 MR. BLOCHER: Yes. In fact, there was one system,  
18 the aux feedwater system and several programmatic areas that  
19 the licensee essentially put our review on hold until they  
20 could complete further corrective action review of those.

21 MR. COLLINS: I just don't know that I know those  
22 numbers.

23 COMMISSIONER MERRIFIELD: I don't either. I was  
24 finishing more for significant/not significant versus exact  
25 numbers. That is fine.

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1 COMMISSIONER JACKSON: Actually, in that context,  
2 I guess, can you speak at all to whether you feel -- and I  
3 realize now you are at a disadvantage because none of us  
4 will remember the numbers from Unit 3, but in terms of what  
5 you found or the significance of them, how much do you feel  
6 may have been related to the age of plant?

7 MR. CURRY: Well, clearly, I think Mr. Bowling's  
8 comments this morning, I mean the age of this unit and the  
9 quality of the documentation at the time when the plant was  
10 originally licensed had a great deal to do with that, and I  
11 think you commented on the issue of CMP that they were  
12 giving great focus to Unit 3. Although they had identified  
13 that there was a problem in a program, the protocol within  
14 our audit plan to meet the order was such that they had to  
15 be very specific about their understanding at the time I  
16 picked up that piece of paper to look at it, and we got  
17 ahead of them, if you will, in that particular regard.

18 If we look at the ICAVP results, and the number of

19 confirmed level 3 discrepancies, I mean those that have to  
20 do with design and licensing basis, there are 75. But that  
21 is really a small number when you look at the thousands of  
22 things that we reviewed. I mean I have talked about the  
23 calculations and the modifications and everything that we  
24 looked at. The number of design and licensing basis  
25 requirements that we verified compared to the number of

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1 level 3s is extremely small.

2 I think probably -- there were no significant  
3 level 1s, there were no significant level 2s, and as you are  
4 probably aware, there were some preliminary ones. So it was  
5 not like we were not looking very hard.

6 But when you combine that issue from tier 1 and  
7 the fact that the accident mitigation systems reviewed in  
8 tier 2, what we saw was all those systems were capable of  
9 performing those functions. And to me, I mean that is an  
10 indication that they have looked at it, they understand it,  
11 they are able to keep this plant where it needs to be.

12 If I can talk about conclusions. They were  
13 generally effective in identifying problems and providing  
14 corrective actions related to the design and licensing  
15 basis. And, clearly, I will tell you the general related to  
16 the issue we have just discussed, we were ahead of them,  
17 and, by protocol, they weren't supposed to be in that  
18 position. So, generally, they were. As we saw them  
19 shifting their resources to Unit 2, I mean clearly we saw --  
20 started to see the results we would have expected to have  
21 seen from people who were doing reviews and turning systems  
22 over to us for review.

23 We did identify also a weakness for the process of  
24 ensuring that all accident analysis and design inputs were  
25 consistent with the abuilt plant and the operating

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1 surveillance procedures, and this was also picked up by the  
2 staff in their reviews of both tier 1 and tier 2. NU has  
3 addressed this particular weaknesses in docketed  
4 correspondence with the staff and we have reviewed that as  
5 well as the staff, and I will sure they will make comment to  
6 that.

7 COMMISSIONER MERRIFIELD: Just one follow-up  
8 question. Are you satisfied with the way in which NU has  
9 gone about correcting that identified weakness?

10 MR. CURRY: Commissioner, because of the protocol,  
11 I look at results. I really don't get to look inside of  
12 their organization, how they do things, so I can only talk  
13 about the results that we have seen. And, certainly, the  
14 results say to me they have done something that has started  
15 to really pay off. I mean we are starting to see -- one of  
16 the programs that we identified that needed improvement had  
17 to do with separation and isolation and, certainly, what we  
18 saw when we went back to see what things they had done to  
19 change that program, we were very impressed. So, just from  
20 a protocol, I don't get to see how they --

21 COMMISSIONER JACKSON: So you are saying, right,  
22 your focus was on these results and less on the programmatic  
23 and process aspects, except by implication?

24 MR. CURRY: By implication. They can tell me they  
25 are doing things, but I would only hear those maybe from

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1 staff, or staff would see them. I would just see the



2 results of what they do. And so when we get to -- when you  
3 see the corrective action results, to me, when they are  
4 meeting our level of expectation, that they changed -- they  
5 are doing something right. I mean whatever their process  
6 was to get there, I am only interested in the results. I  
7 don't get to see how they have changed their process.

8           Upon implementation of the corrective actions  
9 associated with the level 3 DRs and issues identified by NU,  
10 it is our conclusion that the 11 selected systems reviewed  
11 in tier 1 will meet their design and licensing basis, and  
12 that all the critical design characteristics associated with  
13 the 56 accident mitigation systems reviewed in tier 2 will  
14 be consistent with the plant configuration as installed.

15           For the historical changes reviewed in tier 3, NU  
16 had not made changes that were technically a problem. All  
17 of them were adequate and did not adversely affect the plant  
18 design and licensing basis. I think the statistics were  
19 there was only one level 3 discrepancy written against the  
20 tier 3 inspection.

21           COMMISSIONER JACKSON: Well, having said that, you  
22 know, that Northeast Nuclear has proposed to postpone the  
23 disposition of the ICAVP related backlog. And so some of  
24 the Unit 2 items might not be completed until December of  
25 2001. Do you have any views on the postponement of the

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1 backlog and its significance?

2           MR. CURRY: I heard about it this morning.

3           COMMISSIONER JACKSON: Oh, okay.

4           MR. CURRY: But the thing I think I also  
5 understood was that they are only proposing to delay things  
6 that were in the level 4 category, that did not have to  
7 impact the design and licensing basis. They would not have  
8 been level 4s if we did not concur that they were not going  
9 to affect the design and licensing basis.

10           COMMISSIONER JACKSON: All right.

11           MR. CURRY: I am sure the staff will have other  
12 comments about that, but that is my position. If they had  
13 to do with the design and licensing basis, they wouldn't  
14 have been a 4 to begin with.

15           Overall corrective action process, we found to be  
16 effective in identifying and correcting the design and  
17 licensing basis issues. When we went and looked at and  
18 sampled 400 system corrective actions, and they had  
19 identified and corrected by NU in the review of the  
20 corrective actions associated with our DRs. And I put a lot  
21 of stock in the fact that they were able to go and take an  
22 issue that they had not been able to find initially. We  
23 wrote it, we agreed it was a discrepancy, and they were able  
24 to put together a corrective action program, which gave me  
25 the confidence that they could take an issue, understand it

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1 and come up with a corrective action that got them back into  
2 compliance with the design and licensing basis.

3           I mean you think about the other ones, they were  
4 correcting their own things they had found themselves. Here  
5 were ones that they had not been able to find themselves.  
6 So to find a corrective action program that was effective in  
7 that particular area, again, added to our confidence that  
8 they have a good program.

9           We have written a report and I think these  
10 represent our findings.

11 COMMISSIONER JACKSON: Okay. Mr. Blocher, any  
12 comments you want to make?  
13 MR. BLOCHER: No. I think --  
14 COMMISSIONER JACKSON: He has covered them all.  
15 Okay. We will see if you can recall.  
16 Do you have any questions, Commissioner Dicus?  
17 COMMISSIONER DICUS: Yes, I have a question. A  
18 licensee indicated this morning also in their presentation  
19 that they are of the opinion that the ICAVP order should be  
20 closed. Do you agree? Do you have an opinion on that?  
21 MR. CURRY: Yes, ma'am. Based upon the review  
22 that we have done, I think we have, when you look at the  
23 objectives of what we were supposed to inspect and be able  
24 to say to you that our review indicates that they are within  
25 the design and licensing basis and the programs that they

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1 are implementing are providing the results that will keep  
2 them within that, yes, ma'am.  
3 COMMISSIONER DICUS: It is not qualified  
4 otherwise?  
5 MR. CURRY: No, ma'am.  
6 COMMISSIONER DICUS: Okay. Thank you.  
7 COMMISSIONER JACKSON: Commissioner Diaz?  
8 COMMISSIONER DIAZ: No questions.  
9 COMMISSIONER JACKSON: Mr. Merrifield?  
10 COMMISSIONER MERRIFIELD: No further questions  
11 COMMISSIONER JACKSON: Thank you very much.  
12 MR. CURRY: Thank you.  
13 MR. BLOCHER: Thank you.  
14 COMMISSIONER JACKSON: I would now like to call  
15 forward the following panel to the table. Ms. Susan  
16 Perry-Luxton from the Citizens Regulatory Commission; Mr.  
17 Ronald McKeown from Friends of a Safe Millstone; Mr. Thomas  
18 Sheridan, a First Selectman of the Town of Waterford; Mr.  
19 John Sheehan from the Nuclear Energy Advisory Counsel; and  
20 Ms. Tina Guglielmo, Standing for Truth About Radiation; and  
21 Ms. Nancy Burton or her representative, Mr. Joseph Besade  
22 from Fish Unlimited. Thank you very much. And I forgot Mr.  
23 Robert Barron from the Millstone Employee Ad-Hoc Group. I  
24 apologize.  
25 I think that I would like to do is I am just going

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1 to go from our left to right, and I will start with Mrs.  
2 Susan Perry-Luxton.  
3 MS. PERRY-LUXTON: I am Susan Perry-Luxton, I am  
4 from the Citizens Regulatory Commission, a grassroots  
5 citizens' group that was formed in September of 1995 in the  
6 Waterford, Connecticut community because we feared for our  
7 safety when Senior Engineer George Gallatis came forward and  
8 revealed mismanagement and safety problems at Millstone  
9 Nuclear Power Station.  
10 I find it interesting to be here once again under  
11 the big tent of the NRC, at the home base of the NRC's  
12 traveling circus and dog and pony show. After three years  
13 of interacting with the NRC on nearly a monthly basis, the  
14 time for appealing to this agency for help, or to enforce  
15 its mandate is over. We have learned our lesson, now is the  
16 time to name things as they are.  
17 I find it interesting that once again your  
18 restrictive agenda allotted an hour or more to the nuclear  
19 industry and only 35 minutes for citizens' groups, and no  
20 time for whistle-blowers or concerned individuals that are

21 stakeholders in the nuclear community. For example, Tom  
22 Mastrianna, who sits on my right, who has legitimate issues  
23 like the defective fire barrier penetration seal and the  
24 pass issue which impact the whole industry has not been  
25 allowed to speak.

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1 Judge Bolwick's recent investigation reveals  
2 examples of incompetence in senior management and in the  
3 Office of Investigation and leads us to believe us you don't  
4 have the will to properly investigate harassment cases in  
5 the NRC. You who are mandated by law to protect nuclear  
6 workers have ignored and abandoned them in their plight,  
7 causing the needless suffering of Mr. Mastrianna and men and  
8 women like him. That is truly heartless.

9 You haven't -- have you seen the front page  
10 coverage in the New London Day revealing the secret memo of  
11 how Waterford's First Selectman Sheridan brought a  
12 professional public relations agent, Ron McKeown, to Bruce  
13 Kenyon with a plan to form a phony independent grassroots  
14 group named the Friends of Millstone, with the intention  
15 that it be very useful for public relations in the community  
16 and also for testimony in front of this very body, wherein  
17 Mr. Kenyon was jubilant and felt it was too good to be true  
18 and exclaimed, "Let's launch. Awesome."? Have you seen  
19 that? I saw that in my local paper. You choose not to see.

20 I find it interesting that Long Island residents  
21 are deeply concerned that in case of a nuclear accident,  
22 under the existing regulations, they have no evacuation plan  
23 and no escape, no means of escape. The NRC has closed its  
24 mind and their reasonable concerns have been dismissed.

25 Change, meeting community needs is not on the

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1 NRC's agenda. Regarding Millstone 2 restart, you create  
2 criteria and then you don't follow it. You delay your  
3 enforcement indefinitely.

4 Although NU spent countless hours and money fixing  
5 problems and retraining, you in the NRC haven't addressed  
6 your problems. The incompetence of the SPO in not -- in  
7 identifying and not enforcing level 1 severity  
8 investigations as cited in Bolwick's investigation and the  
9 OIG report. It is appalling.

10 Regarding Millstone 2 restart, at Millstone right  
11 now the person who was involved in violating the law and  
12 having Jim Plum take illegal samples into Long Island is  
13 still working, as a matter of fact, is site-wide chemistry  
14 tech there. The person who was involved in putting people's  
15 lives at risk in the 442 valve is still managing people at  
16 Millstone. People that have been involved in harassment are  
17 still working at Millstone.

18 There is no time for me to elaborate the list of  
19 examples of the NRC's closed-mindedness. We have no  
20 confidence in the NRC's will to protect our communities and  
21 our health and safety, therefore, a good sufficient reason,  
22 we are opposed to the restart of Millstone 2.

23 If you have hearts, you have hardened them. If  
24 you have eyes, you have blinded them. If you have minds,  
25 you have closed them. And if you have souls, you have sold

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1 them to the nuclear industry long ago.

2 W.E.B. DuBois has a quote, "If this country

3 continues on its present course, it will become a nation of  
4 fools and hypocrites. Fools, because knowing the difference  
5 between right and wrong, you choose to do what is wrong.  
6 Hypocrites, because knowing what you do is wrong, you  
7 pretend to be doing what is right."

8 COMMISSIONER JACKSON: Thank you. Mr. McKeown.

9 MR. McKEOWN: Good afternoon. My name is Ron  
10 McKeown. I represent an organization which I am very proud  
11 to state that I am the one and the only that thought of  
12 creating it. That is the honest to God truth as thousands  
13 of people who have supported Friends of a Safe Millstone  
14 have attested to.

15 Before I get started, what I would like to do is  
16 just mention our neighbors across Long Island Sound. I  
17 think the industry and the NRC is missing an opportunity to  
18 give appropriate attention at some level, and some due  
19 consideration to our neighbors across Long Island Sound. I  
20 have the opportunity to speak with a number of the assembly  
21 persons and leaders and some of the community organizations  
22 over there, and I think the Commission would be well served  
23 if it would think that the continuum of options available to  
24 Long Islanders may be greater than is perceived.

