

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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IMMEDIATE EFFECTIVENESS REVIEW
BRIEFING - SEABROOK

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PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Thursday, January 18, 1990

The Commission met in open session, pursuant to notice, at 9:00 a.m., Kenneth M. Carr, Chairman, presiding.

COMMISSIONERS PRESENT:

KENNETH M. CARR, Chairman of the Commission
THOMAS M. ROBERTS, Commissioner
KENNETH C. ROGERS, Commissioner

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Executive Director for Operations

THOMAS MURLEY, Director, Office of Nuclear Reactor

WILLIAM RUSSELL, Regional Administrator, Region I

VIC NERSES, Project Manager for Seabrook, NRR

ANTON CERNE, NRR

EDWARD A. BROWN, President and CEO, Division of Public Service of New Hampshire

TED FEIGENBAUM, Sr. V.P. and Chief Operating Officer

BRUCE DRAWBRIDGE, Executive Director of Nuclear Production

GEORGE GRAM, Executive Director of Emergency Preparedness and Community Relations

JOHN TRAFICONTE, Chief, Nuclear Safety Unit, Department of the Attorney General, Commonwealth of Massachusetts

ROBERT A. BACKUS, Seacoast Anti-Pollution League

DIANE CURRAN, New England Coalition on Nuclear Pollution

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

9:04 a.m.

CHAIRMAN CARR: Good morning, ladies and gentlemen.

Commissioners Curtiss and Remick will not be with us today.

The purpose of today's meeting is for the Commission to be briefed on the readiness of Seabrook Station Unit 1 for a full power operating license. The purpose is not to discuss or hear arguments on any adjudicatory matter currently before the Commission. Those matters are under consideration by the Commission in accordance with our rules of practice and the parties to the proceeding have been afforded an opportunity to make their views known on those issues.

The Commission will first hear from the applicant, the New Hampshire Yankee Division of Public Service Company of New Hampshire. They will be followed by the NRC staff. Then we will hear comments from representatives of the Commonwealth of Massachusetts, the Seacoast Anti-Pollution League, and the New England Coalition on Nuclear Pollution, who have requested an opportunity to speak at this meeting. All three parties have been interveners in

1 the Seabrook proceeding. The last three presenters
2 have been asked to limit their remarks to
3 approximately five minutes in length. Upon completion
4 of these presentations, the applicant and the staff
5 will be afforded an opportunity to briefly respond. I
6 would ask the Secretary of the Commission, Mr. Chilk,
7 to keep track of the time.

8 These are the only speakers the Commission
9 is scheduled to hear from today. If anyone other than
10 the scheduled speakers have something to contribute to
11 the Commission's consideration of this matter, they
12 are requested to do so in writing to the Secretary of
13 the Commission at the earliest opportunity.

14 This is, of course, a public meeting. I
15 would ask the audience to be mindful of the rules of
16 conduct that have appeared on the monitors in the
17 hearing room prior to the meeting as a matter of
18 courtesy to the representatives of the various parties
19 who are speaking today and to the Commission.

20 This meeting is for information only. No
21 Commission vote will be taken at this meeting.

22 I understand that copies of the presentation
23 slides are available at the entrance to the meeting
24 room.

25 Do any of my fellow Commissioners have any

1 opening remarks?

2 Does the General Counsel have any comments
3 before we proceed?

4 MR. PARLER: Yes, Mr. Chairman. I would
5 like to elaborate briefly on your point that the
6 purpose of this meeting is not to discuss or hear oral
7 arguments on any adjudicatory matter that's currently
8 before the Commission.

9 In that regard, I note that some of the
10 briefing papers, I guess the applicants that I have,
11 have some 21 pages of slides on emergency
12 preparedness. Emergency preparedness issues
13 constitute the bulk of the adjudicatory issues that
14 have to be decided on the merits. The adjudicatory
15 record on those issues is available to the Commission.
16 If the Commission needs further information for its
17 adjudicatory purposes, it will ask the parties to
18 provide that information on the record.

19 If, in this briefing this morning, anyone in
20 their presentation, in my judgment, gets into the--
21 or appear to me to be getting into the merits of
22 adjudicatory matters, I will interrupt them. And I
23 will apologize now in advance for doing so, but I will
24 do so.

25 Thank you.

1 CHAIRMAN CARR: Thank you very much.

2 Mr. Brown, please proceed.

3 MR. BROWN: Good morning. My name is Edward
4 A. Brown and I'm President and Chief Executive Officer
5 of New Hampshire Yankee.

6 New Hampshire Yankee is the managing agent
7 for the 12 joint owner utility companies that own
8 Seabrook Station. I report directly to the Executive
9 Committee of the Seabrook joint owners for budget,
10 financial and policy matters and for licensing related
11 matters I report to the Chief Executive Officer of
12 Public Service Company of New Hampshire.

13 Observing this meeting today are
14 representatives from three of our joint owner
15 companies that comprise over two-thirds of the
16 percentage ownership of Seabrook: Mr. John Eichorn,
17 who is Chairman of the Joint Owner Executive Committee
18 and Chairman of Eastern Utilities Associates; George
19 Edwards, Vice Chairman of the Joint Owner Executive
20 Committee and who is President and Chief Executive of
21 United Illuminating Company; and Mr. John Duffert,
22 President and Chief Executive Officer of Public
23 Service Company of New Hampshire.

24 On behalf of New Hampshire Yankee and the
25 joint owners, I'd like to thank the Commission for the

1 opportunity to brief you on Seabrook Station's
2 readiness for full power operation. We are indeed
3 ready to safely operate Seabrook Station. Our
4 presentation this morning will demonstrate our
5 readiness and it will also demonstrate that safety is
6 our number one priority and safety comes before all
7 else at Seabrook Station. Safety will be foremost in
8 our minds at all times during the startup, the power
9 ascension and the operation of the plant.

10 Now, in addition to my position at New
11 Hampshire Yankee, I am also Chairman and Chief
12 Executive of Yankee Atomic Electric Company. As you
13 know, Yankee Atomic has a superb 30 year record of
14 safe, efficient and reliable nuclear power operations
15 and at New Hampshire Yankee we rely on Yankee Atomic
16 for management support and special technical
17 expertise.

18 Joining me at this table today are members
19 of New Hampshire Yankee's management team. To my
20 right, Mr. Feigenbaum. Ted Feigenbaum is Senior Vice
21 President and Chief Operating Officer. To his right,
22 Bruce Drawbridge, Executive Director of Nuclear
23 Production; and to my left, Mr. George Gram, Executive
24 Director of Emergency Preparedness and Community
25 Relations. These individuals will be addressing the

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1 subject areas as indicated on the agenda slide.

2 Our experienced managers have been called on
3 many times over the past years to respond to a variety
4 of challenges. These challenges have included the
5 events surrounding the June 22nd shutdown of our
6 reactor at completion of the low power testing. We've
7 taken responsibility for those events and we've
8 learned from them. In fact, just recently we received
9 a letter from Mr. Russell, the NRC Region I
10 Administrator, indicating that we've successfully
11 implemented our corrective action program and have
12 satisfied Region I concerns about the June 22nd
13 shutdown.

14 (Slide) In meeting our challenges, we
15 relied on a strong work ethic and a fundamental set of
16 core values. We've codified these core values into a
17 well accepted values for excellence program. Our core
18 values will be the basis for our safe, efficient
19 management and operation of Seabrook Station.

20 Through a number of scheduled, formalized
21 employee presentations, one on one meetings,
22 management briefings and weekly employee
23 communications, our ongoing commitment to ensure that
24 every action of every employee at Seabrook Station is
25 based on a key four core values.

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1 First, safety, ensuring that every action is
2 taken with full regard for the health and safety of
3 our fellow employees and the general public.

4 Second, professionalism, emphasizing that
5 all of us, from the maintenance worker to the Chief
6 Executive, are professionals in managing, operating
7 and supporting our power plant.

8 Third, quality, supporting independent
9 reviews and self-assessments as a way of life, to help
10 us initiate improvements and ensure quality both as
11 individuals and as a company.

12 And fourth, excellence, recognizing that
13 each of us is uniquely important and each of our jobs
14 is important and that we must be firmly committed to
15 professional operational excellence.

16 These values have become a living set of
17 guidelines against which we measure ourselves on a
18 continuing basis, and it's not just another morale
19 program. Values for excellence is the way of doing
20 business at New Hampshire Yankee everyday. At
21 Seabrook Station we're going to take nothing for
22 granted. We rely on an aggressive program of
23 formalized and continuous self-assessment to assure
24 that we're always striving for excellence in
25 performance.

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1 As we proceed with our formal presentation,
2 I'd like to stress once again that we're ready for the
3 receipt of a full power license and we're ready to
4 operate Seabrook Station safely and conservatively.

5 Now, I'd like to introduce Mr. Ted
6 Feigenbaum, our Senior Vice President and Chief
7 Operating Officer.

8 MR. FEIGENBAUM: Good morning, Mr. Chairman,
9 members of the Commission.

10 As Ed Brown mentioned, I am the Senior Vice
11 President and Chief Operating Officer at Seabrook
12 Station. I report to Mr. Brown and am responsible for
13 day to day operations at New Hampshire Yankee,
14 including production, emergency preparedness, quality
15 programs, engineering and licensing, communications
16 and administration.

17 I'd like to start out this morning by
18 briefly describing our organization at New Hampshire
19 Yankee.

20 (Slide) We have a staff at the plant of
21 about 1100 people. In addition, there are about 375
22 contractors who make up our security force and our
23 craft workers. This entire staff, including executive
24 management, is located on-site and is completely
25 dedicated to the operation of Seabrook. Having the

1 total organization at the plant allows us to focus
2 solely on the safe operation of Seabrook and we feel
3 that this is an important advantage that increases our
4 efficiency and our responsiveness to station needs.

5 Bruce Drawbridge, on my right, was appointed
6 as the Executive Director of Nuclear Production in
7 July of 1989. He has overall responsibility for
8 station operations, maintenance, training and
9 production services. Bruce is a Vice President with
10 the Yankee Atomic Electric Company and has more than
11 15 years experience in the nuclear industry, including
12 five years as an assistant plant superintendent at the
13 Yankee Rowe plant. He will follow me as speaker and
14 brief you on our operational readiness and our power
15 ascension test program.

16 The Executive Director for Engineering and
17 Licensing is Jeb DeLoach, who is here in our audience
18 today. Jeb has more than 20 years experience in the
19 nuclear industry and previously the project manager
20 for all of Yankee Atomic's Engineering Services for
21 Seabrook. His staff of engineers are responsible for
22 all plant design modifications, configuration
23 management, as well as for specialty programs such as
24 fire protection and equipment qualification.

25 We also have a staff of systems engineers in

1 our technical support group reporting directly to the
2 station manager. They provide direct day to day
3 support to the station. Together, altogether, we have
4 a dedicated on-site complement of over 150 engineering
5 and technical personnel who support the operation and
6 maintenance groups.

7 Now, further augmenting this very strong on-
8 site engineering staff is our ability to call upon the
9 experienced services of Yankee Atomic, particularly in
10 specialized areas such as radiological engineering,
11 nuclear engineering, environmental sciences and fuels
12 analysis.

13 Neal Pillsbury is the Director for Quality
14 Programs and Neal is in our audience today as well.
15 Neal has more than 24 years experience in the energy
16 field and he directs the quality assurance and quality
17 compliance programs and a number of oversight
18 functions that provide a comprehensive check and
19 balance on station operations. This includes our
20 recent full power readiness self-assessment, which
21 I'll be describing to you later this morning.