25 Commissioners Dicus and Merrifield were very

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1 open-minded when recently Friends of a Safe Millstone met  
2 with them and I appreciate that. And to that end, we will  
3 be forwarding to the Commission some ideas about what else  
4 is on the continuum of options to give our neighbors the  
5 same level of consideration and respect that we would want  
6 ourselves. So to that end, we will forward that to you.  
7 But I do think that the Commission could open its mind a  
8 little bit more and be a little bit more creative about some  
9 of the things our neighbors across the sound could use as a  
10 consideration.

11 About a year ago I spoke to you and I told you of  
12 whispers that I had heard over the years, whispers of  
13 negativity that I had heard at PTA meetings and at church  
14 meetings, and with Girls Scouts and Boy Scout groups, and I  
15 had heard them for years about Millstone Station. And I  
16 talked with you about how often I meet with large numbers of  
17 community groups, obviously, unaffiliated with anything  
18 energy-wise.

19 The whispers have stopped relative to the  
20 environment, there are no whispers. I am carving out, of  
21 course, activist organizations on one side or another, or  
22 whatever side. But the truth is the mainstream citizenry no  
23 longer whispers and the employees no longer whisper about  
24 safety concerns they have. That I could not say to you a  
25 year ago, a year-and-a-quarter ago, but now I hear no more

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1 whispers.

2 Part of that I think is there's two continuums  
3 going on here. There is a continuum of rectification and  
4 there is a continuum of normalcy. And the continuum of  
5 rectification is really the technical side that you have  
6 involved yourselves with Unit 3 and safety conscious work  
7 environment. But I would look for the signs of normalcy  
8 from the community, and some of those signs are really very  
9 clear. In the last eight months the amount of unaffiliated  
10 mainstream citizens in Southeastern Connecticut who have  
11 attended NRC hearings, if you carve out the interested  
12 groups, has plummeted to as low as two, three people, to as

13 high as maybe eight or ten, your staff would know better.  
14 Last July and last August, I think it was, in the  
15 spirit of reconciliation giving credit to organizations such  
16 as the Citizens Regulatory Commission, Citizens Awareness  
17 Network and other organizations, all the mayors and first  
18 selectpersons, as well as the state reps and state senators  
19 spoke about the need for support, reconciliation of the  
20 employees.

21 I was at a breakfast meeting of 200-300 community  
22 leaders of Southeastern Connecticut where Mr. Kenyon was  
23 asked to make a promise. He was asked to make a promise to  
24 run a very conservative operation, to close it down if there  
25 was a hiccough. And he has done that, he has kept his

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1 promises. We see no promises that he has made that he has  
2 not lived up to. Maybe he could make some more, but he has  
3 lived up to his promises and now I see some people turning  
4 the fact that it played it conservative against him, and  
5 that is probably not fair.

6 I think great praise is needed to be given to all  
7 the activist groups for a heightened level of  
8 responsibility, to the press for reporting, being more  
9 sensitive to health and safety issues that are true and  
10 untrue about nuclear safety.

11 So, in general, we see a great sense of the  
12 continuum of normalcy is moving forward as a continuum of  
13 rectification is moving forward.

14 And, lastly, just a small sign of how the  
15 community is attempting to deal with this and has seen that  
16 the NRC, the firm hand of the NRC has stepped forward and is  
17 swinging the bat correctly. It is very clear that it has  
18 reached deeper, and one of those -- just this past two weeks  
19 I have had conversations with priests and ministers, and we  
20 are going to, with some priests and ministers, there is  
21 going to be a series of some Thanksgivings at churches where  
22 people will be asked to come forward and help to give thanks  
23 for the rectification, a heightened level of safety and  
24 security, as well as the fact that divergent groups have  
25 come forward and worked together to make the area safer and

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1 the plant safer. So I thank you for your time over the last  
2 year-and-a-half, and, Chairman Jackson, as you move on, I  
3 wish you well.

4 COMMISSIONER JACKSON: Thank you.  
5 Mr. Sheridan.

6 MR. SHERIDAN: Thank you. Tony Sheridan, First  
7 Selectman of Waterford. I guess it is my hope that we can  
8 stop meeting like this. It has been a long three years. It  
9 is not that I don't enjoy your company, and I certainly  
10 enjoyed having you to Waterford, Dr. Jackson, but I think  
11 that we have come a long way since -- was it valve number  
12 254 that was -- the attempts to repair it, 45, 55 times  
13 whatever it was?

14 We have come a long way since I had to write a  
15 letter to the former President of NU in very strong terms  
16 suggesting that he rehire Paul Blanche. Paul Blanche was  
17 indeed an important critic to have on board, a man of high  
18 standing, moral and ethical standing, and that his  
19 termination from Northeast Utilities was wrong.

20 We have come a long way since I had to have a very  
21 bitter argument with I believe a fellow by the name of

22 Martin. I could be wrong on the name. I hope there is no  
23 Martin working for NRC today, but I think his name was  
24 Martin. When I read in the local paper that there was a  
25 secret meeting planned between Northeast Utilities and NRC

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1 and I, obviously, felt that there was something very  
2 seriously wrong that they would have to have a secret  
3 meeting, and that anything they discussed couldn't be  
4 discussed in public. That just didn't sound or fit right  
5 with me.

6 I lost the argument, I wasn't invited to the  
7 meeting. But, nevertheless, I think we have come a long  
8 way. It has been a long three years, and most of you have  
9 been very much a part of it. We have all learned a lot. We  
10 are not as naive as we were.

11 And I say we have come a long way because when it  
12 was suggested that Millstone -- I believe the suggestion was  
13 made to Bruce Kenyon that Millstone management might benefit  
14 by having a Community Advisory Committee, the suggestion was  
15 heard and we have a Community Advisory Committee. We call  
16 it MAC. We meet on a regular basis.

17 Most recently when we met with MAC, two, three  
18 meetings ago, we discussed the possibility of addressing  
19 some of the environmental issues. How can we better do it?  
20 Because Lee Olivier had experience with a ring monitoring  
21 system in a previous community, that suggestion was brought  
22 to the floor and within a couple of meetings, it was  
23 approved.

24 I don't know if you know of that, but this is a  
25 system that will allow the monitoring of the atmosphere

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1 around Millstone. I believe it will monitor it every two  
2 minutes round the clock. And what is most important here,  
3 and I can't underline this enough, but what is most  
4 important here is that it is not controlled by Millstone.  
5 It is controlled by the local community college, Three  
6 Rivers College. The high schools in the area, Fitch High  
7 School, I believe, Groton High School, New London High  
8 School, Waterford High School and East Lyme High School, and  
9 I believe two or three communities in Long Island will be  
10 eligible to receive the equipment, the computer equipment  
11 and the monitoring system to partake in this study. In  
12 Waterford we are going to have a curriculum built around it  
13 for the junior high school and high school students.

14 That couldn't have happened -- that wouldn't have  
15 happened three years ago. It simply wouldn't have happened.  
16 We wouldn't even have had an opportunity to bring that kind  
17 of an idea to the floor. It happened today and I am proud  
18 to say that it is a result of the type of enlightened people  
19 we have now in management at Millstone.

20 Will they make mistakes? I am sure they will.  
21 They will continue to make mistakes. But at least now we  
22 know about them, and we have an opportunity to work with  
23 them to correct those mistakes.

24 I want to talk a little bit about -- Ron brought  
25 up the whole question of the people in Long Island. I

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1 listen to -- I happen to live close to the water, my  
2 favorite radio station is NPR out of Long Island. And I  
3 know the people over there are genuinely concerned, and I  
4 gather there are some here today. And I want them to know

5 that I have a family in Waterford. The majority of people  
6 who work at the plants have families in Waterford. The  
7 people who serve on our boards and agencies, our planning  
8 and zoning, our Conservation Commission, have families.

9 We are a nuclear community. We perhaps have a  
10 little of an advantage here in that we grew up with nuclear  
11 power. At any one time of the week or month, we have 25 or  
12 30 of the most powerful nuclear power vehicles going up and  
13 down the Thames River. That has been happening for the  
14 better part of 40 years, so we are perhaps more accustomed  
15 to the whole concept and understanding of nuclear energy.

16 I recognize and acknowledge the residents of Long  
17 Island who have a concern. But what I would like to do is  
18 reach out and have them come to Waterford. I will see they  
19 get a tour of the plant. They don't have to come through me  
20 if they don't want to. They can go directly to the plant  
21 themselves. I am sure the people at the plant can see that  
22 they will get a tour.

23 I can introduce them to some of finest scientists  
24 in the world who live and work in Southeastern Connecticut  
25 with the nuclear industry. These people also have families

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1 who are born, brought up and reared in Waterford and New  
2 London and the surrounding community.

3 Are we concerned? Of course we are concerned. We  
4 want safe plants, but I think we finally have a management  
5 at Northeast Utilities who are willing to work with us, who  
6 recognize that they have to be sensitive to the community  
7 and actions speak louder than words. They are being  
8 sensitive to the community and for that, I very much  
9 appreciate it.

10 Finally, trust. Community trust is very, very  
11 hard to regain. It was lost, but the ring monitoring system  
12 and the other ideas that are being floated before management  
13 to help deal with the lack of trust and the regaining of  
14 that trust are being heard, and for that, I much appreciate  
15 it.

16 I would like to thank the Commissioners for their  
17 work. I know, Dr. Jackson, you have come to Waterford a  
18 couple of times already. That was very much appreciated  
19 and, hopefully, before you vacate your chair, we can have  
20 you back to bring some closure to this rather sad and  
21 sorrowful three years. Thank you very much for your time.

22 CHAIRMAN JACKSON: Thank you.

23 Mr. Sheehan.

24 MR. SHEEHAN: Chairman Jackson, NRC Commissioners,  
25 thank you for this opportunity to participate in the public

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1 meeting on the restart of Millstone 2 nuclear power plant.  
2 My name is John W. "Bill" Sheehan, and you can blame my  
3 mother for the "Bill." I'm a resident of Waterford,  
4 Connecticut, and a member of the State's Connecticut Nuclear  
5 Energy Advisory Council, NEAC. At prior meetings in written  
6 statements the NEAC cochair, Terry Concannon, and  
7 vice-chairman, John Markowitz, have described the statutory  
8 basis, charter and activities of NEAC, and unless you  
9 require additional information, I won't give it.

10 I do want to add, though, a thank you to the  
11 Commission and its staff for the cooperation that they have  
12 given NEAC when our only pulpit is a bully pulpit, because  
13 we're just a group of volunteers, for participation in the

14 ICAVP process, and the ability to be involved in the  
15 cobriefings. Our last meeting was a combined meeting with  
16 your staff in briefing the public, and I think it was very  
17 successful and I hope that we can continue to do that.

18 My remarks concerning the readiness of Millstone 2  
19 for restart -- I'm a former commanding officer of a nuclear  
20 submarine, the USS Daniel Webster, SSVN-626 Gold. With that  
21 past experience in mind, NEAC requested and Northeast  
22 Utilities granted permission for me to become badged for  
23 unescorted access to the Millstone site. So for over a year  
24 I have periodically monitored the activities in the control  
25 rooms of Millstone's 2 and 3 and report back to NEAC.

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1 My first observation of the Millstone 2 watch  
2 standers was in September 1998, because obviously before  
3 that I was watching Millstone 3. I'd like to share my  
4 impressions of the past seven months with you. Although  
5 your staff has spent many more hours than I in observing and  
6 tracking the events, I hope my perspective will be useful as  
7 you make your decision concerning the restart of Millstone  
8 2.

9 I have included copies of each one of these  
10 monitor reports as an enclosure to the written copy of my  
11 testimony if you care to look at them.

12 All of my observations take place after normal  
13 working hours or on holidays and weekends, because obviously  
14 I am paid to do something else. My comments are provided to  
15 the Millstone 2 director of operations for review and for  
16 any action that he felt appropriate.

17 I have found the watch standers to be formal in  
18 their communication with each other concerning plant  
19 operations. The shift turnover procedures are thorough.  
20 Watch section briefs, whether of a pending evolution or the  
21 daily brief, were very complete. The operators were mindful  
22 of reactor safety during the routine conduct of their  
23 watches.

24 It's apparent to me that the lessons learned from  
25 Millstone 3 had been carried over to Millstone 2. When I

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1 started doing these monitorings at Millstone 3 I would have  
2 significant pages of comments. I have to say that in the  
3 seven months I've been making these snapshot visits to  
4 Millstone 2, my major comment, which was early in my visits,  
5 was that the simultaneous turnover of watch stations during  
6 watch relief may make it difficult to monitor potentially  
7 changing plant conditions when the plant was operating. At  
8 the time I observed this, there was no fuel in the core.

9 This morning Chairman Diaz asked how the, if you  
10 want to call it, to use the term that we use in the Navy,  
11 the deck plates felt about some of this. I also had the  
12 opportunity to overhear what the operators talked to each  
13 other about concerning some of the things that were going on  
14 at Millstone. And believe it or not, in the reorganization  
15 process, some of the control room watch standers and so on  
16 were actually very enthusiastic about getting their resumes  
17 ready to try to go on to some other position. In fact, I  
18 know one of the watch standers -- this is over at Millstone  
19 3 -- who was a control room operator when I started  
20 monitoring is now a unit supervisor who has been moved up as  
21 part of his qualification process and as part of their  
22 reorganization.

23 In summary, it's my personal opinion, and I have



24 to say personal opinion because there was no vote of NEAC or  
25 anything like that, that the front-line watch standers in

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1 fact are ready to restart Millstone 2. They have the right  
2 mixture of enthusiasm and conservatism that I think is  
3 necessary to operate a nuclear power plant.

4 So subject to your questions, this concludes my  
5 comments, and I thank you for your attention.

6 CHAIRMAN JACKSON: What about the balance of  
7 people in the plant? Do you ever have the opportunity to  
8 observe equipment operators and --

9 MR. SHEEHAN: I spent most of my time watching how  
10 things go in the control room. One, because it's easier for  
11 me to be more familiar with that. I've walked through the  
12 plant, and I'm impressed with the plant cleanliness and how  
13 they've maintained it, and I do talk to the operators when  
14 they come into the control room to see how they're -- but  
15 most of the time I spend just watching their interaction.

16 I found from my Navy days that if you kind of  
17 blend into the background and they are used to you being  
18 there, that you learn a lot of things just by listening, and  
19 that's the technique that I've used.

20 CHAIRMAN JACKSON: Mr. Barron.

21 MR. BARRON: Good afternoon, Chairman Jackson and  
22 Commissioners of the Nuclear Regulatory Commission. I would  
23 like to thank you for the opportunity that you've given to  
24 Millstone Employee Ad-Hoc Group to speak with you today.

25 I am Robert E. Barron, a former shift manager on

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1 Millstone Unit 2, recently promoted to manager of online  
2 maintenance for the Millstone Station. But it's as a member  
3 of the Millstone Employee Ad-Hoc Group that I'm here to  
4 speak to you today. I am joined by two of my coworkers here  
5 in the audience, Donna Harrington Burnes and Edward F.  
6 Dunden.

7 Although I am the one person sitting before you  
8 today, I am privileged to speak on behalf of the 1,477  
9 Millstone employees who signed this letter I'm presenting  
10 today pledging our support for the safe restart and  
11 operation of Millstone Unit 2. I'd like to take a moment  
12 and read from the letter.

13 Dear Chairman Jackson, Commissioner Diaz,  
14 Commissioner Merrifield, Commissioner Dicus, and  
15 Commissioner McGaffigan:

16 As workers at Millstone Station, we know we are  
17 the front-line people most responsible for the safe  
18 operation of the Millstone Nuclear Power Station. In July  
19 of 1998 we restarted Millstone Unit 3 and have operated the  
20 unit for the last 10 months, demonstrating our commitment to  
21 safety and conservative decision making. We have also  
22 demonstrated our commitment to a strong, safety-conscious  
23 work environment.

24 Millstone Station has developed and implemented an  
25 excellent Employee Concerns Program. Our safety-conscious

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1 work environment is strong and effective because we, the  
2 workers at Millstone Station, own it. We are an empowered  
3 work force. We do not tolerate a lowering of standards, a  
4 compromise of safety, or a neglect of our commitment to do  
5 the right thing. We, the workers at Millstone Station, are

6 prepared to demonstrate our commitment for the safe  
7 operation of Millstone 2.

8 Now let me explain why it was a very easy decision  
9 for me to sign this letter. As the shift manager, there  
10 have been many decisions that I have made or have been  
11 involved in making that have impacted the organization and  
12 the unit as a whole. If there was a degraded plant  
13 component that I wanted to be repaired, it was repaired. If  
14 a change in schedule was required to be made to support the  
15 needs of the plant, it was supported. I have been supported  
16 by my management in decisions and in changes in schedules  
17 that I have made, and just as important, I trust management  
18 to give me that support.

19 Why did I make those decisions? Because I was and  
20 I continue to be responsible for doing the right thing  
21 regardless of what position I filled in the organization.  
22 When I was in senior reactor operator license school, my  
23 responsibilities to operate the plant safely and to protect  
24 the public were clearly explained to me, and I readily took  
25 ownership of these responsibilities.

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1 But it was not just me. Every licensed operator  
2 at Millstone Station has taken ownership of these very same  
3 responsibilities. Our responsibility to operate the plant  
4 safely and to protect the public has been and will continue  
5 to be a real part of every decision that we make at  
6 Millstone as we operate our plants. We recognize that doing  
7 what is right, conservative decision making, placing safety  
8 and quality as our first priorities is what we must do.

9 We are not just employees at Millstone, but we are  
10 also members of the community, our community. The 1,477  
11 signatures on this letter represent a commitment to our  
12 friends, our neighbors, our families, our children, and our  
13 grandchildren.

14 When I look around Millstone Station, I see the  
15 dedicated professional people who care about doing and being  
16 the best at what they do. Millstone Station is full of some  
17 of the best people in nuclear power who could go anywhere in  
18 this industry, but they choose to continue working at  
19 Millstone.

20 I am proud to be an employee at Millstone Station.  
21 We are certainly making a difference. We have taken  
22 Millstone Station from a position of weakness and are moving  
23 towards excellence. We are proud of that accomplishment.  
24 We as a team with a unified vision and common goals will  
25 strive towards making Millstone Station a top performer.

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1 On behalf of the employees of Millstone Station, I  
2 respectfully request that you approve the restart of  
3 Millstone Unit 2. If you have any questions, I'd be happy  
4 to answer them at this time.

5 CHAIRMAN JACKSON: Ms. Guglielmo, please.

6 MS. GUGLIELMO: Hi. I'm here representing  
7 Standing for Truth About Radiation Foundation, which is a  
8 member of the growing Coalition against Millstone, which was  
9 refused the right to speak today even though they represent  
10 over 10,000 Long Island residents that live within the  
11 designated -- federally designated EPZ, the ingestion  
12 pathway zone.

13 I was asked to speak on their behalf, but in five  
14 minutes I feel it's an unreasonable request.

15 I'm here to discuss Long Island's readiness for

16 restart. Long Island is most certainly not ready for Unit 2  
17 restart. This is a unique situation because of the fact  
18 that Long Island is a densely populated island that is  
19 unable to evacuate in the event of a radiological emergency.  
20 This is an issue related to Unit 2 restart.

21 NRC defense-in-depth safety philosophy is based on  
22 the concept that the NRC must have reasonable assurance that  
23 adequate protective measures can and will be taken in the  
24 event of a radiological emergency. A philosophy is a way of  
25 thinking that is applied to any decision that a body makes.

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1 What assurance have you been given that Long Islanders can  
2 be adequately protected in a radiological emergency? Can  
3 anyone answer my question, please?

4 COMMISSIONER DIAZ: I think that the Commission  
5 has for a long time set up a series of measures, okay, that  
6 are built one upon each other that provide reasonable and  
7 adequate protection. The exclusion zone, everything that we  
8 have done, built on the principle that we are, you know, in  
9 a reasonable manner, not 100 percent certain, have done  
10 everything that is possible as an agency to make sure that  
11 public health and safety is protected.

12 I have never seen anything that anybody has  
13 brought up that has, you know, a sound technical basis to  
14 deny that. And if it exists, then I think this Commission  
15 will be very open to see it. We have done that. We have  
16 done it consistently. Okay? We have, you know, established  
17 it, okay? Not only here but anywhere in the world that the  
18 exclusion zones and the emergency preparedness that we  
19 require in this country, you know, are protective of public  
20 health and safety.

21 AUDIENCE MEMBER: Chernobyl. Did you ever hear of  
22 Chernobyl?

23 MS. GUGLIELMO: I think that the idea of  
24 Federal-level planning of ten miles being adequate is based  
25 on the concept that beyond that ten miles the State and

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1 county emergency agencies will take over the protective  
2 measures. That's a comment that Bill Travers made at the  
3 Jamesport meeting held on Long Island before the Unit 3  
4 restart. He was trying to explain to us that the NRC  
5 doesn't make the statement that after ten miles there's no  
6 risk, but that after that ten miles, the State and county is  
7 responsible for providing emergency planning.

8 But our State and our county are not providing us  
9 with any emergency planning. They're not able to. We have  
10 not been given any assurances by anyone. All the emergency  
11 managers of the east-end townships with the exclusion of  
12 John Rano, who is in Southold and is within the ten-mile  
13 Federal level zone, the rest of the townships, their  
14 emergency managers have no instruction guides, no manuals of  
15 how to proceed in the event that there's an emergency  
16 regarding Millstone. And they're within the federally  
17 designated 50-mile EPZ zone.

18 I informed these emergency managers that they're  
19 in that zone. They didn't even know that. That's not  
20 adequate protection. It's not even close.

21 I mean, you say -- it's been acknowledged here  
22 today that the safety-conscious worker environment at  
23 Millstone is still fragile. Well, so is the position of  
24 Long Island residents. This is a unique situation. We're a

25 densely populated island. It needs to be taken into

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1 consideration.

2           When the five emergency shutdowns occurred at Unit  
3 3 in the past year, residents would call my house, sometimes  
4 late at night, in a panic, to ask me how bad it really was:  
5 Should they be getting ready to try to get out or do  
6 something to prepare for responding to these emergency  
7 shutdowns, which we were told stress and strain every safety  
8 system in the plant? I'd rather provide them with your home  
9 phone numbers, because I cannot provide any assurance to any  
10 of these people who are calling me up.

11           Recently there was a fire in Connecticut, last  
12 week. The smoke from that fire reached Long Island in only  
13 an hour. People who saw the smoke told me their blood  
14 turned to ice in their veins because they thought it was  
15 Millstone. They could see it from Montauk Point. I want to  
16 submit copies of our local paper and all the editorials that  
17 came up, because they clearly illustrate the lack of public  
18 confidence.

19           People should not be expected to live with the  
20 fear of being trapped in a radiological plume. Every level  
21 of our government has made official statements of opposition  
22 to the operation of this plant -- our mayors, our town  
23 supervisors, our county legislators, our State assembly  
24 members, our State senator, and our Federal Congressman.  
25 What more do we have to do to make you acknowledge the

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1 unacceptable risk we are subjected to by the operation of  
2 this plant? It was a mistake to site it so close to a  
3 populated island in the first place. Only you have the  
4 authority to correct this mistake.

5           You are mandated to protect public health and  
6 safety. Long Island cannot be protected from the impacts of  
7 an accident at Millstone. We refuse to participate in this  
8 Russian roulette any longer, and I'm here to put a human  
9 face before you that lives in daily fear of being trapped in  
10 a radioactive plume.

11           I am also here to submit two legal petitions today  
12 to suspend the operating license of the Millstone Station  
13 based on -- one is based on the fact that the Fishers Island  
14 plant is still inoperable, and you're not supposed to be  
15 running that plant under those conditions. I am also  
16 submitting 5,000 signatures of Long Island residents calling  
17 for the shutdown of Millstone.

18           CHAIRMAN JACKSON: Thank you very much.

19           I think that Commissioner Diaz captured well what  
20 the belief of the Commission is relative to emergency  
21 planning and our view of the safety. I have taken note of  
22 the fact that you've indicated that you feel that those  
23 State officials who in fact are responsible outside the  
24 ten-mile zone are not adequately prepared, and I will have  
25 our senior managers look into whether there is a gap in that

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1 regard, because it is a State responsibility. But we will  
2 look into that. And so I'm indicating this to our regional  
3 administrator and our executive director for operations.

4           Mr. Besade.

5           MR. BESADE: Thank you, Dr. Jackson.

6           What I have here is a petition opposing the Unit 2  
7 restart, and it's a petition from responsible people in

8 several walks of life, including former nuclear pipefitters,  
9 a retired game warden, the majority of the members of the  
10 Nionic Bay Commercial Fishermen's Association, and large  
11 numbers of sport fishermen and many others. These  
12 responsible citizens who signed the petition state they  
13 would prefer to pay higher taxes rather than continue to  
14 live in an unsafe environment caused by Millstone.

15 I also enclose a one-hour videotape of nuclear  
16 safety issues, a TV show of 4/12/99 with Susan Perry-Luxton  
17 as host, Tom Mastrianna, who was refused a chance to speak  
18 here today with the Commissioners present here today. He  
19 brought a four-inch pile of the latest documents of  
20 violations present on the site today. I want the word of  
21 the Commissioners present here today to promise to give me  
22 their word they will view this tape before making a decision  
23 to let the Unit 2 restart.

24 The people who signed this petition believe an  
25 accident is imminent. Following the past history of NU and

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1 the overseer, the NRC, who let the Millstone and Connecticut  
2 Yankee personnel, through ignorance or collusion, destroy  
3 the environment and the people's lives around the plants, in  
4 order to justify the bottom line of money, I personally have  
5 witnessed the depletion of the many different species of  
6 fish in our area since childhood to my senior years.

7 As a former union pipefitter, I have witnessed the  
8 double standards conducted by the contractor, the utility,  
9 the unions, the NRC, whose job it was to protect the public,  
10 yet saw it was best to not bite the hand that feeds them.  
11 As a union foreman, if I gave an order and a person's life  
12 was lost, I would be held responsible along with the  
13 contractor I work for. I would like to see you, the five  
14 Commissioners, held in the same standards as others in  
15 opposition.

16 I am continually being told by the people in power  
17 mentioned above you are not going to win, do what you've got  
18 to do. Well, let's look back since a brave number of men  
19 came forward to put their livelihoods on the line exposing  
20 defects in the plants and the NRC's minimal involvement in  
21 fines. What bothers me most is the NRC's statement don't  
22 you think NU has suffered enough financially? It is not the  
23 NRC's position to worry about the financial condition of a  
24 utility. Their sole purpose is to be a strong overseer and  
25 protect the public whom they serve.

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1 I wish to allot my remaining time to Mr.  
2 Mastrianna to address the very important safety issues that  
3 will serve to prove that the licensee is in violation of  
4 their own safety and license requirements as required under  
5 Federal law.

6 Thank you.

7 CHAIRMAN JACKSON: Thank you. Any questions?

8 MR. MASTRIANNA: Can I just present a statement  
9 for the record and put some things in the record?

10 CHAIRMAN JACKSON: You had indicated you were  
11 going to give these documents to our secretary and that you  
12 would submit your written statement for the record, as I  
13 recall.

14 MR. MASTRIANNA: For the record, my name is Thomas  
15 J. Mastrianna, a former long-time employee of Northeast  
16 Utilities.

17 CHAIRMAN JACKSON: Thank you very much.  
18 MR. BESADE: Thank you.  
19 CHAIRMAN JACKSON: Commissioner Dicus, any  
20 questions?  
21 COMMISSIONER DICUS: No questions. Thank you.  
22 MR. BESADE: No questions for me?  
23 CHAIRMAN JACKSON: Commissioner Diaz?  
24 COMMISSIONER DIAZ: No, thank you.  
25 CHAIRMAN JACKSON: Commissioner Merrifield?