22 Now, due to the importance of emergency
23 preparedness, New Hampshire Yankee has established a
24 separate subdivision for all emergency planning
25 activities. George Gram is the Executive Director of

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1 Emergency Preparedness and Community Relations and has
2 more than 19 years of experience in the nuclear
3 industry.

4 This morning he will describe our program
5 with an emphasis on the utility sponsored plan that
6 we've developed for the Commonwealth of Massachusetts
7 and the six local communities inside the Massachusetts
8 portion of the emergency planning zone and will strive
9 to do that within the confines of the Chairman's
10 opening remarks.

11 Now, at this point, I'd like to discuss some
12 of the lessons we've learned during our low power test
13 program.

14 On May 26, 1989 we received our low power
15 license and on June 22nd we had completed low power
16 physics testing and were conducting a natural
17 circulation test when we failed to immediately trip
18 the reactor as required by procedure. As the NRC
19 staff noted in our most recent SALP report, this event
20 was a notable exception to a low power test program
21 that was otherwise conducted in a deliberate and
22 controlled manner by a well trained and highly
23 motivated operations staff.

24 The June 22nd event led to a serious self-
25 examination of our entire organization. We studied

1 the event in great detail to determine its root causes
2 and the lessons that we could learn from them. This
3 led to the development of a comprehensive corrective
4 action plan that addressed the root causes of our
5 error. Its implementation has not only provided a
6 number of benefits and enhancements to our test
7 program, but also has strengthened our management and
8 improved our overall conduct of operations.

9 (Slide) The corrective action plan covered
10 the seven broad categories shown on this slide. The
11 categories covered every aspect of the event:
12 procedures, equipment, test personnel, operations and
13 management. These categories, in turn, encompassed a
14 total of 55 individual action items.

15 (Slide) Now, some of the key features of
16 the plan included increased emphasis on procedure
17 compliance and a revision of our policy to more
18 clearly state that procedures must be followed unless
19 there's an overriding safety concern. We've combined
20 this policy with training for the entire New Hampshire
21 Yankee organization to make sure that a heightened
22 awareness of the need for procedure adherence is
23 always maintained.

24 For the test program, our startup and
25 operator crews will be integrated in a single cohesive

1 team to improve command and control and
2 communications. For complex tests, we have dedicated
3 crews who will train together as a team on the
4 simulator. We also require formal, comprehensive
5 pretest briefings for each test. These briefings will
6 ensure that each member of the test crew fully
7 understands the reason for the test, understands any
8 test termination criteria, special test limits or
9 precautions, and is prepared to handle abnormal
10 situations and unexpected responses that may be
11 encountered. Perhaps most importantly, each
12 individual understands his individual responsibility
13 for adherence to procedures.

14 At this time, we have fully implemented the
15 corrective measures or established the necessary
16 programs or procedures that ensure that each element
17 of the corrective action plan is carried out. In most
18 cases, the programs and policies we've established as
19 a result of the corrective action plan will be with us
20 not just for power ascension but also for the life of
21 the plant. For that reason, they constitute an
22 enhancement to our readiness for power ascension
23 testing, but also to our overall readiness to operate
24 Seabrook safely.

25 Now, in addition to the actions taken as a

1 result of the June 22nd event, New Hampshire Yankee
2 has also modified the emergency feedwater system as a
3 result of experience gained during low power testing.
4 Leakage past the emergency feedwater steam turbine
5 supply valves require a changeout of the valves to a
6 low leakage design, evaluation of the system check
7 valves and modification of the downstream drain
8 system. This was all done to improve the operational
9 characteristics of the system. These modifications
10 have been implemented and will be tested during our
11 heatup prior to criticality.

12 Another area that I'd like to discuss
13 briefly this morning is the self-assessment that New
14 Hampshire Yankee has performed to evaluate our
15 readiness to proceed with the power ascension test
16 program and a subsequent full power operation of the
17 plant.

18 Self-assessment has been and always will be
19 a way of life at Seabrook. In 1984, we instituted a
20 group known as the independent review team. Their
21 function is to draw on the best available talent both
22 inside and outside the company and they evaluate key
23 aspects of our operations and provide recommendations
24 for improvement directly to senior management. To
25 date, this independent review team has performed

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1 hundreds of important self-critiques. This function
2 will continue into the operational phase.

3 In order to assess our operational readiness
4 and the effectiveness of our preparations for power
5 ascension and commercial operation, the independent
6 review team manager has assembled a multi-disciplined
7 self-assessment team.

8 (Slide) The self-assessment team
9 organization is composed of a group of experienced
10 personnel who are not directly associated with the
11 areas they are evaluating. The team reports to a
12 management oversight committee through a team manager.
13 The management oversight committee is composed of our
14 most senior management, including Mr. Brown, myself
15 and a number of the subdivision heads.

16 A scoping document has been developed for
17 the self-assessment which outlines the review plan,
18 the performance objectives and the evaluation
19 criteria. The self-assessment team will evaluate
20 programs, performance, resources, qualifications of
21 personnel, training, organizational interfaces and
22 management. They do this primarily by first-hand
23 observations in the field, by auditing simulator and
24 classroom training, by interviewing working level,
25 supervisory and management personnel, and also by

1 reviewing documentation. The self-assessment team
2 manager will convene the management oversight
3 committee and discuss issues with senior management
4 individually on a periodic basis and whenever a matter
5 arises that he believes needs immediate attention.

6 (Slide) Our self-assessment for power
7 ascension was divided into two phases. Phase one
8 evaluated the preparation and readiness to begin power
9 ascension testing. It looked at the completion of
10 full power preparation activities, implementation and
11 completion of commitments, physical plant readiness,
12 completion and effectiveness of our programs and the
13 effectiveness of management and management oversight.

14 Phase two will monitor and evaluate the
15 actual conduct of the power ascension test program and
16 our readiness for full power operations.

17 The phase one assessment was completed in
18 December of 1989. It concluded that the plant was in
19 good physical condition, that management attention had
20 been appropriately focused on establishing the
21 operational readiness of the plant and that we've made
22 conservative and thorough preparations for a safe and
23 deliberate power ascension test program.

24 The team made a number of recommendations to
25 enhance our readiness for full power ascension and

1 these have all been accepted by the management
2 oversight committee and will be implemented before we
3 begin the test program. Overall the self-assessment
4 team concluded that the plant would be ready to begin
5 power ascension testing by the end of January.

6 During phase two, the self-assessment team
7 will report to management at power levels of 5, 30,
8 50, 75 and 100 percent. The test program and further
9 power ascension will be allowed to continue only after
10 management evaluation and approval. We've also agreed
11 with Mr. Russell that we would provide a written
12 report to the NRC at the 50 percent power plateau and
13 would proceed no further before formally meeting and
14 discussing the report with the NRC staff.

15 (Slide) The independent review team and the
16 self-assessment team are only two of the nine
17 management evaluating elements through which New
18 Hampshire Yankee management receives total overview of
19 the power ascension test program and the overall
20 station and conduct of operations of the company.

21 The slide lists the groups within our
22 organization that provide the formal checks and
23 balances to which we are committed. The operational
24 quality assurance program, the off-site and on-site
25 review committees, the independent safety engineering

1 group and the human performance evaluation program are
2 all well recognized nuclear industry concepts.

3 The employee allegation resolution program
4 provides investigations of concerns raised by either
5 current or former Seabrook site employees, of
6 allegations brought to our attention by the NRC, or by
7 members of the general public. Now, we've used this
8 program to investigate allegations that were recently
9 received and have determined that there are none that
10 have any unresolved safety significance.

11 The use of these groups or committees
12 ensures that an effective, multi-disciplined,
13 independent management overview is consistently
14 provided and maintained.

15 In closing, I'd like to mention that we
16 recognize that the transition of a plant from the
17 construction mode to the operating mode can sometimes
18 be difficult. Construction of Seabrook was completed
19 in 1986. Our operating staff was in place and fuel
20 was loaded in October of that year. We therefore have
21 been operating in accordance with the plant technical
22 specifications for over three years. During that
23 time, we've successfully completed the transition to
24 an operating mode and worked to improve our training
25 programs, procedures to ensure that a conservative

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1 operating philosophy is fully in place.

2 Finally, because we recognize the important
3 responsibility that goes along with operation of a
4 nuclear power plant, we've learned to guard against
5 complacency and to reinforce to everyone on the New
6 Hampshire Yankee team that attention to detail is of
7 paramount importance in all activities performed at
8 Seabrook.

9 This concludes my remarks this morning and
10 at this time I'd like to ask Bruce Drawbridge to brief
11 you on our operational readiness and the power
12 ascension test program.

13 MR. DRAWBRIDGE: Thank you, Ted.

14 Mr. Chairman, members of the Commission,
15 good morning. My name is Bruce Drawbridge. I am the
16 Executive Director of Nuclear Production for New
17 Hampshire Yankee. I am responsible for the power
18 ascension test program and the subsequent operation of
19 Seabrook Station. I'll be discussing Seabrook
20 Station's readiness to commence operations, as well as
21 our power ascension test program.

22 We completed the low power testing of
23 Seabrook Station in June of 1989. In the period since
24 low power testing, we have completed the physical in-
25 plant work required to prepare the unit for power

1 ascension testing and power operations.

2 (Slide) The major activities were: the
3 completion of the 18 month surveillance outage on both
4 trains of our engineered safety features, which
5 includes our emergency core cooling system and our
6 containment spray system; the installation of design
7 enhancements to address plant performance items that
8 were identified during low power testing; and the
9 completion of our containment integrated leak rate
10 test.

11 New Hampshire Yankee has evaluated all of
12 the NRC open items for their relation to the issuance
13 of a full power license. The open NRC items required
14 for full power are presently being completed. All
15 relevant activities will be completed prior to
16 entering the applicable plant operating mode. These
17 items are reviewed and statused at our daily plan of
18 the day meetings.

19 Our actions related to the Three Mile Island
20 Action Plan, as provided in NUREG-0737, are complete
21 with the exception of the submittal of operational
22 data for three items. These submittals will confirm
23 information that we have previously provided to the
24 NRC.

25 The first item concerns the safety parameter

1 display system, which is commonly referred to as the
2 SPDS. That is complete. However, we will be
3 providing the results of the availability calculations
4 and response time testing to the NRC prior to startup
5 from the first refueling outage. These calculations
6 and response time tests will reflect SPDS performance
7 during the first operating cycle, and therefore cannot
8 be provided at this time. The SPDS status is
9 addressed in our current operating license and in the
10 NRC Safety Evaluation Report, Supplements 6 and 7.

11 The second item is related to the post
12 accident sampling. All hardware and procedural
13 changes related to this item are complete. However,
14 we still have to verify system performance using a
15 diluted reactor coolant system sample. The reactor
16 has only been operated for approximately 19 effective
17 full power minutes and therefore there is not
18 sufficient reactor coolant activity to allow a diluted
19 sample to be utilized. The post accident sampling
20 system will be verified during the performance of our
21 power ascension test program.

22 The third item is related to the control
23 room design review. This review has been completed,
24 however we still have to address control room
25 environmental parameters, such as temperature, air

1 flow and noise, data that can only be obtained during
2 power operations. We'll provide a report after the
3 plant has operated at full power.

4 (Slide) In regard to our current plant
5 schedule, the major in-plant work has been completed
6 and we are currently performing the surveillance
7 testing and valve lineups to prepare the plant for
8 heatup. Station operations personnel are completing
9 the final actions to establish containment integrity
10 today. Our current schedule identifies a completion
11 of surveillance testing to be accomplished by January
12 23rd. We are progressing in a controlled, deliberate
13 manner, emphasizing a conservative approach to
14 operations.

15 Once the surveillance testing is complete,
16 we'll be ready to begin the plant heatup to operating
17 temperature and pressure. Entry into plant operating
18 mode 4 could begin January 25th and we could be ready
19 to begin power ascension testing on January 31st,
20 should the Commission authorize the issuance of a full
21 power license.

22 Some surveillance testing will be performed
23 during mode 3, hot standby, to verify the operability
24 of the emergency feedwater system and perform baseline
25 monitoring of the atmospheric steam dump valves. This

1 testing is being conducted at this time due to the
2 need for normal plant operating temperature and
3 pressure.

4 Our maintenance organization has been very
5 active since low power testing due to the outage work
6 that I previously mentioned. With the completion of
7 the outage work and the preparation of the plant for
8 power operations, our maintenance backlog is being
9 reduced to be within expected levels.

10 (Slide) Performance of maintenance and
11 modification activities at Seabrook Station is
12 controlled by a comprehensive work control program
13 that has been in place for approximately four years.
14 All plant-related maintenance is controlled by our
15 work control system. Any component that requires
16 maintenance or modification is assigned a unique work
17 request. In our system, in order to ensure accurate
18 machinery history records, we do not group like items
19 in one work request, but require a unique work request
20 per item.

21 As of this morning -- we had a previous
22 slide, but I've updated it. I got new information
23 this morning. As of this morning, we have 177 work
24 requests that are required for plant mode 4 through
25 mode 1. These items will be completed prior to

1 entering the applicable mode. In addition, we have
2 698 work requests that are part of our normal ongoing
3 maintenance and operations program.

4 (Slide) New Hampshire Yankee coordinates
5 all training activities through our on-site training
6 group. Our operator programs are accredited by INPO
7 and we are actively pursuing INPO accreditation of our
8 remaining programs. Presently, we have an
9 accreditation visit scheduled for our maintenance
10 programs, mechanical, electrical and instrumentation
11 control, in April of this year. The accreditation
12 visit for the remaining programs, chemistry, health
13 physics, technical staff and shift technical advisor,
14 are scheduled for July of this year. A key element in
15 our training program, reactor operator training,
16 utilizes our on-site plant-specific simulator.

17 (Slide) We currently have 34 senior reactor
18 operators and nine reactor operators in our operations
19 and training departments. Our operations department
20 has 21 senior reactor operators and eight reactor
21 operators assigned to a six shift rotation.

22 (Slide) Each shift is headed by a shift
23 superintendent who holds a senior reactor operators
24 license. Reporting to him are the unit shift
25 supervisor who also holds an SRO license and two

1 reactor operators. On some shifts we fill the reactor
2 operator's position with a senior reactor operator.

3 Also, each shift has a complement of
4 auxiliary operators, fire fighters, instrumentation
5 and control technicians, health physics, chemistry and
6 maintenance technicians, plus our security force.

7 The shift technical advisor is a dual role
8 STA/SRO function performed by a degreed individual
9 with a senior reactor operators license who has
10 received additional training in accident assessment
11 appropriate to the shift technical advisor position.

12 The majority of our senior reactor operators
13 have been at Seabrook Station for over six years.
14 They have observed and participated in the
15 construction of the station while concurrently
16 receiving operator training. We have manned the
17 control room continuously since 1984. Our operators
18 have operated systems and equipment since it was
19 turned over from construction and participated in both
20 the preoperational and low power testing programs.

21 The operations department has approximately
22 140, 1-4-0, many years of nuclear operating experience
23 prior to coming to New Hampshire Yankee. Since coming
24 to New Hampshire Yankee, our operators have received
25 additional hot experience from their participation in

1 and observation of plant operations at other
2 utilities. A majority of our hot experience was
3 obtained at Millstone Unit 3, a similar Westinghouse
4 unit.

5 (Slide) New Hampshire Yankee has
6 implemented a fitness for duty testing program in
7 April of 1986. We have enhanced the program as
8 appropriate through the years. We have followed the
9 NRC Fitness for Duty rulemaking and made the
10 appropriate modifications to our program to meet the
11 Fitness for Duty Rule. Our revised program was
12 implemented on a test basis for program verification
13 on December 7th of last year and was fully implemented
14 in compliance with the rule on January 3rd of this
15 year.

16 The changes that we made to the program
17 included alcohol testing by breathalyzer test and the
18 random testing of personnel. We have approximately 42
19 days of implementation experience with the new program
20 and have identified no major or unexpected problems.

21 Upon issuance of a full power license, power
22 ascension testing would then begin at Seabrook
23 Station. Testing will be performed by integrated test
24 crews comprised of power ascension test personnel and
25 operations personnel. The power ascension test

1 organization includes experienced personnel from
2 throughout the New Hampshire Yankee organization. We
3 have supplemented this organization with consultant
4 personnel who have recent experience in startup
5 testing at similar pressurized water reactors. The
6 power ascension test program manager reports to the
7 station manager and is responsible for all aspects of
8 the program. This test position is being filled by
9 our technical support manager, an individual who has
10 held an NRC senior reactor operators license for
11 Seabrook Station.

12 An important element of our power ascension
13 test program involves the utilization of enhanced test
14 procedures. In order to incorporate the lessons
15 learned from low power testing that was performed in
16 June of 1989, the power ascension test program was
17 reviewed and updated. The procedures were revised to
18 include a background document and a briefing document
19 and were integrated into the station operating
20 procedure system.

21 We have conducted a comprehensive training
22 program for our power ascension test crews. Each test
23 crew is comprised of power ascension test personnel
24 combined with one of our normal operating crews.
25 Training has been provided on the power ascension test

1 program for these combined crews. Additionally, the
2 crews receive training on the simulator for certain
3 power ascension test procedures which require
4 substantial interaction between the operations and
5 power ascension test personnel.

6 For the performance of certain complex power
7 ascension test procedures, we will designate specific
8 dedicated crews. Prior to the performance of these
9 particular tests, the designated crew will receive
10 additional training utilizing the simulator. Although
11 this action may extend our power ascension testing
12 program by a short period of time, we believe that
13 this action will ensure an effective and well
14 conducted test program.

15 (Slide) Power ascension testing will be
16 performed at the power level plateaus of 0, 5, 30, 50,
17 75 and 100 percent reactor power. At the completion
18 of testing at key power level plateaus, the power
19 ascension test manager will provide a briefing to
20 executive management describing the testing that has
21 been performed to date and explain any problems
22 identified, along with their resolution. Executive
23 management will also receive a briefing from the self-
24 assessment team manager, providing the team's
25 assessment of power ascension testing and New

1 Hampshire Yankee's readiness to proceed to the next
2 power level.

3 The senior vice president will authorize
4 continuation of testing at the next power level after
5 reviewing both reports. New Hampshire Yankee will
6 also meet with NRC management to discuss our
7 evaluation of power ascension testing prior to
8 exceeding the 50 percent reactor power.

9 In summary, we believe that Seabrook
10 Station, along with our people and programs, are ready
11 to commence power ascension testing and subsequent
12 full power operations.

13 At this time, I would like to ask George
14 Gram, Executive Director of Emergency Preparedness and
15 Community Relations, to brief you on our emergency
16 preparedness and vehicular alert and notification
17 system.

18 George?

19 MR. GRAM: Thank you, Bruce.

20 Good morning, Mr. Chairman and members of
21 the Commission.

22 My objective this morning is to provide you
23 with a brief overview of emergency preparedness for
24 Seabrook Station, focusing on our utility plan
25 developed for the Commonwealth of Massachusetts. The

1 presentation is intended to show our readiness in the
2 emergency planning area and it is designed to be
3 descriptive. If the General Counsel believes that any
4 portion of my remarks impinge upon matters in
5 litigation, please interrupt and I will move on to the
6 next section.

7 (Slide) Seabrook Station's ten mile plume
8 exposure pathway emergency planning zone, or EPZ, is
9 made up of 23 communities, 17 in New Hampshire and six
10 in Massachusetts. The EPZ boundary was established by
11 the two states and include portions of communities
12 which extend well beyond a ten mile radius from
13 Seabrook Station. All of the land area within two
14 miles of and nearly two-thirds of the total EPZ land
15 area is in New Hampshire. The EPZ is also transversed
16 by two major interstate highways, I-95, which runs
17 north and south, and I-495, which runs east and west,
18 both of which are six or eight lane highways.

19 The resident population of the EPZ is
20 approximately 148,000 and the summer peak population
21 is approximately 247,000, of which New Hampshire
22 accounts for 94,500 resident population and 161,000
23 total summer peak population.

24 (Slide) The Seabrook Station 50 mile
25 ingestion pathway zone, or IPZ, includes portions of

1 three states, New Hampshire, Massachusetts, and Maine.

2 (Slide) There are four major organizations
3 involved in planning for and responding to a
4 radiological emergency at Seabrook Station. The first
5 is New Hampshire Yankee, which is responsible for on-
6 site response.

7 (Slide) The State of New Hampshire and 17
8 local communities cover off-site response in New
9 Hampshire for the ten mile emergency planning zone and
10 the 50 mile ingestion pathway zone.

11 (Slide) The State of Maine is involved in
12 off-site planning and response for that portion of
13 Maine that falls inside the 50 mile IPZ for Seabrook.

14 (Slide) And New Hampshire Yankee has
15 developed a utility plan and organization for the ten
16 mile EPZ and 50 mile IPZ in Massachusetts.

17 (Slide) The planning, staffing and
18 facilities for the on-site plan and the New Hampshire
19 and Maine state plans are typical of emergency
20 preparedness at nuclear power stations throughout the
21 U.S. I would like to now --

22 MR. PARLER: Mr. Chairman, it seems to me
23 that if we get beyond simply descriptive material
24 which is in the background information, that that
25 would be inappropriate. The other participants in

1 this proceeding were under the impression that their
2 contributions, their participation would not be on
3 contested issues.

4 The gentleman just said that the plan or
5 whatever he was talking about is comparable to other
6 places. Whether or not that is the case, whether or
7 not emergency planning is adequate is hotly contested
8 in this proceeding and the merits of the matters still
9 haven't been resolved.

10 If the gentleman wants to describe -- just
11 give a description of things which are in the
12 adjudicatory record, perhaps that's okay. But any
13 judgmental sort of things about the adequacy of the
14 plan or what have you, those are adjudicatory matters
15 and should not be discussed.

16 CHAIRMAN CARR: Can you proceed along those
17 lines?

18 MR. GRAM: Yes, sir, I believe so.

19 CHAIRMAN CARR: Please do.

20 MR. GRAM: I would now like to focus on our
21 utility plan.

22 (Slide) Although the Commonwealth of
23 Massachusetts has prepared and exercised emergency
24 response plans for the Pilgrim Nuclear Power Station
25 in Plymouth, Massachusetts, the Yankee Nuclear Power

1 Station in Rowe, Massachusetts, and the Vermont Yankee
2 Nuclear Power Station in Vernon, Vermont, this is not
3 the case for Seabrook Station.