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1 COMMISSIONER MERRIFIELD: No, thank you.  
2 CHAIRMAN JACKSON: I will certainly view your  
3 videotape before I --  
4 MR. BESADE: Thank you, Dr. Jackson.  
5 I wish the other Commissioners also to see it,  
6 because I want them -- they're all in charge of making the  
7 decision whether this plant starts or not, correct?  
8 CHAIRMAN JACKSON: Right, but they have to speak  
9 for themselves.  
10 I'm going to call forward the NRC staff.  
11 Before you begin, Commissioner Dicus, who as you  
12 know has a background in emergency planning, emergency  
13 preparedness, has indicated that in fact we need to check  
14 with the New York Emergency Management Agency to determine  
15 what in fact is in place, because an ingestion pathway  
16 exercise has been done, and if the 50-mile ingestion pathway  
17 planning has not reached the counties and townships on Long  
18 Island, then that should be done. And so I'm going to ask  
19 you to check on that, and I will give you this.  
20 DR. TRAVERS: Chairman, I may be able to make a  
21 comment on that based on a letter we have from FEMA that  
22 involves that very exercise.  
23 CHAIRMAN JACKSON: I'll give you that anyway.  
24 DR. TRAVERS: Sure. Absolutely.  
25 CHAIRMAN JACKSON: But you're welcome to make the

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1 comment.  
2 DR. TRAVERS: Sure.  
3 CHAIRMAN JACKSON: Um-hum.  
4 DR. TRAVERS: But let me -- I should begin --  
5 CHAIRMAN JACKSON: Why don't you in fact go ahead  
6 and make the comment --  
7 DR. TRAVERS: Let me make a comment on that. We  
8 were interested in the comment as it was raised, and Sam  
9 happened to have a copy of a letter we received from FEMA,  
10 December 29 of 1997 indicating that their report or -- yes,  
11 a copy of their report associated with an August 8, 1997  
12 full participation plume pathway exercise occurred actually  
13 on October 8, 9, and 10 of 1997.  
14 In that letter FEMA indicates that the  
15 participants in that exercise included the State of  
16 Connecticut, the city of Groton, the towns of East Lyme,  
17 Groton, Ledyard, Lyme, Montville, Old Lyme, Waterford in  
18 Connecticut, and the hamlet of Fishers Island in New York,  
19 the city of -- let's see, the city of New London. I thought  
20 I saw New York State in here as well. Let's see, where was  
21 it? Oh, Fishers Island and New York State fully  
22 participated in these exercises.  
23 That's all I can say about it right now, but as  
24 you point out, Commissioner, there is a 50-mile ingestion  
25 pathway in addition to the ten-mile exposure pathway that is

1 tested from time to time and it would include Long Island as  
2 well. So the expectation, and we can certainly check --

3 CHAIRMAN JACKSON: I think the point is let's just  
4 check.

5 DR. TRAVERS: We need to check into it.

6 CHAIRMAN JACKSON: Right.

7 DR. TRAVERS: To make sure that there is no gap.

8 CHAIRMAN JACKSON: Right.

9 DR. TRAVERS: We'll be glad to do that.

10 CHAIRMAN JACKSON: Okay.

11 MR. COLLINS: Chairman, just for a point of  
12 elaboration, we are aware of that particular circumstance,  
13 and Tom Essig, the section chief of NRR over the emergency  
14 preparedness area has experience in that area, has talked to  
15 the licensee, and can in fact update you on the  
16 circumstances if you'd like. If not, we can do it.

17 CHAIRMAN JACKSON: We can hear from him on his  
18 discussion with the licensee, but we're talking about  
19 checking with the New York State --

20 MR. COLLINS: Right.

21 CHAIRMAN JACKSON: Emergency Management Agency.  
22 That's what I've asked you to do. But I'm happy to hear  
23 from you.

24 MR. COLLINS: This is a result of coordinating  
25 with the State, both Connecticut and New York.

1 CHAIRMAN JACKSON: I've asked for a specific input  
2 from the State.

3 MR. COLLINS: I understand.

4 CHAIRMAN JACKSON: That comes from the State based  
5 on your request.

6 MR. COLLINS: Right.

7 CHAIRMAN JACKSON: Okay?

8 MR. ESSICK: Would you like me to speak to the  
9 ingestion pathway issue for -- ingestion pathway? I don't  
10 believe that there's been an ingestion pathway exercise done  
11 on Long Island that was --

12 CHAIRMAN JACKSON: Okay. So --

13 MR. ESSICK: There is one planned for the future.  
14 Fishers Island is technically part of the ten-mile  
15 EPZ.

16 CHAIRMAN JACKSON: Right. But not for Long Island  
17 as such.

18 MR. ESSICK: It has been included. But an  
19 ingestion pathway exercise has not been accomplished on Long  
20 Island.

21 CHAIRMAN JACKSON: Okay.

22 Okay, Mr. Travers.

23 DR. TRAVERS: Good afternoon, Chairman. As you  
24 know, the staff has been continuing extensive oversight  
25 activities in connection with the three-plus-year shutdown

1 of Millstone Unit 2, and today we're here to discuss with  
2 you our assessment of the issues related to the potential  
3 restart of Millstone Unit 2. As you indicated, Chairman, at  
4 the beginning of this meeting, in SECY-99-109 we provided  
5 the Commission a written summary of our assessment of the  
6 issues that we have been following and periodically updating  
7 the Commission on.

8 In addition, in that paper we indicated to the

9 Commission that the staff believes that the order, the ICAVP  
10 order, has been satisfied by virtue of the actions taken by  
11 NU, Parsons Power, and the NRC staff, and also we  
12 recommended the Commission provide its restart authorization  
13 for Unit 2. So let me introduce the people at the table,  
14 and we'll get right into our presentation, rather than take  
15 any more time.

16 Sam Collins, of course, is Director of the Office  
17 of Nuclear Reactor Regulation, and Hub Miller, the  
18 Administrator of NRC Region I. Gene Imbro is the Chief of  
19 the Mechanical and Civil Engineering Branch. Helen Pastis  
20 is here, and Wayne Lanning is the Director of the Division  
21 of Reactor Safety in Region I. And with that, let me turn  
22 it over to Hub to begin the staff presentation.

23 MR. MILLER: Okay. Thank you, Chairman and  
24 Commissioners. We will do three things. First, describe  
25 very briefly the inspection and oversight activities of the

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1 staff at Millstone. Secondly, present our observations.  
2 And then thirdly, draw or present our conclusions and make  
3 recommendations regarding restart.

4 As Bill mentioned and as you've heard today, and  
5 as you well know, NRC activities at Millstone have been  
6 intense. In addition to the direct involvement of the  
7 Commission, of course, Office of Special Projects was  
8 formed, and carried the lead through the restart of Unit 3.

9 Upon the restart of Unit 3 last August, all of the  
10 functions at staff level involved with oversight and  
11 inspection were returned to the region except for the area  
12 of the design inspections that Gene will talk about and the  
13 area of safety-conscious work environment and employee  
14 concerns. While the function returned to the region, it was  
15 maintained as a special inspection directorate under  
16 Wayne's -- Wayne Lanning's leadership, reporting directly to  
17 me, which was still providing a heightened level of  
18 oversight beyond what would normally occur for a plant.

19 Next slide.

20 CHAIRMAN JACKSON: Since I do want to ask a  
21 question about safety-conscious work environment, what's  
22 been the recent trend in terms of Millstone's site  
23 allegations received and -- both in terms of numbers and  
24 significance?

25 MR. COLLINS: I will address the numbers, Madame

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1 Chairman, perhaps you get give regional experience on the  
2 issues. The trend at Millstone, going back to '97, looking  
3 in the aggregate total number would be 57, '98 would be 31.  
4 So far in '99, based on the first quarter, it is 11, so if  
5 you project that over 12 months, it would be at 44, so the  
6 trend would be increased.

7 An analysis of that trend, and it is probably  
8 pretty mature to make any conclusive analysis because we are  
9 looking at one quarter's information, but an analysis by Ed  
10 Baker, who is the agency allegation advisor, would indicate  
11 that its history would show it is not unusual to have an  
12 increase at the time a plant prepares for restart, including  
13 carrying through probably the first period of restart. But,  
14 again, I have to be cautious with that because it depends on  
15 the significance of the issues.

16 The average median, if you will, number for  
17 calendar year '98 was six, and, again, that is compared to  
18 31. And the median so far in calendar year '99 is one.



19 Again, if you cascade that to four quarters, it becomes  
20 four, as opposed to 44. So the plant is still at an  
21 escalated level and the trend is increasing.

22 MR. MILLER: And I think it is also important to  
23 point out that we are still in process in evaluating these  
24 allegations. So it is one thing to count just the number  
25 and it is another thing to look at whether they are

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1 substantiated or not, which I don't think we can speak to  
2 here today. But more broadly, we will get into this kind of  
3 as we speak. I think in terms of the fundamentals that are  
4 required for a strong safety culture and safety conscious  
5 work environment, generally speaking, it is positive, but  
6 that is getting ahead a little bit.

7 COMMISSIONER JACKSON: Fundamentals are as  
8 fundamentals do.

9 MR. MILLER: Yes. And that is what I am talking  
10 about, what we observe. As they perform, not just as they  
11 talk the program.

12 Oversight activities -- if I could have the next  
13 slide. As you are aware, we have conducted our activities  
14 at Millstone following the processes that are framed in  
15 Manual Chapter 0350. This is the chapter, the procedure  
16 that applies to plants that are in a shutdown status. And  
17 it is really that document that provided the framework and  
18 the discipline to do a number of things.

19 First of all, make sure that our assessments, the  
20 work being done by Millstone is complete and comprehensive  
21 in addressing the issues that are essential to address prior  
22 to restart, to assure that there is adequate coordination  
23 among the many groups are involved. The activities at  
24 Millstone have involved many groups in the region, but, of  
25 course, also, many groups in the headquarters office, not

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1 just in the inspection arena, but there is a lot of activity  
2 in the licensing arena, especially in the resolution of  
3 issues that came out of the design inspections at Millstone.

4 Also, it served as an important tool to  
5 communicate with the licensee what our expectations were,  
6 and the public, over which issues of the many issues that  
7 exist there were ones that needed to be resolved prior to  
8 restart, and they do that upfront.

9 The second thing to talk about regarding the  
10 process is that it was guided on an ongoing basis by a panel  
11 of senior managers and staff from both the headquarters and  
12 region. Wayne Lanning led the so-called Restart Assessment  
13 Panel which assured that adequate resources were being  
14 applied to the issues as we conducted our oversight  
15 activities over the past several years.

16 There is a list here which I won't go through in  
17 detail. This is a shortened list. There are some 55 items  
18 that were identified in the restart action plan as issues  
19 requiring resolution prior to restart. They included, of  
20 course, the broad issues such as safety conscious work  
21 environment, employee concerns, and the ICAVP, the broad  
22 area of corrective actions, procedure upgrade, quality  
23 assurance and so on.

24 Throughout this process, also, an important  
25 element has been interaction with the public. We have held

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1 meetings with the licensee in an open arena. Members of the  
2 public were offered the opportunity to observe and often did  
3 observe our technical meetings and meetings at the site.  
4 But beyond that, also, we met periodically with the public,  
5 held meetings every six to eight weeks where we would  
6 typically summarize the nature of the inspections that we  
7 were performing and what observations we made and offer  
8 opportunity for comment and discussion on those findings.

9 Next, if I could just speak just briefly about the  
10 nature of some of the more significant inspections. First,  
11 I think it is important to point out that we have maintained  
12 at Millstone an expanded site coverage. We have had two  
13 extra resident inspectors and, in fact, I would like to  
14 introduce Dave Bowler, who is the Senior Resident Inspector.  
15 He is here somewhere.

16 COMMISSIONER JACKSON: He is behind you.

17 MR. MILLER: Behind me. There he is. And Mr. Jim  
18 Lingle, also, the Branch Chief from the Region is with us.  
19 Dave Lundy, who is in charge, if you will, on-site. The  
20 residents are backed up, though, by many specialists, both  
21 from the regional office and from the office of -- from  
22 Sam's office, looking at selected, specific issues that we  
23 were in our restart list.

24 We conducted a number of major team inspections.  
25 You have heard about them today on a number of occasions.

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1 The so-called 40500 team inspection, which is an inspection  
2 that focuses principally on corrective actions. We also  
3 assessed certain aspects of the Employee Concerns Program in  
4 that inspection. This is an inspection, just to give you a  
5 sense of it, that included eight inspectors for two weeks.

6 We conducted an operational safety team inspection  
7 which was just completed last week. This was an inspection  
8 that was done at the very end of the preparations for  
9 restart by individuals who had not previously been involved  
10 in inspections at Millstone. It was a dozen inspectors,  
11 including inspectors from other regions and contractors.  
12 The idea was for this group to come in and to sample many of  
13 the issues that had been previously inspected, to sample to  
14 give additional confidence that the observations that we  
15 were making were correct and accurate, and this involves,  
16 among other things, a heavy focus on operations in the  
17 control room, off-hours.

18 We also timed it to observe activities as the  
19 licensee began to change the configuration of the plant. We  
20 learn a lot about, especially after a long shutdown, there  
21 were questions this morning about, you know, what do we see?  
22 What confidence can we have that after this long period that  
23 the operators are ready? And so we felt it important to  
24 watch a lot of the mode changes and other activities as they  
25 reconfigured systems and did final testing.

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1 Gene Imbro will talk, of course, about the very  
2 extensive inspections that we did in the design arena.

3 I want to say also it is important -- there were  
4 questions this morning about the 17th area, engineering  
5 quality. Engineering runs through much of this and it is a  
6 crosscutting issue, and we get our insights through -- some  
7 of these inspections perhaps more than others, but in really  
8 all of the inspections, we are assessing broad areas such as  
9 corrective action. Engineering is an issue. And, in fact,  
10 as I turn this over to Wayne and to Gene, we have organized

11 the presentation of our observations not by the inspections,  
12 per se, but we have chosen to frame them more broadly,  
13 because it really is through all of these inspections that  
14 we have gotten our insights.