4 (Slide) New Hampshire Yankee has developed
5 and manned a utility-sponsored plan for Massachusetts,
6 the Seabrook Plan for Massachusetts Communities, or
7 the SPMC. This plan, along with the on-site and New
8 Hampshire and Maine state plans, were demonstrated in
9 a deficiency free June 1988 full participation graded
10 exercise. We believe it was the largest radiological
11 emergency exercise ever held in association with
12 commercial nuclear power.

13 (Slide) The SPMC planning basis provides
14 for response in a ten mile EPZ and 50 mile IPZ in
15 Massachusetts.

16 (Slide) Seabrook Station is located
17 approximately two miles from the Massachusetts border
18 and planning encompasses six local communities in the
19 EPZ.

20 (Slide) And ingestion pathway planning in
21 Massachusetts extends south of Boston.

22 (Slide) The SPMC provides for full
23 implementation by the utility off-site response
24 organization commonly referred to as the ORO, and is
25 based on three possible modes of response.

1 (Slide) The first mode calls for the ORO to
2 be fully activated and all facilities and resources
3 readied to respond. This is called standby mode. The
4 Commonwealth may elect to respond fully with its own
5 personnel and resources, in which case the ORO would
6 remain in standby mode to assist if required.

7 (Slide) The second mode involves the ORO
8 providing manpower and equipment to the Commonwealth
9 to supplement existing state resources, but the
10 Commonwealth retains overall command and control of
11 response activities.

12 (Slide) The resources available are
13 extensive. In terms of equipment and personnel, more
14 than 2300 emergency workers have been trained and are
15 currently qualified ORO responders.

16 (Slide) The organization has access to over
17 1200 transportation vehicles, including buses,
18 ambulances, tow trucks and vans. New Hampshire Yankee
19 has also purchased or --

20 MR. PARLER: Mr. Chairman, the interveners
21 have on appeal from an on-site licensing board
22 decision a challenge to the finding that the
23 applicant's vehicle alert notification system, the so-
24 called VAN system, was adequate. That's in LPB-89-17.

25 I would urge the gentleman to just stick

1 with the descriptive materials or else -- if I had my
2 pleasure, he would terminate the discussion about
3 emergency planning. The issues are very broad. They
4 go to the heart of many of the adjudicatory matters
5 and if he goes beyond descriptive discussion that is
6 already in the record and it is unchallenged, I would
7 have a problem.

8 CHAIRMAN CARR: Mr. Brown, do you think we
9 can dispense with the rest of the emergency
10 preparedness proceedings?

11 MR. BROWN: Yes, sir, I believe we can.

12 CHAIRMAN CARR: All right. We'll do so
13 then.

14 MR. BROWN: Mr. Chairman and members of the
15 Commission, this concludes the formal part of our
16 presentation.

17 In closing, I'd like to affirm that we at
18 New Hampshire Yankee are ready for the full power
19 licensing and operation of Seabrook Station. Our
20 physical plant, our programs and our procedures are
21 ready. Most importantly, our people, as characterized
22 by a commitment to safety, professionalism, quality
23 and excellence, are ready to conduct a conservative
24 power ascension program that will bring Seabrook
25 Station into commercial operation.

1 Given this state of readiness, we
2 respectfully request that the Commission allow the
3 decision of the licensing board authorizing full power
4 operation to become effective.

5 We realize that a full power operating
6 license from the Nuclear Regulatory Commission carries
7 with it significant responsibilities. I can assure
8 you that everyone on the New Hampshire Yankee team
9 takes those responsibilities very seriously and we're
10 committed to maintaining the trust of the Commission
11 and to protecting the health and safety of the public
12 at all times.

13 Thank you.

14 CHAIRMAN CARR: Thank you very much.

15 Any questions, Commissioner Roberts?

16 Commissioner Rogers?

17 COMMISSIONER ROGERS: Just a couple little
18 ones.

19 Mr. Feigenbaum, how stable has your staffing
20 been over the last few years, I don't know, three
21 years or so? For example, what's been the turnover
22 rate of licensed operators, engineers, or experienced
23 technicians?

24 MR. FEIGENBAUM: In this past year, 1989,
25 the overall company turnover rate was in the area of

1 five percent.

2 COMMISSIONER ROGERS: Excuse me. The
3 company is the plant or --

4 MR. FEIGENBAUM: Everybody located at the
5 plant, all our employees, New Hampshire Yankee
6 employees was about five percent. In previous years,
7 in '87, '88, it was somewhat higher than that as we
8 were going through our transition from the
9 construction to operating mode.

10 As far as operators, Bruce, can you address
11 the people on our operations staff?

12 MR. DRAWBRIDGE: Yes. For this past year,
13 for the operations staff, the turnover rate was 4.6
14 percent and that was primarily new people coming in,
15 new AOs coming in, et cetera. That would be typical
16 for the last few years.

17 COMMISSIONER ROGERS: That would be roughly
18 the same average --

19 MR. DRAWBRIDGE: Roughly the same, yes.

20 COMMISSIONER ROGERS: -- for the categories
21 of engineers, operators and technicians?

22 MR. DRAWBRIDGE: Overall for the station
23 last year, it was 3.9 percent.

24 COMMISSIONER ROGERS: And for the company it
25 was about five percent?

1 MR. DRAWBRIDGE: About five percent.

2 COMMISSIONER ROGERS: All right.

3 Mr. Drawbridge, you talked about self-
4 assessment team. Is the self-assessment team manager
5 a full-time assignment for that individual? Was that
6 discussed?

7 MR. FEIGENBAUM: Yes. I was discussing
8 that. The self-assessment team manager is full-time
9 for the period that he's doing self-assessment work.
10 The individual that happens to be filling that
11 particular position is also the independent review
12 team manager. So we see a nice complementary
13 arrangement there between his normal functions, which
14 are to provide oversight, as well as being a self-
15 assessment team manager for the power ascension
16 readiness preparation. But when he's in that task,
17 for the last 60 to 90 days, he's been doing that
18 essentially full-time.

19 CHAIRMAN CARR: Let me piggyback on that one
20 because that's one of the questions I had for you.
21 What's the difference between the IRT and the SAT, the
22 independent review team and the self-assessment team?

23 MR. FEIGENBAUM: Well, the self-assessment
24 team is a task that essentially has a beginning and an
25 end. It will end when their report is completed for

1 the phase 2 review of the conduct of the operations of
2 the power ascension test program. The independent
3 review team is a standing organization at New
4 Hampshire Yankee and is --

5 CHAIRMAN CARR: Roughly the same people?

6 MR. FEIGENBAUM: The manager is the same,
7 the rest of the people are different.

8 CHAIRMAN CARR: And all those activities
9 that you have ongoing there for management oversight,
10 what kind of coherence and consistency -- who makes
11 sure all those guys know what each other is doing?

12 MR. FEIGENBAUM: Well, we've arranged
13 essentially all the quality program groups, the QA, QC
14 group, the independent safety engineering group, the
15 independent review team, as well as the employee
16 allegations resolution program, all under a single
17 director of quality programs. He meets with all his
18 department managers on a weekly, if not more often
19 than that, basis and they coordinate their activities
20 to make sure that they're not overlapping or stepping
21 on each other's area of responsibility and creating a
22 problem as far as time and effort in the station to
23 support those activities. So, it is coordinated
24 through the director of quality programs.

25 COMMISSIONER ROGERS: To just come back to

1 this assignment of the individual who's the self-
2 assessment team manager, did you say that that person
3 would be the IRT manager as well?

4 MR. FEIGENBAUM: Yes, that's correct.

5 COMMISSIONER ROGERS: And those two
6 committees or teams, do they constitute that person's
7 full-time assignment then?

8 MR. FEIGENBAUM: Yes, they do.

9 COMMISSIONER ROGERS: It's either one or the
10 other?

11 MR. FEIGENBAUM: That's correct. We have an
12 authorized level of four people for our independent
13 review team at all times throughout the year. For the
14 self-assessment team, the independent review team
15 manager assembled a group of about ten people, more
16 than his authorized budget, and we took those people
17 from all areas of the company that had expertise in
18 the areas that he was assessing.

19 He also has the ability and has contracted
20 for a couple of people with outside expertise because
21 we couldn't find people that had the expertise and
22 were independent of the work at the plant. So, it's a
23 combination on the self-assessment team of independent
24 contractors as well as our own employees.

25 COMMISSIONER ROGERS: What is the background

1 of that individual? What is the experience and
2 background of that self-assessment team manager? I
3 think that's a very important role in this and I'd
4 just like to know a little bit more about --

5 MR. FEIGENBAUM: The individual's name is Ed
6 DeMaris. Ed was in our technical support group at the
7 plant for a number of years during the construction
8 phase and the preparation of engineering programs and
9 procedures. He then went to work in our corporate
10 engineering group and has a very extensive engineering
11 background.

12 Together in his team, on the independent
13 review team, we also have operational capability. We
14 have a unit shift supervisor that was recently
15 assigned to the independent review team who reports to
16 Ed DeMaris. So, I think there's a nice balance of
17 operational experience as well as engineering design
18 experience.

19 COMMISSIONER ROGERS: Thank you very much.

20 Mr. Drawbridge, I guess you did talk about
21 the work requests and you said there were some changes
22 on the slide that we had and the mode 4, 3, 2, 1 work
23 requests outstanding were 175 as contrasted to 205.

24 MR. DRAWBRIDGE: 177, I believe, sir.

25 COMMISSIONER ROGERS: I see, 177. Now, what

1 about the rest of them, the priority 1, 2, 3, 4
2 additional items?

3 MR. DRAWBRIDGE: Sure. Do you want that
4 breakdown?

5 COMMISSIONER ROGERS: Well, just, for
6 example, yes, why not. It would be helpful to just
7 see what the change has been in that.

8 MR. DRAWBRIDGE: Priority 1, there are five.
9 Priority 2, there are 68. Priority 3, there are 494.
10 Priority 4, there's 130.

11 COMMISSIONER ROGERS: All right. Now, those
12 numbers have gone up from the slide. What was the
13 occasion that led to that, for those changes? How did
14 that come about?

15 MR. DRAWBRIDGE: What we're doing right now,
16 sir, is we're collecting all of our work requests, as
17 I mentioned earlier. We have a separate work request
18 that's issued for each item that occurs. We're right
19 now going through our surveillance testing and as we
20 go through our surveillance tests, a number of these
21 work requests will be worked off at the same time.
22 That is to say, if we have work requests, let's say,
23 on 12 valves in the same system, those 12 valves, when
24 we do that retest of that system, the work request
25 could then be closed out.

1 The work request system does -- you do see
2 perturbations. It does go up and down. We expect to
3 see it around 750 typically.

4 COMMISSIONER ROGERS: What does that
5 represent in a typical month's work?

6 MR. DRAWBRIDGE: Typical months work? We
7 usually close out approximately 100, 125 work requests
8 a week, something like that. We also open
9 approximately 100 or so a week too.

10 COMMISSIONER ROGERS: Roughly a month and a
11 half then or something?

12 MR. DRAWBRIDGE: Roughly, yes. Roughly
13 about seven weeks, eight weeks.

14 COMMISSIONER ROGERS: All right. Fine.
15 Thank you.

16 CHAIRMAN CARR: Any other questions?

17 COMMISSIONER ROGERS: No.

18 CHAIRMAN CARR: How about telling me what
19 priority 1 means in your work request system?

20 MR. DRAWBRIDGE: Sure. Priority 1 work
21 requests are those work requests that we want to start
22 immediately and work on. It could involve a personal
23 safety issue, for example if you had a railing that
24 was down. Also, if you had a tech. spec. item too as
25 well that you wanted to have cleared out. Priority 1

1 makes the plant focus on those items so that we work
2 those items first and get them completed.