15 So at this point, unless there are more questions?

16 COMMISSIONER JACKSON: Well, I do have one.

17 During the January 1999 Commission meeting on the closure of  
18 the order related to employee concerns and safety conscious  
19 work environment, the staff discussed performance of  
20 inspection procedure for 0001, resolution of employee  
21 concerns. And I am interested in how this procedure is  
22 being factored into your plans?

23 MR. MILLER: We owe you an answer on that on May  
24 10th and we will provide that answer. But we intend to do a  
25 number of things with respect to employee concerns. In

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1 addition to the inspections that we will do, we will be  
2 following the quarterly reviews that Little Harbor will be  
3 doing with the licensee and monitoring --

4 COMMISSIONER JACKSON: Let me stop you for a  
5 second. What are you going to tell us on May 10th, what you  
6 are going to do, or that you have done it and some results  
7 from it?

8 MR. MILLER: You asked for us to tell you what our  
9 plan was.

10 COMMISSIONER JACKSON: Okay.

11 MR. MILLER: And we will give you a plan on May  
12 the 10th. We are still coordinating that, the program  
13 office and the region.

14 COMMISSIONER JACKSON: Okay.

15 MR. MILLER: Let me stop there and ask Wayne to  
16 continue.

17 MR. LANNING: Good afternoon. I am going to  
18 address the operations, maintenance and surveillance. The  
19 next slide, please.

20 Operations are adequate to support restart. This  
21 conclusion is based on the staff's assessment of the conduct  
22 of operations and the support to operations. For example,  
23 the fuel reload was performed well, and essentially  
24 event-free. Also, operator performance during the heat-up  
25 has been acceptable, although there were some minor valve

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1 alignment problems. These pipes --

2 COMMISSIONER JACKSON: Wayne, when you talk, could  
3 you speak to what makes them minor? Because the Commission  
4 has actually gotten quite a bit of correspondence on this  
5 issue of valve alignments.

6 MR. LANNING: I will be glad to. They are minor  
7 in the sense that they really were not safety significant.  
8 They involved additions of inventory to the reactor coolant  
9 system in two cases. Another case involved a reduction of  
10 water from the spent fuel pool, a small amount. All of  
11 these were attributed to procedure problems, and a lack of  
12 adequate planning.

13 All these three events occurred at a time when  
14 there was increased activity in the control room and so, as  
15 a result of these events, Northeast stopped activities, took  
16 a standdown, did a self-assessment and, really increased the  
17 amount of resources available to minimize distractions to  
18 the operators in the control room.

19 So it was a very valuable lesson learned type of

20 events with minor safety significance.  
21 COMMISSIONER JACKSON: Well, there are two  
22 aspects. One is the safety significance of the actual event  
23 and the other is the potential safety significance of the  
24 actual event. And so I guess what I think the Commission  
25 needs some assurance with respect to is what do you -- I

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1 mean do you feel that what the licensee has done in terms of  
2 lessons learned is sufficient to preclude a recurrence?

3 MR. LANNING: I do. And the OSTI, in fact,  
4 checked that during their most recent inspection.

5 MR. MILLER: Coming out of an outage, I am sure  
6 you appreciate this, there are numerous valve alignments  
7 that have to be done. And I think in most of the startup  
8 situations that I have seen, I can't recall a time where  
9 there weren't a couple of errors coming out of the outage.  
10 And what we look for is what does the licensee do to react  
11 to that. I was -- we were concerned, but they did -- they  
12 did standdown. They took strong action. And since that  
13 time, the performance has been good.

14 COMMISSIONER JACKSON: Okay.

15 MR. LANNING: Communications, both among operators  
16 and to other organizations were appropriate and effective.  
17 We found good procedure quality and observed appropriate  
18 procedure adherence in both operations and maintenance.

19 And, finally, our inspections found that licensed  
20 operators are trained and qualified, and this included  
21 just-in-time training and training for modifications. Next  
22 slide.

23 Maintenance and surveillance are adequate to  
24 support plant restart. We have found plant material  
25 condition generally acceptable based on the equipment

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1 condition and the backlog of maintenance activities.

2 Similarly, surveillance testing was found to be  
3 acceptable. Tests required for restart were identified or  
4 have been completed. Inservice testing requirements were  
5 met and surveillance procedures were of good quality.

6 Overall, maintenance activities were generally  
7 good, including post-maintenance testing and preventive  
8 maintenance. Management oversight was a strength and the  
9 quality of the maintenance work was very good.

10 Finally, the work scheduling planning process is  
11 adequate and improving. But given the backlog and emergent  
12 work, the ability to complete work efficiently is still a  
13 challenge. With time, emergent work decrease and more  
14 experience will be gained in implementing a new work control  
15 process, and the unit will be able to implement a 12 week  
16 rolling schedule and improve the work process.

17 COMMISSIONER JACKSON: So that is the solution,  
18 the 12 week rolling schedule?

19 MR. LANNING: Yes.

20 MR. MILLER: I think it is both that and continued  
21 commitment of resources. I think that it is both, because  
22 there is a large backlog. You have heard the company talk  
23 about their commitments to stay after that backlog and it is  
24 very important that they do that. It is not any one thing.  
25 But I wouldn't underestimate the importance of improving

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1 their work control, work planning processes. That will be  
2 ultimately an important part.

3 COMMISSIONER DIAZ: However, the separation of  
4 what is safety significant and what is non-safety  
5 significant has taken place, is being paid attention to, and  
6 is obviously visible and the process of identifying credible  
7 to you, is that correct?

8 MR. MILLER: Right. And I will speak more about  
9 backlogs in one of the later slides, in the context of the  
10 corrective action process.

11 MR. LANNING: No other questions? I will turn it  
12 over to Gene.

13 MR. IMBRO: Thank you, Wayne. I would like to  
14 speak about the ICAVP order and the staff actions in that  
15 regard. I will start off with a little bit of background in  
16 terms of the purpose of the order.

17 On August 18th, 1996 the NRC issued an order that  
18 required that Northeast Nuclear Energy Company to implement  
19 an independent corrective action verification program.

20 Specifically, the order directed NNECO to obtain the  
21 services of an independent organization to conduct a  
22 multi-disciplinary review of Millstone Units 1, 2 and 3.

23 The purpose of the review, of course, was to  
24 provide independent verification that Northeast's  
25 configuration management plan, which they refer to as CMP,

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1 had identified and resolved existing problems, had  
2 documented and utilized the licensing and design basis to  
3 resolve identified nonconformances, and had established  
4 programs, processes, and procedures for effective  
5 configuration management going forward.

6 The order required that the ICAVP was to be  
7 completed to the satisfaction of the staff prior to the  
8 heat-up restart. Next slide, please.

9 I will jump to the conclusions and then we can go  
10 back and I will fill in some details. NRC oversight of the  
11 implementation included six team inspections and extensive  
12 observation of technical interactions and discussions  
13 between Parsons and Northeast. These inspections and  
14 observations, which I will discuss more fully on the  
15 following slides, provides the basis for the staff's  
16 conclusions that the Parsons' ICAVP was comprehensive and  
17 conducted to a sufficient level of engineering detail to  
18 allow us to reach a conclusion regarding the effectiveness  
19 of Northeast's configuration management plan.

20 Considering the extensive scope of review and the  
21 level of engineering detail reviewed, a relatively small  
22 number of ICAVP significance level 3 discrepancies were  
23 identified by Parsons and the staff. Based on the number  
24 and low significance of these findings, the staff has  
25 concluded that Northeast Configuration Management Program

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1 was effective in restoring Unit 2's conformance with its  
2 design and licensing basis and that the NNECO configuration  
3 management programs, and processes, and procedures are  
4 adequate to maintain conformance with the licensing and  
5 design basis in the future.

6 The Unit 2 ICAVP has been completed to the  
7 satisfaction of the NRC staff and, therefore, the staff  
8 would recommend to the Commission that the order be closed.

9 COMMISSIONER JACKSON: In terms of the on a go  
10 forward basis maintaining conformance with the design and  
11 licensing bases, so it is your judgment that that process,

12 configuration management process, is being implemented  
13 properly by the workers?

14 MR. IMBRO: Yes, Chairman Jackson, we feel that it  
15 is. I think we have looked directly at the design control  
16 manual and the processes that Northeast uses to control the  
17 design. We feel they are adequate. I think they possibly  
18 could be improved. I think anything can be improved. But I  
19 think right now --

20 COMMISSIONER JACKSON: I am talking about how they  
21 are actually being done by the people.

22 MR. IMBRO: Implemented, yes. Yes, I believe that  
23 they are being implemented appropriately. I think we have  
24 seen over the two or three years that we have been on-site  
25 the level of engineering products improve, and I think that

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1 is a reflection that the configuration management process is  
2 being implemented properly.

3 COMMISSIONER JACKSON: What is the issue then with  
4 the engineering quality?

5 MR. IMBRO: Excuse me?

6 COMMISSIONER JACKSON: What is the issue then with  
7 engineering quality?

8 MR. IMBRO: Well, as we understood it, the --  
9 well, the issue of engineering quality had to do with  
10 calculational errors that were being made. I think that --

11 COMMISSIONER JACKSON: I thought there was an  
12 issue with design change packages also.

13 MR. IMBRO: We looked design change packages.

14 COMMISSIONER JACKSON: That was spoken to by them  
15 this morning.

16 MR. IMBRO: Yes. Well, okay, I guess, from our  
17 point of view, I think we saw the design change packages  
18 that we looked at, at least the relatively newer ones were  
19 quite good. I think that from an engineering quality point  
20 of view, again, there were calculational errors that were  
21 being made, but I think they were relatively minor in  
22 nature, but there were enough to cause the licensee concern.  
23 I think they implemented, as I mentioned before, this  
24 Quality Review Board.

25 We have seen the level, the quality level improve,

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1 again, over the time we have been there. So in terms of  
2 engineering quality, I think, you know, certainly, it can be  
3 better, but I think right now, I think it is adequate to  
4 support restart.

5 COMMISSIONER JACKSON: Do you have a comment, Mr.  
6 Lanning?

7 MR. LANNING: Well, I just like to take you back  
8 to Unit 3, in the recirculation spray system, where those  
9 modifications late in the process were not of good  
10 engineering quality. And there were other examples where  
11 engineering work was not acceptable. So it is really a  
12 result of that they implemented this Quality Review Board to  
13 improve the process of engineering work. I think we are  
14 seeing the benefits of that.

15 COMMISSIONER JACKSON: So you have begun since  
16 they implemented this Review Board, you have actually seen a  
17 change, a step change in the quality?

18 MR. LANNING: I think so. In comparison with Unit  
19 3, the engineering for MOTS, for example, Unit 2, have been  
20 much improved.

21 COMMISSIONER JACKSON: Okay.

22 MR. IMBRO: Slide 10, please. Quickly, I would  
23 like to go through the role that NRC played in overseeing  
24 the ICAVP. The NRC staff has been extensively involved in  
25 the development and implementation of the ICAVP from its

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1 inception. Some of the staff's ICAVP oversight activities  
2 are listed on the slide, and I won't go through them all.

3 But, in addition to specifying the scope and depth  
4 of the Parsons' review, the staff provided guidance in the  
5 application of the four levels of ICAVP significance. These  
6 were developed by the staff to provide a measure of safety  
7 significance of the Parsons' discrepancy reports.

8 COMMISSIONER JACKSON: Are they exactly the same  
9 as what was used for Unit 3?

10 MR. IMBRO: Yes, exactly the same. Yes. During  
11 the implementation of the ICAVP, staff involvement focused  
12 on assuring the independence of Parsons and that it was  
13 maintained throughout the process, and that the review by  
14 Parsons was technically comprehensive, critical in nature  
15 and in accordance with the NRC approved audit plan and  
16 communications protocol.

17 Staff also interacted frequently with members of  
18 the Connecticut Nuclear Energy Advisory Committee to keep  
19 them apprised of ICAVP activities, including the numerous  
20 NRC monitored interactions between Parsons and Northeast  
21 Utilities to discuss technical issues.

22 NEAC observed a large majority of these  
23 interactions and observed most, if not all, of NRC's ICAVP  
24 oversight inspections. The involvement of NEAC I believe  
25 enhanced public confidence in the objectivity and

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1 independence of the ICAVP process.

2 COMMISSIONER JACKSON: What involvement did NEAC  
3 have again?

4 MR. IMBRO: NEAC, they were in the role of  
5 observers who observed the staff's performance or oversight  
6 of the ICAVP. So, when we had phone calls where the  
7 licensee and NEAC would discuss discrepancy resolutions, we  
8 would inform NEAC and they would participate -- not  
9 participate, but listen, listen to the call, monitor the  
10 calls.

11 We informed them of our exit meetings and they  
12 attended the exit meetings. They attended some -- they  
13 observed in-process inspections, so they were quite active  
14 in looking at how we were overseeing the ICAVP process,  
15 particularly in maintaining the independence of the ICAVP  
16 process.

17 COMMISSIONER JACKSON: But nothing with respect to  
18 the scope of the reviews?

19 MR. IMBRO: No. No. The scope of the reviews was  
20 determined by the staff. But I will point out, though, that  
21 NEAC assisted in the public selection of the two final  
22 systems from a group that were pre-approved by the staff.  
23 So in that sense, they participated in the scope, but I  
24 mean, again, the scope was really defined by the NRC.

25 Slide 12, please. I'm sorry, I skipped one.

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1 Slide 11.

2 COMMISSIONER JACKSON: Eleven.

3 MR. IMBRO: Just, again, a lot of this was covered

4 by Dan Curry and Eric Blocher from Parsons, but just quickly  
5 to go through the scope of the ICAVP review. The ICAVP  
6 review was developed by the staff to be a comprehensive  
7 review of the effectiveness of NNECO's programs to identify  
8 and correct nonconformances with their design and licensing  
9 bases.

10 In SECY-97-003, the staff proposed a three tier  
11 approach to verify configuration control from several  
12 vantage points. Tier 1 was an independent, vertical slice  
13 review of 11063 maintenance rule, group 1 and group 2  
14 systems, and the interfaces between these systems and  
15 approximately 50 support systems, and, again, to verify the  
16 compliance with their licensing and design bases.