3 CHAIRMAN CARR: And priority 2?

4 MR. DRAWBRIDGE: Priority 2, those are items
5 that are of a lesser nature than the priority 1,
6 obviously. Those are the items that if the issue were
7 allowed to continue could affect the performance of
8 the piece of equipment.

9 CHAIRMAN CARR: Of those work requests
10 you've described, how many of them have to be
11 completed prior to being ready to pull rods?

12 MR. DRAWBRIDGE: All of the --

13 CHAIRMAN CARR: 177?

14 MR. DRAWBRIDGE: 177, plus we would also
15 clear out any priority 1 items that might come up in
16 the course of that as we heat out the 2 as well.

17 CHAIRMAN CARR: Now, the 177 are separate.
18 They're also categorized, I assume.

19 MR. DRAWBRIDGE: That's correct, yes.
20 They're categorized by the particular mode that
21 they're required to be operational in.

22 CHAIRMAN CARR: Well, as you know,
23 maintenance is one of my interests, I presume. There
24 was concern expressed in the SALP with respect to
25 maintenance personnel errors and lack of attention to

1 detail and failure to conduct post maintenance tests
2 on the steam dump valve. Reassure me that you're
3 corrective action since the June 22nd event have
4 solved the problems. It looks to me like you're using
5 a lot of overtime still in maintenance. Give me your
6 long-range plans on maintenance personnel. How are
7 you going to get your hands on this maintenance
8 problem or do you see it as a problem?

9 MR. DRAWBRIDGE: Well, we are always
10 monitoring our maintenance efforts. We have done a
11 fair amount of overtime, quite a bit of overtime in
12 the past six months. That is due to the amount of
13 work we have done and the amount of improvements that
14 we've done in the system.

15 We have what we call a system week concept
16 in maintenance. That allows us to do a lot of our
17 preventative maintenance on an ongoing basis. That is
18 to say every given week we specify a particular system
19 or systems. There might be two that we're going to be
20 working on. Our crews are trained and specialized in
21 certain systems. We are getting ready to go through
22 the accreditation program right now and as that, of
23 course -- I'm sure you're well aware that's very
24 systemized training. We think we have a good training
25 program.

1 CHAIRMAN CARR: What's your goal for ratio
2 of preventive maintenance to corrective maintenance
3 when you're operating?

4 MR. DRAWBRIDGE: Our goal would be about 60
5 percent preventative maintenance, 40 percent
6 corrective.

7 CHAIRMAN CARR: Well, is this work-off rate
8 of 125 a week include the ones -- I mean, includes a
9 lot of overtime?

10 MR. DRAWBRIDGE: I'm sorry?

11 CHAIRMAN CARR: The work-off rate, you said
12 close out 125 a week and open about 100. So you're
13 gaining about 25 a week. That's taking into account
14 all that overtime.

15 MR. DRAWBRIDGE: That's correct. For our
16 given situation right now today, yes. Our goal for
17 outstanding work requests is 750 or less.

18 CHAIRMAN CARR: Yes, I got that.

19 I notice that you resleeving and plugging
20 the tubes in both primary component cooling water heat
21 exchangers to repair tube degradation due to erosion and
22 pitting in order to allow one full cycle of operation
23 with acceptable performance. When and what's your
24 long-term fix for that problem?

25 MR. DRAWBRIDGE: We plan to replace two

1 bundles on those particular heat exchangers. The
2 problem that we have seen there is a flow impingement,
3 high velocity flow impingement type problem.

4 MR. FEIGENBAUM: In addition --

5 CHAIRMAN CARR: When do you plan to do that?

6 MR. FEIGENBAUM: In addition to changing the
7 heat exchanger bundles, we also plan to make changes
8 to the channel head and the inlet arrangement.
9 Unfortunately, it's not the best arrangement. The
10 flow that comes in has to make a sharp turn and there
11 is impingement and some cavitation at the inlet of the
12 tube sheath. And as a result of that, we will, at the
13 first refueling outage, we're looking at changing out
14 the tube material and changing the piping arrangement
15 in the channel head design and make it deeper.

16 CHAIRMAN CARR: So that's after the first
17 cycle?

18 MR. DRAWBRIDGE: That's correct.

19 CHAIRMAN CARR: First outage.

20 MR. DRAWBRIDGE: First refueling outage.

21 CHAIRMAN CARR: Okay. Can you tell me the
22 age of the oldest maintenance item in your corrective
23 maintenance backlog? Give me a guess.

24 MR. DRAWBRIDGE: I would -- it would be a
25 guesstimate. I would think that there would be items

1 that would probably be about four months old, a few
2 items.

3 CHAIRMAN CARR: How about sending me the
4 real dope for the record?

5 MR. DRAWBRIDGE: Okay.

6 CHAIRMAN CARR: All right. If there are no
7 other questions, thank you very much.

8 We'll now hear from the staff.

9 Mr. Taylor, you may proceed.

10 MR. TAYLOR: Good morning. With me at the
11 table, to my right, Doctor Murley, the Director of
12 NRR, and to his right Vic Nerses, the Project Manager
13 for Seabrook from NRR. To my left, Bill Russell,
14 Regional Administrator, Region I, and to his left,
15 Tony Cerne, Senior Resident during the construction
16 period at Seabrook.

17 As usual, the staff's briefing today will
18 include presentations from Headquarters and region
19 staff. To begin, I'll ask Doctor Murley to start.

20 DOCTOR MURLEY: Thank you.

21 Mr. Chairman, Commissioners, we will
22 summarize the staff's findings on the readiness of the
23 plant and the licensee to operate Seabrook at full
24 power. Mr. Nerses, the Project Manager, will talk
25 about the background and license conditions. Mr.

1 Russell will talk about the construction adequacy, low
2 power testing program, the readiness to operate and
3 also the status of some late filed allegations that we
4 have received. Mr. Cerne is here to answer any
5 questions you might have.

6 I'll cover emergency preparedness and I
7 should mention that there are FEMA representatives in
8 the audience, in particular Mr. Richard Donovan, who
9 is Chairman of the Regional Assistance Committee, if
10 there are any questions.

11 Mr. Nerses?

12 MR. NERSES: Good morning, Chairman Carr and
13 Commissioner Roberts and Rogers. My name is Victor
14 Nerses and I am the Seabrook Project Manager from
15 Project Directorate 1-3 of the Office of Nuclear
16 Reactor Regulation.

17 I thought I would begin our briefing by
18 pointing out a few facts about Seabrook and Seabrook
19 licensing matters.

20 (Slide) In my first slide, certain
21 distances -- may I have the next slide, please? Thank
22 you.

23 In this slide, certain distances from nearby
24 cities are shown. However, what is not shown, perhaps
25 of interest, is that Seabrook is located about two

1 miles inland from the Atlantic Ocean. It is
2 surrounded by a salt marsh and you can get an idea of
3 the setting for this from the photograph on your
4 briefing book.

5 The primary source for heat dissipation
6 during normal operations and accident conditions is
7 the Atlantic Ocean. Ocean water gets into the plant
8 through an intake tunnel 19 feet in diameter and about
9 three miles long. This tunnel is located about 260
10 below the station. A similar tunnel is provided for
11 the discharge.

12 The large dry containment is the primary
13 containment structure and this structure is enclosed
14 in a secondary containment with about a five foot wide
15 annulus. This secondary containment collects
16 potential leakage in the event of an accident and
17 filters the leakage through a cleanup system to reduce
18 off-site dosage.

19 (Slide) My next slide is licensing
20 milestones. As you can see, Seabrook has had a
21 lengthy licensing process. To be more specific, it
22 has been more than 16 years since the application for
23 a CP had been docketed.

24 (Slide) In my next slide on licensing
25 conditions and exemptions, if Seabrook should get a

1 full power license, it will have a few license
2 conditions. The condition on safety parameter display
3 system results from an Atomic Safety Licensing Board
4 decision. The other conditions are standard ones we
5 have been placing in nuclear power plant licenses.

6 Seabrook will also have a few exemptions
7 that have been common to licenses the Agency has
8 issued on nuclear power plants, although I understand
9 not all licensees in fuel facilities have the
10 criticality monitoring exemptions.

11 This completes my remarks. If there are no
12 questions, then I'll turn it over Doctor Murley.

13 CHAIRMAN CARR: Let's proceed.

14 DOCTOR MURLEY: On emergency preparedness, I
15 will limit my comments to the staff activity and the
16 staff recommendations.

17 Over the years, the NRC staff has reviewed
18 and continues to review the emergency plans. We have
19 observed both on-site and off-site exercises and we
20 have inspected both on-site and off-site facilities.
21 For example, the staff has conducted some 14
22 inspections and appraisals of the on-site response
23 capability, including evaluation of the utility
24 performance in four exercises.

25 The Federal Emergency Management Agency,

1 FEMA, in coordination with the NRC, has performed an
2 extensive and detailed review of the off-site plans
3 and preparedness for Seabrook. The FEMA evaluation
4 included a review of the off-site emergency plans by
5 the FEMA Regional Assistance Committee, the RAC.
6 Numerous assistance and assessment visits to verify
7 resources, training and support programs have been
8 done and they have observed two exercises of off-site
9 preparedness, a February 1986 New Hampshire exercise,
10 and the June 28th to 29th, 1988 graded full
11 participation exercise involving the State of New
12 Hampshire, the utility off-site organization from
13 Massachusetts and the State of Maine.

14 The Seabrook June 28th and 29th, 1988
15 exercise was one of the most extensive exercise
16 evaluations conducted by FEMA. During the two days of
17 the exercise, 1,525 persons --

18 MR. PARLER: Mr. Chairman, one of the
19 matters that is on appeal are the appeals from the
20 licensing board's decision on the adequacy of the
21 Seabrook plan for the Massachusetts communities and
22 the results of the 1988 FEMA-rated exercise. That's
23 in LBP-89-32. That's on appeal. Again, beyond very
24 general descriptive material --

25 CHAIRMAN CARR: I agree.

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1 MR. PARLER: -- we should stay away from
2 that, sir. The parties differ on the conclusions that
3 have been reached about the adequacy of --

4 DOCTOR MURLEY: Okay. During -- with regard
5 to this exercise, no deficiencies were observed by
6 FEMA during the graded exercise. FEMA has documented
7 in reports to the NRC that the off-site plans and
8 preparedness for Seabrook are adequate.

9 MR. PARLER: The bottom line discussions
10 about the adequacy of emergency planning is not
11 appropriate at this meeting. Excuse me.

12 CHAIRMAN CARR: Anything left to say there,
13 Doctor Murley?

14 DOCTOR MURLEY: Mr. Chairman, I thought I
15 was presenting factual material that's in the record.
16 On advice of counsel, this is what I have been told is
17 factual material.

18 MR. PARLER: The parties to this proceeding
19 differ about the judgment that should be reached on
20 the facts that are in the material. That's what the
21 appeals are all about.

22 CHAIRMAN CARR: If it's in the record, we'll
23 get to take a look at it.

24 MR. PARLER: The adjudicatory record is
25 available to the Commission.

1 DOCTOR MURLEY: During the February 1986 New
2 Hampshire exercise, the NRC participated as an
3 organizational player in the exercise, in addition to
4 observing it. As the regional administrator at the
5 time, I participated as NRC's Director of Site
6 Operations and was therefore able to observe at first
7 hand the activities in the emergency operations
8 facility and the communications among the licensee,
9 the State of New Hampshire, the local New Hampshire
10 communities and the NRC.

11 Last week, with other staff, I listened to a
12 detailed description of the emergency response plan
13 and we inspected some of the important off-site
14 facilities. In early December, the licensee submitted
15 to NRC revisions to the emergency plans. We believe
16 these revisions should have been provided to the
17 Commission, to the boards, and to the parties. Since
18 that was not done, the staff will provide copies of
19 the revisions to the Commission, to the boards and to
20 the parties as soon as possible.

21 FEMA has reviewed the revised plans and has
22 assured us that the changes in these revised documents
23 do not change their findings. Therefore, the
24 revisions do not alter the staff conclusions in the
25 safety evaluation report on adequacy of emergency

1 preparedness at Seabrook. Based on the staff's review
2 of the Seabrook on-site plans and preparedness, FEMA's
3 assessment of off-site plans and preparedness, as well
4 as the licensing board's decisions on contested
5 matters, the staff concludes that the overall state of
6 on-site and off-site emergency preparedness provides
7 reasonable assurance that adequate protective measures
8 can and will be taken in the event of a radiological
9 emergency at Seabrook and therefore emergency
10 preparedness at Seabrook is adequate to support full
11 power operations.

12 Bill Russell will continue.

13 MR. RUSSELL: I'd like to address issues
14 associated with construction. The last SALP
15 evaluation, during which construction was evaluated,
16 was rated as Category 1. Of the 30,000 direct
17 inspection hours expended, approximately 27,000 have
18 been associated with construction activities prior to
19 the issuance of the low power license. We have
20 approximately 3,000 hours since that low power
21 license.

22 Our broad conclusion as it relates to
23 construction is that the final safety analysis report
24 and the design of the facility is, in fact, reflected
25 in the as-built plan.

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1 At the time I issued my recommendation
2 regarding full power licensing to Doctor Murley, we
3 had four allegations that we were processing at that
4 time. Those allegations do not constitute any issues
5 which would preclude issuance of a full power license.

6 That day, the 9th of January, we received
7 two late filed allegations. We have reviewed those in
8 accordance with the Agency's procedures, which is
9 essentially a three part test, first to review the new
10 issues for materiality to the licensing decision,
11 secondly to judge whether new information is contained
12 in them that we had not previously seen, and to judge
13 whether they are significant to safety.

14 We constituted a group of staff to review
15 those. We essentially had nine staff reviewing the
16 materials received from Senators Kerry, Kennedy and
17 Congressmen Mavroules and Markey, some 255 individual
18 issues. We had another group of three staff that
19 reviewed issues that were received from an individual
20 in the area, a Mr. Anderson.

21 I'll cover Mr. Anderson's concerns first.
22 They were essentially developed through a tape
23 recording of radio transmissions which were received
24 at Mr. Anderson's residence, some few hundred tape
25 recordings in the course of approximately one year.

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1 He provided the transcripts of some of the more recent
2 recordings and provided his concerns regarding the
3 content of that material.

4 The staff has reviewed the transcriptions
5 that we have received, including some additional
6 material received on January 15th. We've broadly
7 characterized those into 13 areas and we conclude that
8 none of those areas are material to the decision
9 regarding a recommendation for a full power license.
10 We are continuing to review those and make efforts to
11 obtain the balance of the tape recordings and there
12 are discussions going on at this time with Mr.
13 Anderson as to how to proceed.

14 The second area of late filed allegations
15 came from the Employees' Legal Project through a
16 consultant that they had hired, QTC Corporation, some
17 255 items. We have reviewed those. We concluded that
18 some 115 were new information or characterized
19 differently than the staff had seen before and
20 approximately 144 in the earlier screening were
21 concluded to be material. We have reviewed those.

22 We have work remaining on six technical
23 issues of the new category that are material and
24 potentially relevant. We have received verbal
25 information from the licensee regarding those six

1 which indicates that the licensee has records or other
2 information which would resolve those issues. We
3 understand what that material is. It's to be provided
4 to the staff by the 24th of January and we do not
5 believe that those issues, based upon the verbal
6 representations made by the licensee, would constitute
7 a bar to licensing.

8 In addition to the allegations, there are a
9 number of items which were reflected in the readiness
10 report. At the time I forwarded that, there were 17
11 items identified in the enclosure. We now have four
12 items remaining to be addressed. Two items are
13 associated with testing, which requires plant heatup,
14 the testing of the turbine driven auxiliary feedwater
15 pump, which was described by the licensee. In
16 addition, some check valves need to be tested in the
17 interface between the low pressure emergency core
18 cooling system for leakage across those check valves.

19 There are two items which are expected to be
20 completed tomorrow associated with the post accident
21 sampling system which relate to training and review of
22 the heat tracing adequacy to preclude condensation in
23 the sampling lines.

24 In the area of maintenance, I would like to
25 identify one which we consider as a critical path item

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1 related to maintenance. It's work with ASCO valve
2 solenoids, sealing of those solenoids for
3 environmental qualification purposes. That work is
4 going on now. It is not yet complete. With respect
5 to that item itself, as well as the other maintenance
6 items that are ongoing, it's our view that they are
7 adequately controlled by technical specifications and
8 the procedures that the licensee has for assuring
9 operability prior to mode change and no additional
10 license conditions are required.

11 The items that are necessary to go into mode
12 4 to commence heatup are running a few days behind
13 schedule. We estimate at this time that the licensee
14 would be ready for mode 4 heatup operations by about
15 the 25th of January.

16 (Slide) If I could have the next slide,
17 please.

18 I have combined the preoperational testing
19 and low power testing together to discuss broadly the
20 performance of the licensee in testing. During the
21 preoperational phase following construction, they were
22 rated as a SALP Category 1. As it relates to the low
23 power testing in the most recent SALP, we evaluated
24 them as Category 2, as a part of operations. Overall,
25 we have found that the testing has been conducted in a

1 very methodical manner, that there has not been
2 pressure on schedule, and that, in fact, operations
3 personnel were well integrated into the performance of
4 testing.

5 The test results have been satisfactory and
6 there have been, in fact, few test exceptions. One
7 test has been deferred. This is the natural
8 circulation test which was the test that was aborted
9 on the 22nd of June. That is proposed to be conducted
10 using decay heat at a later phase in the test sequence
11 rather than conducting it with the reactor critical
12 with the pumps tripped.

13 The most significant from a regulatory
14 standpoint issue during the low power testing program
15 was the failure to manually scram the reactor on the
16 22nd of June.

17 I will not duplicate the items that the
18 license has described, but there are some parts of
19 that that I think are significant.

20 First, it was a challenge to operators that
21 resulted as a failure to adequately close out
22 maintenance activities. The steam dump to the
23 condenser was not adequately restored or tested
24 following maintenance and the position indicator was
25 not connected. That was certified to be ready for

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1 testing when it was not. That valve then cycled open
2 to close and resulted in an over cooling of the
3 reactor during the test which was the transient--
4 caused the pressurizer level to drop below the 17
5 percent reactor trip point.

6 The actual event itself, that is the period
7 of time the water level was below 17 percent and the
8 transient on the plant was not safety significant.
9 There was, however, a concern with respect to the
10 understanding of termination conditions for testing
11 and the hierarchy of procedures which existed in the
12 minds of some operators between test procedures and
13 operations procedures. Some of the staff members felt
14 that testing procedures belong to the test
15 organization. Operating procedures were the ones the
16 operators operated the plant by.

17 That understanding of the procedures and the
18 reasons behind the procedures we felt was a key issue
19 associated with conduct of operations. The licensee
20 did develop a comprehensive corrective action plan
21 that did indeed address the root causes of the
22 problems, incorporating some 55 specific actions. The
23 NRC has reviewed those and confirmed their adequacy
24 with respect to readiness to perform operations.

25 The key areas are associated with management

1 controls for testing the involvement of managers, the
2 testing operations interface, which has now
3 incorporated the testing procedures into operations
4 procedures so that there is no longer a concern
5 regarding hierarchy of procedures.

6 There's been extensive work done both by way
7 of training and describing the reasons for test
8 limits, why they exist and what actions are to be
9 taken regarding test termination. That has been
10 observed by the NRC in simulator evaluations where
11 testing was performed, where faults would be inserted
12 in the course of the test, some of which would require
13 test terminations, others of which would not. I also
14 personally observed a mock pre-shift briefing on a
15 test and observed some testing being demonstrated on
16 the simulator.

17 I concluded that the activities that were
18 necessary for corrective actions following that event
19 have been satisfactorily completed and have released
20 the company under the agreements that were reached to
21 not restart the reactor pending my review and
22 approval.

23 As it relates to readiness for power
24 operation, you have met some of the key managers of
25 the utility. We have concluded that they do have an

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1 effective site management team. They have six crews
2 that are fully staffed. I only want to focus on one
3 interface issue and that is that they have four crews
4 for the test department. So there's a four crew
5 rotation with the testing organization, with a six
6 crew rotation with the operations organization.

7 We carefully looked at that to make sure
8 that the procedures for turnover of information, the
9 interfaces and the communications were effective. We
10 looked at that during the briefings, the joint
11 training that was conducted and have concluded that
12 that concept, while it is different, does not create a
13 concern on our part.

14 With respect to the power ascension program,
15 the licensees described their program. I'd like to
16 briefly touch on what the region plans to do by way of
17 our inspection activity. We do have an inspection
18 plan, should the Commission approve licensing of the
19 facility, which would include, during periods of
20 testing, 24 hour coverage. We will have specialists
21 from the region to augment the resident staff. We
22 would intend to gather information in parallel with
23 the licensee regarding performance and conduct the
24 equivalent of a mini-SALP review at about the 50
25 percent power point. We would have a public meeting

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1 to review the licensee's formal report on their own
2 self-assessment and would do an end point comparison
3 of the results of our review to the licensee's review
4 and the licensee has agreed to not proceed beyond that
5 point without receiving my approval.

6 Overall, the region has concluded from our
7 inspection activities, as well as a review of
8 licensee procedures, the facility can be operated
9 safely.

10 Doctor Murley?

11 DOCTOR MURLEY: We have summarized then the
12 basis for our conclusions that the plant meets the
13 regulations and that there's reasonable assurance that
14 the plant can and will be operated without endangering
15 the health and safety of the public. Therefore, the
16 staff recommends Commission approval to issue a full
17 power license upon completion of the immediate
18 effectiveness review.

19 That concludes our remarks.

20 CHAIRMAN CARR: Any questions, Commissioner
21 Roberts?

22 COMMISSIONER ROBERTS: On page 7, you
23 indicate that there were 30,000 hours of NRC
24 inspection and you broke that down into 27,000 during
25 construction. Can you give me some general sense of

1 how that would compare with NRC inspection on other
2 plants, say within the past five years? I don't mean
3 with great precision, but just some idea.

4 MR. RUSSELL: It's generally in the
5 ballpark. The facilities that have had a longer time
6 in construction have had more hours of inspection
7 activity --

8 COMMISSIONER ROBERTS: That's reasonable.

9 MR. RUSSELL: -- as a result. There have
10 been quite a number of inspections related to receipt
11 of allegations related to quality of construction.
12 We've had major teams that have involved upward of a
13 thousand hours or better that were led by the region.
14 But it's not unusual, at least in my view, from what
15 I've seen from other facilities, and Tom, you may be
16 able to comment on others, but it's probably in the
17 upper half from the standpoint of inspection hours of
18 recent NTOLs.