17 COMMISSIONER JACKSON: How did you pick the 11 as  
18 opposed to 35?

19 MR. IMBRO: Well, we used --

20 COMMISSIONER JACKSON: What was the basis of the  
21 selection is what I am really saying.

22 MR. IMBRO: We looked at several things. First of  
23 all, we looked at risk insights. We looked at system  
24 complexity in terms of the number of components. We looked  
25 at past problems with the systems. So we tried to select

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1 the systems that were the most likely for us to observe  
2 problems in.

3 Tier 2 was a review of approximately 750 critical  
4 design characteristics and initial plant operating  
5 conditions to verify that the 56 systems credited with  
6 accident mitigation were able to perform as assumed in the  
7 accident analyses in the FSAR.

8 Tier 3 was a historical review of 14 change  
9 processes, other than the principal design change process,  
10 to verify that past changes made to these processes did not  
11 introduce noncompliances with the unit's design and  
12 licensing basis. The Tier 3 review, as Parsons mentioned,  
13 included approximately 460 changes to Unit 2 since the  
14 issuance of the operating license, so it was a review over  
15 the continuum of time from the operating license to present,  
16 and Parsons has expended approximately 223 hours -- 23,000  
17 hours of technical review.

18 COMMISSIONER JACKSON: What are we to take away  
19 from that bullet?

20 MR. IMBRO: That the review is very comprehensive.  
21 Just by the magnitude, the sheer magnitude of the hours, and  
22 the level of detail. We observed -- they looked at close to  
23 a thousand calculations. They looked at more than a  
24 thousand drawings. They have reviewed procedures from  
25 emergency operating procedures, normal operating procedures,

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1 abnormal operating procedures. They have reviewed component  
2 specifications. They really dug deeply.

3 So I think what you can take -- at least what I  
4 take away from this is that Parsons' review was thorough and  
5 that the conclusions they reached are supportable and we  
6 would concur with them.

7 Next slide, please. Just a quick discussion of  
8 ICAVP inspection results. NRC's oversight of ICAVP, as I  
9 had indicated before, included six team inspections that  
10 represented approximately 9,500 hours of inspection. The  
11 purpose of these inspections was to provide confidence that  
12 Parsons' reviews were comprehensive and that the Northeast  
13 configuration management plan was effective in restoring



14 compliance with the unit's licensing and design bases.  
15 Two of the inspections we conducted were similar  
16 to the SSFIs that were described in the NRC manual. One of  
17 the SSFIs focused on a system that was being reviewed by  
18 Parsons, the aux feedwater system. The other focused on a  
19 system that was included in Northeast's CMP. Northeast  
20 looked at all 63 systems. But this reactor building closed  
21 cooling water system was not a part of the Parsons' review  
22 and we did that sort of to get a cross-section of things  
23 that were being reviewed both by Parsons and things that  
24 were not being reviewed by Parsons, just to be sure that  
25 there was a uniformity.

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1 The staff also conducted inspections similar to  
2 Parsons' tier 2 and tier 3 reviews. And, lastly, we  
3 inspected -- we did a detailed inspection of the corrective  
4 actions for issues that were identified by Parsons, by us in  
5 our inspections, and also some things that were identified  
6 by Northeast during their CMP that were not part of the  
7 Parsons' review.

8 None of the issues identified by NRC would have  
9 prevented a safety system from performing its intended  
10 function. Therefore, the NRC findings were determined to be  
11 in safety significance equivalent to ICAVP level 3s -- level  
12 3 discrepancy reports.

13 Overall, the significance and number of the NRC  
14 identified violations we feel is small, particularly in view  
15 of the level of inspection effort and the depth of our  
16 team's reviews.

17 COMMISSIONER JACKSON: So those are your outcomes.  
18 Because what you have cited are the outputs, 23 violations.

19 MR. IMBRO: That's right. That's correct.

20 COMMISSIONER JACKSON: Et cetera, et cetera. So  
21 the outcome is that the significance is --

22 MR. IMBRO: Yes, that is right. And I would just  
23 continue on that the number of Unit 2 violations resulting  
24 from the ICAVP is comparable to that identified on Unit 3.  
25 With only one exception, the NRC violations were enforcement

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1 severity level 4s, contrasted to ICAVP severity level, which  
2 is the lowest, of course, as you understand, the lowest  
3 enforcement severity level. And looking -- judging these  
4 against the new enforcement guidelines for level 4s, the  
5 majority of these would have been NCVs, so the significance  
6 was not very great.

7 There was only one enforcement severity level 3  
8 violation, I think as the licensee has alluded to. This was  
9 a violation for failure to perform a 50.59 analysis on tech  
10 spec interpretation.

11 Again, the Northeast corrective actions to the  
12 above violations, we feel were adequate not only to correct  
13 the specific instance of the violation, but also to explore  
14 the breadth of the violation and examining other systems to  
15 see if similar situations occurred. We feel that they did a  
16 good job in that expansion of scope, and they also corrected  
17 any violations that -- or any other discrepancies that they  
18 identified.

19 Therefore, in accordance with the criteria  
20 contained in our January 30th letter for ICAVP scope  
21 expansion, we did not feel it was necessary to expand the  
22 ICAVP scope based on the quality of the licensee's

23 corrective actions.  
24 Again, based on the above, the staff concludes  
25 that the ICAVP order has been satisfactorily completed.

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1 COMMISSIONER JACKSON: To what extent, in terms of  
2 -- well, never mind. I'll wait. I'll wait.

3 MR. IMBRO: Okay. This concludes my presentation  
4 regarding ICAVP. At this point, if there are no further  
5 questions, I will turn the presentation back to Mr. Miller.

6 MR. MILLER: The next two areas that I will talk  
7 about, again, are croscutting issues, and so it is best to  
8 review these after the others. The first has to do with the  
9 corrective action process and, based on all of our  
10 inspections, we have drawn the conclusion that sufficient  
11 program has been made with respect to the corrective action  
12 program to support restart.

13 The identification of problems is done at a low  
14 threshold. I think the numbers that you saw this morning  
15 speak to that. The inspections that we have done, where we  
16 have looked at individual items that are in the backlog of  
17 items, and where we checked to see how the licensee  
18 addresses those issues has indicated that they are generally  
19 thorough and lead to a good result.

20 There is the backlog. You have talked a lot about  
21 it. We have talked a lot about it today. Our feeling is  
22 that the backlog is adequately prioritized. We have looked  
23 at it, first of all, from the point of view of are there  
24 items in the backlog that could impact on the operability of  
25 safety equipment, impact on the ability to meet technical

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1 specifications and the like, the very obvious things.

2 We looked at their process for making these  
3 judgments, the criteria that they have applied. Beyond  
4 that, we have sampled individual items to make our own  
5 judgments about those and we have concluded that they have  
6 made the right judgments regarding what is required prior to  
7 restart and what can be left.

8 COMMISSIONER JACKSON: To what extent did the NRC  
9 staff use actual risk insights in making those judgments?

10 MR. MILLER: Well, we used the PSA, the leader of  
11 the OSTI was one of our SRAs, or senior reactor -- senior  
12 risk analysts, and we consulted with the PSA routinely in  
13 selecting the samples that we took and picking the items,  
14 the specific items that we looked at. And in judging, I  
15 know on a number of occasions, I saw specific analyses on,  
16 you know, issues that got us into looking at risk  
17 specifically on an item by item basis.

18 COMMISSIONER JACKSON: Okay. You say you looked  
19 at it on an item by item basis. Did you also evaluate the  
20 cumulative effect of the backlog from a specific risk point  
21 of view?

22 MR. MILLER: Well, we pushed the licensee to do  
23 that. There is no way that I know of to do that in any  
24 rigorous way that you can tie to a PRA. But it is on our  
25 mind. I think that --

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1 COMMISSIONER JACKSON: I disagree, by the way.  
2 But it is okay. But I disagree.

3 MR. MILLER: We challenged the licensee after the  
4 restart of Unit 3 and there were a number of events, and you  
5 have talked about those this morning. I think that there

6 was a question of whether or not they had given adequate  
7 attention to the cumulative burden on operators. And it  
8 why, in a sense, you have to look at not just the items that  
9 are clearly and plainly an impact on the operability of  
10 equipment, but also look at -- the number does become  
11 somewhat important, and I will give you an example.

12 One of the plant trips was the result of a main  
13 steam isolation valve going shut. And that was the result  
14 of a solenoid that failed. Now, it was known that there  
15 were some vulnerabilities with those solenoids. Every  
16 problem doesn't get fixed right away. It wasn't a problem  
17 by looking at it. On the face you would say it wasn't an  
18 immediate issue.

19 So a backlog and a reduction in the number of  
20 backlog does become important because, you know, the backlog  
21 can have these kinds of issues.

22 So, our judgment, just generally, Chairman, is  
23 that good decisions were made regarding restart and that the  
24 plans that they have laid out and the commitments that they  
25 have now made to work that backlog is reasonable.

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1 Licensee internal oversight --  
2 COMMISSIONER MERRIFIELD: I am just going to  
3 interrupt you. Before we go to the next slide, I just want  
4 to ask a sort of concluding question to that slide number  
5 13. Given the importance of a sound Corrective Action  
6 Program, this is obviously something we're going to need to  
7 be vigilant about maintaining our -- keeping on top of the  
8 licensee in that regard, because sometimes faltering in a  
9 corrective action program can be an indicator of problems in  
10 other areas.

11 CHAIRMAN JACKSON: That's how we got here.

12 COMMISSIONER MERRIFIELD: Right. How do we, going  
13 forward, what kind of indicators are we going to be using to  
14 make sure we've got an early indication if there are  
15 problems in the future?

16 MR. MILLER: That might be the -- a full  
17 discussion of the new program, for one. Certainly there's  
18 that, but there's also, you know, looking at, in every  
19 inspection, as a byproduct of every inspection, do we have  
20 evidence that the licensee is identifying their own issues  
21 and consistently getting to the root cause and fixing them  
22 in a timely way. We've preached that as a fundamental  
23 objective of every inspection, as a byproduct of every  
24 inspection, and that sensitivity is heightened, has been  
25 heightened over the past several years as we've learned the

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1 lessons from Millstone, but, Sam, if you want to add to  
2 this.

3 MR. COLLINS: I'll try to be partially responsive.

4 We have -- Chairman, you touched on this earlier  
5 when you mentioned, you know, Chapter 4501, we have an  
6 additional effort that we're working on as a result of the  
7 Commission paper that was provided in July having to do with  
8 safety conscious work environment, which again focused us on  
9 the Corrective Action Program as one of the options that was  
10 provided to measure safety-conscious work environment and  
11 the disposition of issues that are brought forward by  
12 individuals.

13 In the Commission direction which occurred in  
14 August to that, the direction was to go forward and look at

15 the existing program but enhance that program having to do  
16 with the corrective action program inspection procedure,  
17 which is 4,500, and provide for training insights and  
18 additional enhancement of our processes. We went out to the  
19 regions in late October and asked for them to comment on the  
20 procedure and provide us recommendations for training. That  
21 came in at the end of the year. And we're now revising that  
22 procedure to include those insights to try to get to these  
23 issues in the future.

24 These enhancements will be used at the followup  
25 corrective action inspection which is already scheduled by

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1 the region to take place sometime after discussions here  
2 today. I think May is the proposed date for that at this  
3 time. In addition, the new oversight process depends quiet  
4 heavily on the Corrective Action Program to be robust and to  
5 be functional.

6 We intend to inspect that area directly, and there  
7 is also a preliminary view that is shared by the working  
8 group of which licensees are a member that performance and  
9 the trends in performance can be directly related to a  
10 Corrective Action Program. There's a cause and effect.  
11 Licensees will be unable to maintain the high measurement of  
12 performance as indicated by the individual performance  
13 indicators if there is a problem in the Corrective Action  
14 Program. There's a direct nexus there. The pilot plants  
15 will be used --

16 CHAIRMAN JACKSON: Is the risk-informed baseline  
17 inspection program going to look at some -- at certain  
18 aspects?

19 MR. COLLINS: It will.

20 CHAIRMAN JACKSON: Of the Corrective Action  
21 Program?

22 MR. COLLINS: It will. It will not look at it in  
23 depth, but it will test it as Hub mentioned as a matter of  
24 the disposition and of issues that are found.

25 CHAIRMAN JACKSON: Um-hum.

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1 MR. COLLINS: And then --

2 CHAIRMAN JACKSON: I'm glad to hear that, because,  
3 I mean, let's face it, Northeast Utilities had a Corrective  
4 Action Program before we ever got to where we are, and so --  
5 and we talk a lot about problem identification, low  
6 thresholds for identifying them, and then, you know,  
7 sometimes we feel there may be weakness in getting to root  
8 cause, et cetera, and we talk about that. But then once  
9 you've sort of tossed everything over into the corrective  
10 action basket --

11 MR. MILLER: Chairman, I've got a strong bias on  
12 this, and it is that an inspection like a 4500 inspection,  
13 which goes in and looks at the corrective action process,  
14 gives you a lot of insights, but the greatest insights come  
15 from the inspectors who are out looking at the work in a  
16 direct fashion, looking at maintenance, looking at  
17 engineering and the like, and making a judgment of the  
18 things that we find and see, is the licensee finding those  
19 same things, and where we find either an individual issue or  
20 a pattern of weakness that is not being picked up by the  
21 licensee, that's our strongest evidence that a corrective  
22 action process is not working.

23 CHAIRMAN JACKSON: Well, but --

24 MR. MILLER: And it's in the rollup of that --

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1 found --

2 MR. MILLER: Right.

3 CHAIRMAN JACKSON: Is in the end, and how that  
4 affects the plant performance, is in the end the only  
5 measure. Right? You can find what you want, and, I mean, I  
6 can tell you that I know my brake pads are worn down and  
7 that my, you know, tread on my tires are below some, you  
8 know, limit, and that my oil, you know, is leaking, but the  
9 real issue is if I'm going to get out onto the Beltway, am I  
10 going to put new tires on the car? Am I going to put new  
11 brake pads on the car? That's all I'm really talking about,  
12 on a risk-informed basis. And that's the point. It's, you  
13 know, not just that they identify. That's necessary.

14 MR. MILLER: Yes, I was going to get to that.

15 COMMISSIONER MERRIFIELD: Can I --

16 CHAIRMAN JACKSON: Please.

17 COMMISSIONER MERRIFIELD: If you don't mind.

18 CHAIRMAN JACKSON: Please.

19 COMMISSIONER MERRIFIELD: If I can phrase that in  
20 the form of a question, perhaps. You know, there has been  
21 some discussion today not only about the loss of confidence  
22 in Northeast Utilities and their having to rebuild it but a  
23 loss in confidence in the NRC. I've only been here for six  
24 months, so I wasn't as intimate as the Chairman and the  
25 other Commissioners have been in this. But given the

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1 changes that we have made in our inspection process from the  
2 actions that are taken by our resident inspectors to our  
3 regional inspectors to the activities undertaken at NRR, in  
4 combination with the proposals that we have under way in our  
5 new inspection and enforcement process, given your strong  
6 opinions about these, Hub, are we in a position now where we  
7 have greater confidence to say that we have learned lessons  
8 from this activity and we made the changes necessary for us  
9 to avoid putting ourselves in this position again in the  
10 future?

11 MR. MILLER: I would say yes. Well, among other  
12 things, the need to not only be sensitive to whether the  
13 licensee is identifying issues in the first place but,  
14 secondly, roll up to see if these things are being fixed  
15 properly. And a lot of it is in the rollup. The objective  
16 indicators that we are focusing on and that are part of the  
17 new program in combination with inspection, what do they  
18 tell you? How does the plant perform? It's the outcome.  
19 And I think it's this focus on outcomes and improved  
20 inspection. I think that it gives me the ability to talk to  
21 the public and say I have confidence that we've --

22 DR. TRAVERS: I think the other thing is the goal  
23 we've had in the new assessment oversight process has been  
24 this emphasis on objective measures, how can we communicate,  
25 how can we first understand and then communicate publicly

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1 well on our assessment of performance?

2 And we are now embarking on a pilot program that  
3 we hope will be successful and demonstrate how we can use  
4 these objective measures as part of an assessment strategy  
5 to put ourselves in a better position to understand and  
6 ultimately communicate our best thinking on performance

7 assessment.  
8 The only other thing I would like to mention on  
9 the emphasis that I think we need to strive for in  
10 corrective action understanding is in connection with  
11 assessment generally, but more particularly with the  
12 Commission's recent approval of a new enforcement strategy  
13 for severity level 4 violations, for example. Right now  
14 based on that change licensees are putting problems that  
15 even NRC identifies into their Corrective Action Program.  
16 We are not intending to follow up on each one of those by  
17 requiring nor examining the corrective actions that result.

18 The corollary to that is that we are emphasizing  
19 the need to understand that the Corrective Action Program is  
20 a healthy one and is in fact resulting in the appropriate  
21 disposition of these issues as they arise. And it's really  
22 the level of confidence we need to maintain to support the  
23 working of that sort of enforcement strategy that we've  
24 adopted recently.

25 CHAIRMAN JACKSON: Have you tied the loop? I

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1 mean, have you closed the loop in terms of what it takes to  
2 be convinced that the Corrective Action Program is healthy?

3 DR. TRAVERS: Yes, and we are doing that in  
4 connection with the inspection procedures that Sam made  
5 reference to earlier.

6 COMMISSIONER DIAZ: Madam Chairman --

7 AUDIENCE MEMBER: Millstone should be shut down.  
8 NRC needs to prove they're not a tool of the nuclear  
9 industry by doing the right thing and shutting it down, and  
10 you all now it. It's the worst one in the country, the most  
11 likely disaster to happen next.

12 COMMISSIONER DIAZ: If I may go back to tying in  
13 the cumulative, you know, effects of many things, and risk  
14 insights. I do believe that it is very hard to extract from  
15 cumulative say problems what, you know, an actual issue is,  
16 and sometimes it is better, especially if you use risk  
17 insights, to see which are the important ones and how they  
18 propagate through the system, how they get fixed in the  
19 corrective action.

20 However, like Hub said and like the Chairman  
21 addressed, sometimes, you know, the size might indicate, you  
22 know, and we have used the word "pervasive," you know,  
23 problem, but it is difficult and it will become more  
24 difficult, okay, rather than easier, when we really  
25 risk-rank, you know, the type of issues, because we are

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1 going to be focusing on those which are of higher safety  
2 significance, those who propagate through the system, those  
3 are the ones that, you know, inspections will see from one  
4 to the other, not only the single issue of the ones that  
5 carried out from one area to another. And those are easier  
6 to put, quote, in and sum them up that a lot of the simple  
7 lower issues.

8 CHAIRMAN JACKSON: Oh, I agree. But we do have  
9 this example of the circulating water screens, and, you  
10 know, the plant trip that resulted where, you know, you have  
11 the debris or the, you know, seaweed, and so you can focus  
12 on that, but there's a degraded system that would, you know,  
13 have the effect of allowing you to reverse the screens, and  
14 if you're not looking at the fact that it's not just, you  
15 know, the seaweed or sea grass intrusion but in fact whether  
16 there's some degradation in the system that impairs its

17 ability to deal with that, then in point of fact that's an  
18 example of what I call a cumulative effect.

19           You have the effect both of, you know, what's  
20 going on in the water, what's coming in, and you have the  
21 effect of a degradation in the system which you might think  
22 by itself is not a big deal, but that if it compromises the  
23 ability of the circulating water system to deal with a  
24 particular thing, then it can have some operational effect.  
25 And I haven't even put that into any, you know, risk ranking

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1 as such, but I'm just saying where you have a compendium of  
2 things that conspire. And I think it's that kind of  
3 vigilance that I think is important.

4           CHAIRMAN JACKSON: Yes. Mr. Collins?

5           MR. COLLINS: Yes. Just to be responsive to  
6 Commissioner Merrifield's comment about public confidence in  
7 Millstone, there are two forums to look at that in.

8           We have quite an extensive Millstone lessons  
9 learned internal program, which we can provide the history  
10 on to your staff and the status. I believe the real focus  
11 of you question though was externally, and how are new  
12 processes or is our decision-making going to help to  
13 buttress or to shore up, provide some measure of positive  
14 confidence, and although it will take a while to get there  
15 certainly, I believe with the new oversight process there  
16 are opportunities for that.

17           Those opportunities come very early in the process  
18 as far as involving the external stakeholders and there our  
19 stakeholders in Long Island are certainly a part of that.

20           The program office will consider and we certainly  
21 would be receptive to any insights from the Commission of  
22 whether it is the right thing to do and in the agency's best  
23 interest to hold local meetings in the area of Millstone to  
24 ensure that the individuals are aware and are educated on  
25 our new process, because that process will be visible, it

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1 will be public, and like the other initiatives that NU  
2 mentioned it will be in our mind a tangible indicator of  
3 plant performance.

4           I think part of the history of Millstone, of why  
5 we got to why we are here today and the trust issue was the  
6 lack of information, and the lack of insights, along with  
7 our processes which again warranted improvement and  
8 hopefully we are moving down that road, so I think there is  
9 room in that area, public confidence.

10           There is room in the understanding of where we are  
11 going with our oversight process and what is available to  
12 the public to measure actual performance as we move down the  
13 road to certainly the operating units' performance and any  
14 decision the Commission should make after that.

15           CHAIRMAN JACKSON: Okay. Why don't we go on.

16           MR. MORRIS: Next slide, 14. Northeast has  
17 strengthened the internal oversight activity and this  
18 includes quality assurance but not just quality assurance.  
19 Also there are oversight panels, the self-assessments that  
20 are done by the line management.

21           I think that the rollups, the overall assessments  
22 that are being performed by QA have been good and you heard  
23 the company talk today about having a certain standard that  
24 was there before restart. They have increased their  
25 standards as the units have come back online. The standards

1 for Unit 3 were higher than they were for Unit 2 or even the  
2 startup of Unit 2 and so my sense is or our sense is from  
3 the inspections that oversight is strong and certainly  
4 acceptable and sufficiently strong to support startup for  
5 the unit.

6 The next slide is just a very brief summary of the  
7 challenges that Northeast faces. I think it is important  
8 for us as we oversee the station that we keep in mind that  
9 these challenges are on they will be restarting Unit 2, the  
10 preparations for Unit 3, the Unit 3 outage are in process  
11 now and they will going into that outage, the need to  
12 improve the work control processes, continue to maintain  
13 progress on the backlog and complete the site  
14 reorganization. There's a lot there -- and at the same time  
15 maintain the safety-conscious work environment and employee  
16 concerns and so it is with this in mind that we will go on  
17 to the next page, continue to provide close oversight.

18 We expect that during the startup of Unit 2 we  
19 will have an augmented coverage of the startup activities,  
20 that we will agree upon certain hold points in the power  
21 ascension program, to review the results of each phase of  
22 the power ascension program, the results, and review that  
23 with the company before they proceed to the next level.

24 We will continue to provide upon their completion  
25 of that some period of monitoring after they start the unit

1 up, also provide coverage of the outage --

2 COMMISSIONER MERRIFIELD: Excuse me, Chairman, if  
3 I may, I actually had a -- you talked right through. I just  
4 want to go back to the last slide for just one second.

5 You have indicated that the Staff believes the  
6 programs and personnel at Millstone are adequate to support  
7 restart of Unit 2. You have listed a variety of challenges  
8 here and what we have to look at, ultimately, the Commission  
9 is going to make the decision and our decision isn't  
10 necessarily a laser decision as to are they able to operate  
11 Unit 2. It is a question of given all of the other  
12 challenges here, given the fact that we have an upcoming  
13 outage coming up, all the challenges associated with that,  
14 given those, can you articulate your full confidence that  
15 they are going to be able to that given all of these  
16 challenges?

17 MR. MILLER: Being an inspector, I never like to  
18 look forward but my sense is that if they do the things that  
19 they have done, make the kinds of adjustments and priorities  
20 as they made after they encountered some of the problems  
21 coming up on Unit 3, after they made the adjustments as they  
22 encountered some personnel errors as they came up on Unit 2,  
23 provided they continue that kind of conservative  
24 decision-making, that as they encounter difficulties that  
25 they slow it down and they make correct decisions and that

1 way they should be able to manage this, but at this point  
2 the point of this slide is to just tell you that we need to  
3 continue to monitor them closely, and to suggest or to say  
4 that we know that they can't do it.

5 It's just that, you know, there is a lot of talk  
6 here today about the good news, the things that the company,  
7 the progress the company has made and they certainly had to  
8 make it sufficient enough to get confidence to start the



9 unit up. It's just that I think it's wrong to then believe  
10 that with all of the discussion of the positive things to  
11 somehow get the view that this is going to be an easy thing  
12 going forward. It won't be and I think we just have to  
13 judge, make our judgments about how much is enough oversight  
14 in light of that.

15 COMMISSIONER MERRIFIELD: Well, it is easy  
16 sometimes for us to get into the NRC-speak, and just so it  
17 is clear for the public, we are not simply taking a snapshot  
18 of this. I mean this is a compendium. We are going to  
19 continue to look at the activities going on with this  
20 licensee to determine whether we have continued confidence  
21 in what they are doing, so it is not as if, even if this  
22 Commission were to decide, yes, we agree with the Staff and  
23 we have confidence that this unit can restart, we are going  
24 to be continuing to very closely monitor what is going on  
25 with this licensee.

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1 MR. TRAVERS: And this is meant to give you a  
2 sense of those areas that we --

3 COMMISSIONER MERRIFIELD: -- will continue to look  
4 at.

5 MR. TRAVERS: -- will monitor and focus on.

6 MR. MILLER: We will be assessing the plant of  
7 course in the next, in the Senior Management Meeting and all  
8 of the other things that go along with that.

9 Well, I think this slide kind of speaks for  
10 itself. It kind of comes back to the Chairman's, probably  
11 her first question to me, and that is where do we stand in  
12 terms of the employee concerns program and monitoring it.

13 We are developing the plan and we will be  
14 providing our plan and a specific plan at the end of May.

15 At this point this ends my presentation, and I'll  
16 turn it back over to Bill.

17 MR. TRAVERS: As I indicated at the beginning of  
18 our presentation, our summary and recommendation to the  
19 Commission as presented in the SECY paper is that we in fact  
20 have been carrying out an oversight program for a little  
21 over three years now that has focused on the corrective  
22 actions being made by Millstone Unit 2, and we recommend  
23 that in connection with the ICAVP that they have met the  
24 conditions of the order and we are recommending that the  
25 Commission with our conclusion that that order has been in

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1 fact satisfied.

2 Secondly, we believe that the corrective actions  
3 and the programs they have implemented during their three  
4 year shutdown period are viewed as ones that support the  
5 safe restart and operation of Millstone Unit 2, and lastly  
6 we provided a recommendation to the Commission that the  
7 Commission authorize restart of Millstone Unit 2, and a  
8 propos to Commissioner Merrifield's question, the way the  
9 Commission considered this in connection with Millstone Unit  
10 3, if there is consideration in the same fashion, Millstone  
11 Unit 2 would remain in connection with today's program a  
12 Watch List Category 2 program and would in fact continue to  
13 receive additional scrutiny by the NRC Staff in connection  
14 with the kinds of activities including startup and continued  
15 operation as they ascend to power, so even if the Commission  
16 approved restart, my point simply is that they would remain  
17 in a category of our assessment that would be enhanced over

18 and above that normally associated with plants that are  
19 operating well.  
20 CHAIRMAN JACKSON: These are the final questions  
21 and comments. I am going to start in the inverse order,  
22 with Commissioner Merrifield. Thank you.  
23 COMMISSIONER MERRIFIELD: I have a question and  
24 then I have a couple of comments.  
25 The question is this. You talked about some of

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1 the recommendations. I wondered if you have given any  
2 thought -- obviously there is a great deal of stakeholder  
3 interest in regards to this facility, both in terms of the  
4 individuals who live in the Waterford area, within the  
5 10-mile EPZ, as well as citizens who live outside of the  
6 10-mile EPZ on Long Island and elsewhere, and so, you know,  
7 as a personal opinion, I think we need to keep vigilant in  
8 terms of maintaining that public confidence and keeping them  
9 informed.