19 DOCTOR MURLEY: Yes. I would have expected
20 that for a typical, if there is such a thing these
21 days as a typical plant that's coming up for full
22 power licensing, perhaps 20,000 hours would be about
23 average. I don't know if this is the highest or not,
24 but it's certainly among the highest.

25 COMMISSIONER ROBERTS: That answers my

1 question. Thank you.

2 CHAIRMAN CARR: Commissioner Rogers?

3 COMMISSIONER ROGERS: Well, I was interested
4 in that same point, but also I wonder if you could say
5 a little bit more about the breakdown of inspection
6 activities. You mentioned the 27,000 inspection hours
7 were related to construction. I wonder if you could
8 just say a little bit more about what construction
9 does include in this sense. Just what is the full
10 range of items that are inspected under what you would
11 call a construction category and then what were the
12 other 3,000 hours of inspection related to?

13 MR. RUSSELL: Well, the break point that
14 I've used is the issuance of the low power license
15 since that license was issued and we've gotten into
16 testing activities with the reactor producing heat
17 last summer. There have been approximately 3,000
18 hours since that time. Clearly, some of that time has
19 been directed to follow-up on issues or allegations
20 related to construction deficiency, so it's not clear
21 from the standpoint that none of the hours since low
22 power testing relate to construction reviews.

23 Similarly, activities after the issuance of
24 the fuel load license related in some respects to
25 readiness for operation, looking at operations

1 procedures and procedures that would be used
2 subsequently in testing. So there's not a clean
3 break. The break is more with calendar time and how
4 we've collected the hours.

5 Activities associated with construction
6 inspection vary from the one extreme of what I will
7 characterize as independent analysis and review using
8 the NRC nondestructive examination van, which we had
9 go up, that looks at in-service inspection activities
10 performed by the NRC, everything from -- not
11 edicurrent testing, but ultrasonic examination,
12 dipenetrant testing, radiography, looking at welds, to
13 actual observation of construction activities in the
14 field through the resident and specialist program,
15 looking at quality assurance programs. So it's
16 essentially a sampling of all of the activities with
17 which the licensee is engaged during the construction
18 process.

19 MR. TAYLOR: I might add a personal note. A
20 number of years ago, I led a construction assessment
21 team at that site during one of the breaks in
22 construction. Tony will remember the year. I won't.
23 But at that time, during a halt, we reviewed the full
24 level of construction activities up to that point,
25 reviewed radiographs, did a rather large assessment.

1 And that inspection report's on the record.
2 Generally, we found the construction work up to that
3 period to be good and to meet standards.

4 COMMISSIONER ROGERS: Well, I guess what I
5 was really trying to understand a little bit better
6 was exactly how broad that term "construction" is.
7 Where does it cut-off with respect to equipment and
8 things of this sort? When does one say that something
9 is construction and when does one say that this is
10 simply the installation of a prefabricated piece of
11 equipment? I'd just like to understand that a little
12 bit better, if you could.

13 DOCTOR MURLEY: Could I take a cut at it?
14 Mr. Commissioner, I don't think we collect statistics
15 on that fine a detail in terms of inspection, just
16 equipment, and then inspection of the installation of
17 it. In fact, during some of this construction time
18 there is even pre-op testing that's going on, and we
19 would lump all of those hours into construction.

20 MR. RUSSELL: Let me give you a more
21 specific example. Through 1986, we had approximately
22 21,000 hours of inspection activity, which is the time
23 that the licensee concluded they were completed with
24 construction. Since then, there has been maintenance
25 work that has gone on. There have been design

1 modifications that have been put in. So design
2 modifications fall into construction activities.
3 Maintenance on a plant that hasn't yet operated, is
4 that construction or is that maintenance of an
5 existing plant? So it's difficult to draw that line.

6 But our activities are field activities
7 associated with observing the practices in the field
8 as well as reviewing engineering records, looking at
9 the quality programs. And we do have extensive
10 inspection modules, guidance which lay out areas to be
11 sampled. One of the standards for those reviews and
12 the fundamental objective is to reach a conclusion
13 regarding the construction of the facility in
14 accordance with the terms and conditions of the
15 application, the final safety analysis report, the
16 construction drawings and other commitments that have
17 been made to the NRC. And there have been, I believe,
18 now -- I think it's three or four supplements from the
19 region regarding an overview of activities and our
20 findings that are necessary in accordance with my
21 recommendation to Doctor Murley regarding the adequacy
22 of construction of the facility.

23 COMMISSIONER ROGERS: I guess the point is
24 that it covers all of the physical aspects of the
25 plant? Is that correct?

1 MR. RUSSELL: Yes, sir.

2 COMMISSIONER ROGERS: It's not limited to
3 concrete and piping, but would include other physical
4 aspects as well?

5 MR. RUSSELL: Absolutely, everything from
6 installation of cable, cable separation, electrical,
7 INC, observation of pre-op testing, surveillance, as
8 well as the review of the licensee controls which they
9 use to insure that those activities are adequate. So
10 it's a combination of assuring that the licensee does
11 the job properly the first time as well as independent
12 evaluation by the NRC.

13 COMMISSIONER ROGERS: Well, there has been a
14 criticism of the quality assurance paper trail during
15 the course of construction, and an allegation that
16 it's incomplete and insufficient to establish the
17 necessary assurance that our requirements have been
18 satisfied, and I take it that you don't believe that
19 to be correct. And if you don't, why do you find--
20 what is your basis for believing that the quality
21 assurance paper is sufficient for our purposes here?

22 MR. RUSSELL: Broadly, that issue was looked
23 at with a team inspection, looking into a number of
24 allegations. What you described broadly is the recent
25 allegations from QTC Corporation that are in the

1 package that were forwarded with the Congressional
2 correspondence that we're looking at recently.

3 We've had two major team inspections.
4 They're documented. One was in 1986, another in 1987.
5 We looked at those allegations. We looked at the
6 actual installed hardware in the field, and we did not
7 conclude that there was a pervasive quality assurance
8 break-down, which is broadly what the allegation is.

9 There have been some omissions or
10 incompleteness in records, which were subsequently
11 corrected. It's not one that elevates itself to the
12 level where we would conclude that there was a
13 fundamental breakdown. So it's a difference in
14 judgement as to what the findings mean, and we have
15 not found instances of actual quality problems in the
16 field when we've gone out to independently verify
17 them.

18 DOCTOR MURLEY: I might add to that, since I
19 was the Regional Administrator from 1983 to '87. We
20 received at that time allegations of poor construction
21 practices, mistakes that were being made, and we
22 followed up on all of those that we got. As Bill
23 said, we sent special teams up.

24 What we found is that frequently the workers
25 making the allegations, there were two kind of

1 circumstances that they fall into generally.

2 One is that they did indeed observe a
3 practice that was not good. However, they weren't
4 involved in the subsequent follow-up by the company
5 itself. That is, they didn't know that the company's
6 own quality assurance program comes in behind and
7 corrects many of those problems. When we went in
8 there, we found that the company's own QA program had
9 corrected some of the things that the workers had
10 found to be problems.

11 And second, another category was where the
12 workers really didn't understand our own regulations
13 and what was needed. So whereas they thought perhaps
14 a crack in the concrete was an indication of not
15 meeting our regulations, that's not the case at all.
16 In fact, we recognize that concrete normally cracks.
17 There are tests that are done to make sure that it is
18 nonetheless adequate throughout its depth. And in
19 fact, our regulations and our practices take into
20 account this behavior of concrete, for example, in
21 specifying margins that must be made in the depth and
22 reinforcing bar and so forth.

23 So every time we looked at these, we found
24 that there was in many cases a root or a potential
25 problem that the workers were concerned about, but

1 that the ultimate disposition of it was not, in the
2 final analysis, a safety problem.

3 COMMISSIONER ROGERS: Well, I don't know
4 that we can pursue it. I don't see any way of
5 pursuing it further, but you feel that there is an
6 adequate documentation to fall back on, which is --

7 DOCTOR MURLEY: Yes.

8 COMMISSIONER ROGERS: -- the key element in
9 a quality assurance program?

10 DOCTOR MURLEY: Yes. If the Commission
11 would like --

12 COMMISSIONER ROGERS: -- quality control.

13 DOCTOR MURLEY: -- we could send these
14 special inspection reports that looked at direct
15 allegations and disposition of them. It's well-
16 documented.

17 MR. RUSSELL: The two inspection reports
18 that we're talking about are 8652 and 8707.

19 Tony, if you'd like to describe the results
20 from those -- there were only two open items from
21 them, and there were no violations.

22 MR. CERNE: The two large team inspections,
23 this was again as a result of allegations raised by
24 Employees' Legal Project, many of which, those same
25 allegations, have been re-raised in their body of the

1 255 new allegations that have just come before us.

2 At the time the 8652 and 8707 inspections
3 were done, the findings from those reports resulted in
4 two unresolved items, one of which had to do with
5 concrete cracking and water leaking through, ground
6 water leakage through the concrete and the effect on
7 the rebar.

8 What we basically did was contracted with a
9 technical expert consultant to come in and do the
10 review for us in a task interface agreement with NRR.
11 They reviewed that. That was all made public as an
12 attachment to the inspection report and we resolved
13 that into a closed -- they have no corrective action
14 associated with them, no technical merit in the sense
15 of effect on quality. No violations were issued as a
16 result of those inspections.

17 COMMISSIONER ROGERS: The five percent low
18 power license provided for about 40 minutes of
19 equivalent full power operating time, and only some 23
20 minutes or so of that have been used. Were there any
21 tests to be conducted? I guess we did hear about the
22 natural circulation test, which was terminated but is
23 expected, if a license is granted, to be continued
24 using decay heat as the driving force.

25 Were there any other tests that were

1 contemplated to be carried out in that 40 minutes of
2 equivalent full-time operation that were not done,
3 despite the fact that only half of that time was used?

4 MR. RUSSELL: No, sir. The one test that
5 was deferred was the natural circulation test, which
6 was one to be done with the reactor critical with the
7 pumps turned off. They propose to do that test
8 through an alternate manner, and that test proposal is
9 pending with the Office of Nuclear Reactor Regulation
10 now.

11 COMMISSIONER ROGERS: Thank you.

12 CHAIRMAN CARR: Has the staff done a
13 maintenance inspection at Seabrook yet?

14 MR. RUSSELL: We did an operational
15 readiness assessment which looked at maintenance, but
16 we have not yet done the maintenance team inspection.

17 CHAIRMAN CARR: But you don't know when it's
18 scheduled?

19 MR. TAYLOR: Do you know, Tom?

20 DOCTOR MURLEY: No.

21 MR. TAYLOR: We can provide that for the
22 record.

23 MR. RUSSELL: We can provide that for the
24 record. Their accreditation procedures and review are
25 scheduled for later this summer.

1 CHAIRMAN CARR: Which means all of it needs
2 looking at?

3 MR. RUSSELL: Yes, sir.

4 CHAIRMAN CARR: My concern, as I mentioned
5 to the licensee, was the maintenance. And I'd like to
6 get your opinion on whether they've solved their
7 problem of post-maintenance testing, maintenance
8 personnel errors, whether they're going to be able to
9 keep up with the maintenance without a lot of
10 overtime. Give me an overview of how their
11 maintenance program looks to you right now.