10 I didn't know whether you had any thoughts in  
11 terms of what activities you might be wanting to undertake  
12 in that regard as we along, or perhaps you don't. I don't  
13 know.

14 MR. MILLER: We have had the periodic meetings  
15 that I talked about every six to eight weeks in the  
16 Connecticut area. Sam and some of the folks from NRR had a  
17 recent meeting in New York, is that right? --

18 MR. TRAVERS: And Dr. Sheron.

19 MR. MILLER: And Dr. Sheron to hear issues of the  
20 citizens or of the people in New York regarding the  
21 emergency planning issue, and so I mean we have done, we  
22 have tried to keep a continuing dialogue going with the  
23 public, and specific issues have arisen like the emergency  
24 planning issue and we have had specific meetings on that.

25 I expect that we'll continue at some level to do

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1 this.

2 MR. TRAVERS: But I do think we were looking at  
3 transitioning into a more nominal state of affairs. We have  
4 been carrying out a fairly extraordinary program with regard  
5 to our efforts at Millstone, and deservedly so. We think it  
6 has been the right thing to do.

7 We think though that there will probably be a  
8 lessening of that kind of activity balanced against, as you  
9 have indicated, the need to continue to involve public  
10 stakeholders.

11 We need to work on just what that will be but I  
12 anticipate it will be more nominal.

13 COMMISSIONER MERRIFIELD: Well, I think it is  
14 important that we continue to have some presence there and I  
15 look forward to reviewing the recommendations that you and  
16 your staff will make in that regard.

17 A couple of comments that I want to make to finish  
18 things out. Having been a Commissioner for only six months  
19 but having been involved in public service for going on 14  
20 years now I understand that one has to have a relatively  
21 thick skin about things, and having been accused of having  
22 no brain, no heart, and no soul, I certainly would want to  
23 assure the public that I don't think this Commission is, you  
24 know, I don't think we are in the cast of the Wizard of Oz  
25 here and I indeed do feel I have those particular parts of

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1 my body and soul.

2 I would also say that given the probably less than  
3 \$20 in my wallet, I would say that I don't feel like I have  
4 been bought by the nuclear industry.

5 In terms of the comments about Long Island, I know  
6 that there were a number of people who came down today to  
7 participate in this meeting. We did have one witness who  
8 testified on behalf of a Long Island based group. I want to  
9 just make it clear for the public record we at the request  
10 of Congressman Forbes did hold a public meeting on March  
11 1st, 1999 that was chaired by Tom Madden of our Office of  
12 Congressional Affairs.

13 One of the concerns that was raised in that  
14 meeting was that the information and the transcript from  
15 that meeting be presented to the Commission. In fact, that  
16 indeed was the case -- the 136 pages plus the attachments  
17 were presented to the Commission. I can't speak for the  
18 other Commissioners. I did indeed read each and every one  
19 of the words presented in that transcript and the material,  
20 so at least as far as my consideration of how we move  
21 forward in this plant and how we treat it, I certainly do  
22 have those thoughts of those Long Islanders as well.

23 Finally, I think Sam and Bill brought up the issue  
24 of having public comments as it relates to the new oversight  
25 process. I think that is an entertaining thought that

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1 certainly I would consider and I think perhaps we as a  
2 Commission ought to think about not only specifically in  
3 regards to the residents around Millstone but there may be  
4 some reason to have a few -- however one terms that -- a few  
5 public meetings around the country at different plants  
6 perhaps to test that with the public as well.

7 I think there may be some merit to that, and I  
8 will leave that as my final comment.

9 CHAIRMAN JACKSON: Commissioner Diaz.

10 COMMISSIONER DIAZ: I want to thank the staff for  
11 presenting for a long time a series of reviews of these  
12 plants that I believe are thorough and I believe present  
13 significant evidence as to the evolutions and the oversight  
14 that has been exerted over the Millstone units which I  
15 believe it is an extraordinary oversight.

16 As you know, and I have publicly stated before, I  
17 believe that eventually licensees have to stand on their own  
18 feet, that they cannot be propped up by external  
19 organizations or by continued intense oversight, that they  
20 must be able to maintain an effective and safe operation  
21 program without extraordinary measures. And I don't believe  
22 that this country or anybody can afford to continue propping  
23 up or supporting or continue activities that are way beyond  
24 what they should be.

25 Therefore, my position is that Millstone should

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1 eventually stand on its own two feet without extraordinary  
2 oversight, and then if they're not capable of doing that,  
3 then the Commission will have to review why they're not  
4 capable of doing that.

5 Having said that, I continue to be concerned with  
6 how we interact with the public, and I know especially you,  
7 Dr. Travers, have made extraordinary efforts and you, Mr.  
8 Miller, to interact with the public and to present how  
9 careful this Commission and this Agency and the staff

10 consider the different issues. Still, there's obviously a  
11 gap, and this gap might always exist, but I just want to  
12 make sure that we continue to be cognizant that these  
13 discrepancies exist in how people see what we do and how we  
14 see what we do, and that's the real thing. It is not to,  
15 you know, it is a real difference.

16 When somebody can come to this room and say, and I  
17 quote, an accident is imminent, and we have the technical  
18 information that says there have been no accidents in  
19 Millstone, there's only been one major accident in this  
20 country which you, Dr. Travers, happened to deal with in  
21 Three Mile Island -- we had no real, you know, impact on  
22 health and safety -- and we continue to have this, it seems  
23 to me there is an obligation for this Agency to continue to  
24 look at this gap and continue to work on it, continue to  
25 improve, you know, how we communicate with the public. And

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1 that is an obligation that I consider it not independent of  
2 what we do with public health and safety but attached to it.

3 CHAIRMAN JACKSON: Commissioner Dicus?

4 COMMISSIONER DICUS: No further, thank you.

5 CHAIRMAN JACKSON: I would like to thank Northeast  
6 Nuclear Energy Company, Parsons Power Grouping, the Nuclear  
7 Energy Advisory Council, First Selectman Thomas Sheridan,  
8 the Millstone Ad-Hoc Employee Group, Standing for the Truth  
9 About Radiation, the Citizens Advisory Commission, Fish  
10 Unlimited, Friends of a Safe Millstone, and the NRC staff  
11 for a candid and informative briefing on the readiness of  
12 Millstone Unit 2 for restart.

13 As I stated in my opening remarks, the Commission  
14 will consider the information presented to us by all parties  
15 today along with written information that we've received on  
16 the docket including that from Mr. Mastrianna, in deciding  
17 whether to lift the Independent Corrective Action  
18 Verification Program order and in deciding whether the items  
19 associated with the restart action plan have been completed  
20 satisfactorily.

21 The decision of the Commission will be based on  
22 whether sufficient corrective actions in its judgment have  
23 been undertaken and that the results achieved demonstrate  
24 that issues that led to the shutdown of the Millstone  
25 facility have been alleviated, and the decision also will be

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1 based on whether Unit 2 is in the Commission's judgment in  
2 compliance with existing NRC rules and regulations. And I  
3 remind you about the fact that we need to have some specific  
4 feedback to the Commission on the issue of the 50-mile  
5 ingestion pathway exercise that includes Long Island and  
6 when it will occur, and that we have closed the loop with  
7 the emergency management agency.

8 I just want to say that I do have the advantage  
9 or, if you want to call it that, the disadvantage of having  
10 been in this from the beginning, since it really surfaced as  
11 a serious issue, and therefore I probably take a harder view  
12 than most people relative to the remaining -- the continued  
13 need for remaining vigilance, and just would like to point  
14 out that all of the continuing vulnerabilities that you  
15 identified are the same ones which got out of hand and led  
16 us into this morass which I think we've been working our way  
17 out of very systematically due to the hard work of a number  
18 of people including all of you sitting at this table. But  
19 because of that then we should all be chastened in terms of

20 how easy it is to fall off the planet, as it were, and that  
21 we should not take any of these things for granted.

22 One could argue that the ultimate metric of the  
23 efficacy of the new reactor oversight program is in fact  
24 whether or not we come away from the pilots understanding  
25 whether that program would keep us from falling into this

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1 kind of black hole in the future. And I always believe  
2 that, having heard from a number of individuals who  
3 expressed themselves quite strongly today in terms of their  
4 perceptions of the Commission, I think if we all just  
5 remember to keep the public in public health and safety,  
6 we'll all be further ahead. And with that I would like to  
7 thank you and adjourn a very long meeting.

8 [Whereupon, at 4:38 p.m., the briefing was  
9 concluded.]

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### LIST OF DOCUMENTS SUBMITTED FOR THE RECORD AT THE 4/14/99 "BRIEFING ON REMAINING ISSUES RELATED TO PROPOSED RESTART OF MILLSTONE UNIT 2"

The following items are available in the Public Document Room and in the Office of the Secretary Commission Records:

1. Written Statement of J.W. "Bill" Sheehan, Member, State of Connecticut Nuclear Energy Advisory Council (NEAC) (with attachments)
2. Millstone Employee Signatures in Support of the Restart of Unit 2
3. 2.206 Petition dated April 14, 1999 (to Secretary and the Executive Director for Operations) with attachments (press articles) submitted by Tina Guglielmo, Standing for Truth About Radiation (being handled within the 2.206 Petition Process)
4. Signatures of registered voters demanding that the Millstone Nuclear Reactors in Waterford, Connecticut be closed submitted by Tina Guglielmo, Standing for Truth About Radiation with press articles
5. Petition to Stop Millstone Unit 2 Restart and Permanently Closed Millstone Nuclear Power Station submitted by Joe Basade
6. Ltr dated April 13, 1999 to Chairman Shirley Ann Jackson from Sue B. Avedon, South Fork Groundwater Task Force concerning the reopening of Millstone Unit II
7. Ltr dated April 14, 1999 to Chairman Shirley Ann Jackson from Joseph Besade, President, Waterford, CT Chapter, Fish Unlimited concerning restart for Millstone Unit 2 (with attached report from Donald DeCore, Sr.)
8. Ltr to Commissioners from Valerie Justin, Issue Manager for Millstone, Coalition of Neighborhoods for the Preservation of Sag Harbor concerning safety of Millstone reactors (with attachment from the Sag Harbor Express)
9. Statement for the Record for April 14, 1999 NRC Meeting Held at Rockville, Maryland on Millstone Unit II from Thomas Mastrianna with the following attachments:
  1. Affidavit dated September 15, 1998 of Thomas Mastrianna concerning Millstone
  2. Ltr dated March 19, 1999 to Thomas Mastrianna from David J. Vito, NRC, Region I regarding Millstone and Haddam Neck concerns
  3. Ltr dated April 2, 1999 to T. P. Necci, Northeast Nuclear Energy Company from James C. Linville, NRC, Region I concerning NRC Combined Inspection Report Nos. 50-245/99-02, 50-336/99-02, 50-423/99-02, and Confirmatory Action Letter 1-97-010 Closeout
  4. Ltr dated April 13, 1999 to Thomas Mastrianna from David J. Vito, NRC, Region I regarding Millstone and Haddam Neck concerns
  5. Condition Report Form (AR No. 98-018522) dated 10/9/98 concerning MP2 fire penetration seals
  6. Condition Report Form (AR No. 98-018522) dated 10/9/98 concerning MP2 fire penetration seals
  7. Condition Report Action Closeout (AR No. 98015288-13) dated 12/8/98 concerning MP2 fire penetration seals (with attachments)
  8. Condition Report Form (AR No. 98018516) dated 10/9/98 concerning MP2 fire penetration seals
  9. Condition Report Form (AR No. 98018517) dated 10/9/98 concerning MP2 fire penetration seals
  10. Condition Report Form (AR No. 98018518) dated 10/9/98 concerning MP2 fire penetration seals
  11. Condition Report Form (AR No. 98018519) dated 10/9/98 concerning MP2 fire penetration seals
  12. Condition Report Form (AR No. 98018520) dated 10/9/98 concerning MP2 fire penetration seals
  13. Condition Report Form (AR No. 98018521) dated 10/9/98 concerning MP2 fire penetration seals
  14. Condition Report Form (AR No. 98018523) dated 10/9/98 concerning MP2 fire penetration seals
  15. Condition Report Form (AR No. 98018700) dated 10/13/98 concerning fire penetration seals
  16. Condition Report Form (AR No. 98018909) dated 10/19/98 concerning potential problem areas to site fire protection
  17. Condition Report Form (AR No. 98015288) dated 8/12/98 concerning multiple failures in fire penetration seals
  18. Condition Report Form (AR No. 98011188) dated 6/5/98 concerning the Post Accident Sampling System, fire seal protection, and the control room ceiling
  19. Condition Report Form (AR No. 98-18516) dated 10/9/98 concerning MP2 fire penetration seals
  20. Condition Report Form (AR No. 98018517) dated 10/9/98 concerning MP2 fire penetration seals

21. Condition Report Form (AR No. 98018518) dated 10/9/98 concerning MP2 fire penetration seals
  22. Condition Report Form (AR No. 98018519) dated 10/9/98 concerning MP2 fire penetration seals
  23. Condition Report Form (AR No. 98018520) dated 10/9/98 concerning MP2 fire penetration seals
  24. Condition Report Form (AR No. 98018521) dated 10/9/98 concerning MP2 fire penetration seals
  25. Condition Report Form (AR No. 98018523) dated 10/9/98 concerning MP2 fire penetration seals
  26. Condition Report Form (AR No. 98018700) dated 10/13/98 concerning fire penetration seals
  27. Condition Report Form (AR No. 98018909) dated 10/19/98 concerning potential problem areas to site fire protection
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10. Videotape of Susan Perry-Luxton, Citizens Regulatory Commission and Thomas J. Mastrianna given to the Commission for Review by Joseph Basade, Fish Unlimited at Millstone Meeting 4/14/99 (available in the Office of the Secretary Commission Records only)