12 MR. RUSSELL: The concern that you expressed
13 is one that's also held by the staff. In fact, we
14 highlighted that to the licensee, the concern with
15 overtime, the fact that they're running approximately
16 60 hours with the craft and maintenance personnel.
17 Some of that's a result of the outage that they're in
18 with an increase in work load, but the issue of
19 staffing and whether there is a need for additional
20 staff or whether the work load will reduce with time
21 and get to be a manageable level is something that
22 we're continuing to monitor. They are adequately
23 controlling the overtime in accordance with their
24 procedures and the Commission's guidance, but it is
25 somewhat higher than what we expect.

1 The actions that they've taken in response
2 to the June 22nd event, which looked at testing
3 following maintenance and readiness of equipment to
4 support testing, as well as the procedures that they
5 have for closure of maintenance items in general now
6 and control of mode changes, we reviewed specifically
7 as a part of the corrective actions for the June 22nd
8 event. And we've concluded that they are adequate.
9 They may be somewhat cumbersome. They may be a little
10 bit slower, not as efficient, but we conclude that
11 they are appropriate and that we do not expect a
12 recurrence of those types of events.

13 CHAIRMAN CARR: Any other questions?

14 Thank you.

15 We'll now hear from the Commonwealth of
16 Massachusetts, Mr. John Traficonte.

17 Good morning, sir. You may proceed.

18 MR. TRAFICONTE: Thank you. Good morning,
19 Mr. Commissioners, and I want to thank you first of
20 all for giving me five minutes to deal or to address
21 plant readiness.

22 I want to comment first by noting that I
23 have no prepared statement, because it was my
24 understanding of the ground rules this morning that no
25 party, neither the applicants nor the staff, were

1 going to be permitted to comment on any contested
2 issues.

3 CHAIRMAN CARR: We're trying to make it that
4 way.

5 MR. TRAFICONTE: I understand that those
6 were the ground rules, but I want to note first off
7 that I do want to speak for five minutes because I
8 want to go into some detail about how what you just
9 heard over the last hour and 45 minutes went over many
10 of the contested issues. And to the extent that the
11 interveners are not going to be permitted equal time,
12 we think that that would be an unfair way to proceed.

13 Before I go into those details, I have to
14 note, however, that I puzzled over how the Commission
15 could have a plant readiness briefing without anyone
16 mentioning or discussing or commenting on contested
17 issues for these reasons:

18 First of all, emergency planning is
19 obviously the critical issue in any Seabrook license.
20 And as the Commission is aware, its own appeal board
21 has identified the legal standard for emergency
22 planning as the "pivotal" issue in any Seabrook
23 licensing. That certified question is before you, and
24 it's not been ruled on. So for Doctor Murley -- with
25 all due respect -- for Doctor Murley to sit here and

1 assert that the staff has found reasonable assurance
2 that adequate protective measures can and will be
3 taken, we think that obviously addresses head-on a
4 key, if not the key, contested issue.

5 Equally importantly, however, it appears
6 that the attorneys for the staff and the applicants
7 failed to inform the presenters this morning that the
8 interveners in this case presented serious challenges
9 to the performance of the applicants during low power
10 testing. Indeed, we filed contentions on July 21,
11 1989, and we followed it up after the staff issued its
12 augmented inspection report in August. We followed
13 those contentions up on August 28 with a very thorough
14 set of contentions. And those contentions included,
15 Mr. Chairman, a concern of yours, maintenance.

16 We had experts that alleged that -- based on
17 prior performance as well as the performance on June
18 22nd -- that maintenance problems of a serious nature
19 existed at the plant. We filed a contention. The
20 contention was denied. And it was denied, as you may
21 or may not be aware, because the licensing board
22 applied the Record Reopening Standard, which we
23 thought was improper, and which we think federal law
24 is clear that that constitutes, in fact, bad faith by
25 the Commission.

1 So, first of all, maintenance and every word
2 you heard about maintenance this morning, as it arises
3 out of or is connected to the June low power testing,
4 was inappropriate. That's a contested issue.

5 Number two, operator proficiency or operator
6 training or, as it was called here, operator
7 retraining, those issues arise out of the low power
8 testing. And indeed, we had contentions. And again,
9 those were denied and no hearing was held. We had
10 contentions supported by experts that, in fact, the
11 testing revealed that operators were not adequately
12 trained and did not know what they were doing.

13 Three, one of the themes this morning was
14 the test program, the power ascension program. Are
15 they indeed going to have an adequate power ascension
16 program as they move, if they ever do, from zero power
17 up to 100 percent. This one really amuses me.
18 Because, we filed, again, a contention -- and this one
19 was filed on August 28 -- in which we detailed, based
20 on prior inspection reports and the augmented
21 inspection report, we detailed how the test program
22 and the quality assurance program during testing and
23 power ascension was an absolute disaster on June 22nd.

24 I'd like to note two points.

25 First of all, the licensing board outdid

1 itself when it addressed this issue, because nowhere
2 in its discussion of our contentions -- which, of
3 course, denied every single contention -- nowhere in
4 the opinion which issued in October -- I believe it
5 was October 26 -- nowhere does the licensing board
6 mention this contention. It does not mention it. And
7 again, the contention was supported by facts, facts in
8 the record. It was also supported by expert affidavit
9 and expert testimony.

10 Last point on this line -- and obviously, I
11 may run over -- but the last point on this line is you
12 heard the applicants and the staff -- and indeed,
13 parenthetically, I'd like to comment. I don't know
14 how else they could have given you a plant readiness
15 briefing without talking about maintenance, without
16 talking about operator proficiency. But again, these
17 are contested issues.

18 You heard the applicants and staff talk
19 about their judgement on how important what happened
20 at low power was. And I noted -- in fact, I noted in
21 writing what Mr. Russell said. He stated to you that
22 the actual physical events, the hard technical events,
23 were not safety significant, and I don't dispute that.
24 That's to say that that trip did not, in itself -- or
25 was not about to lead to a reactor accident. But then

1 he said, and I quote, that the staff thought it was a
2 "key issue and a matter of concern as to the events
3 that surrounded the trip."

4 Well, I'd like to read to you what the staff
5 said in its augmented inspection report dated August
6 21.

7 SECRETARY CHILK: Mr. Chairman, if I can
8 interrupt, five minutes.

9 CHAIRMAN CARR: All right.
10 Go ahead and -- is this your last point?

11 MR. TRAFICONTE: I'm sorry. Sure, this will
12 be it.

13 This is on page 29 of the August 21
14 augmented inspection report, who's number is available
15 in the record. At this point, this is what the
16 staff's judgement was:

17 "The failure of the operating crew to trip
18 the reactor when required by the test procedure during
19 the June 22nd test, the failure of test group
20 personnel to recommend tripping of the reactor at that
21 point, and the failure of management present in the
22 control room to exercise their responsibilities in
23 this situation, despite the fact that the plant was
24 being operated under a technical specifications
25 special test exception, is safety significant. Also,

1 the apparent willingness of management to proceed with
2 testing following the June 22nd occurrence without
3 first completing a thorough review and causal factor
4 assessment is safety significant."

5 Indeed, it is safety significant. If the
6 Commission would spend a few minutes and look at what
7 the same staff represented to the licensing board in
8 response to our low power contentions, it will find
9 that this word, "safety significant," disappears. It
10 goes into the Orwellian memory hole. And the only
11 thing left is a "concern" or an "issue," which
12 apparently the staff is now perfectly prepared to say
13 is of no great moment.

14 So again, I apologize. I have obviously
15 commented on the contested issues. I don't know what
16 else I was supposed to do, and obviously I'd have a
17 lot more I could say if I were given the same 45
18 minute time that staff and applicants had.

19 Thank you.

20 CHAIRMAN CARR: Thank you.

21 Any questions?

22 Thank you very much, Mr. Traficonte.

23 We'll now hear from Mr. Backus, from the
24 Seacoast Anti-Pollution League.

25 Good morning, sir.

1 MR. BACKUS: Good morning, Mr. Chairman,
2 members of the Commission.

3 I am Robert Backus. I represent the
4 Seacoast Anti-Pollution League, which has been a full
5 intervenor in the Seabrook proceeding for many, many
6 years, sir. I have basically two things that I want
7 to do in the time that I have here.

8 The first is to urge that the Commission
9 address and reach all the contested issues that are
10 before you prior to permitting any licensing of the
11 plant. We know a licensing decision was made on
12 November 9th by the licensing board. It's our
13 understanding that the only thing that stands between
14 that decision sufficing to permit the staff to
15 actually issue the license is your immediate
16 effectiveness review. I presume this may have some
17 relation to that immediate effectiveness review. If
18 it does, we believe the Commission has an obligation
19 to the parties to decide the contested issues prior to
20 permitting that license to go into effect.

21 As you know, you have before you a certified
22 question from the appeal board in ALAB 922 on the
23 standard to be applied to judging the adequacy of an
24 emergency plan. We believe you must answer that
25 question in a reasoned fashion prior to letting this

1 licensing decision become effective. We believe you
2 must.

3 You have, also, knowledge of, and I take it
4 are going to undertake some investigation into the
5 fact that the appeal board on November 7th, a mere two
6 days before the licensing board authorization for full
7 power, reversed and remanded the New Hampshire
8 emergency plan on four issues. And we just had a
9 notice from the licensing board that we are to notify
10 them within a few days of what further proceedings we
11 feel should be undertaken on those four issues.

12 Well, whatever further proceedings to be
13 undertaken, we say -- and this is before you on the
14 papers that have been filed -- surely that must occur
15 before you authorize any further licensing of the
16 Seabrook plant or any use of a license for the
17 Seabrook plant. We think we are absolutely entitled
18 to that.

19 Mr. Chairman, some almost ten years ago we
20 brought a case, SAPL versus NRC, which went to the
21 District of Columbia Court of Appeals and resulted in
22 an opinion. And in that case, the Commission through
23 its attorneys promised I think the public, and
24 certainly my client, since we were the moving party,
25 that if emergency planning at Seabrook was infeasible,

1 no license would issue. The Court adopted that. That
2 language is in their opinion. I think it's not only
3 pertinent, I think it's the law of the case. I think
4 it's binding.

5 So any suggestion that the licensing board's
6 immediate issuance authorization can be allowed to go
7 into effect without those issues being resolved, I
8 find astounding. And I think it would be not only
9 contrary to the Court of Appeals' decision, I frankly
10 think it would be a breach of faith with the people
11 that have been told to trust the Nuclear Regulatory
12 Commission, which has always said that safety is its
13 first, last, and a permanent consideration in any
14 matter.

15 So that's the first point I wanted to make,
16 is that we need the Commission's decision on that. We
17 believe we're entitled to it. And we believe that all
18 of these issues that we are supposedly not to comment
19 on here today, but which we have commented on in
20 writing, as you know, must be decided before any
21 action on the licensing authorization. So that
22 involves the matters I've told you about and also the
23 motion before you to vacate the licensing board
24 authorization for licensing. We believe you must act
25 on that.

1 The second thing I wanted to do has to do
2 with the Employees' Legal Project Report. As we
3 expected and as we heard today, the staff has informed
4 you that they've looked at the more than 200
5 allegations that are dealt with in the Employees'
6 Legal Project Report. And as I understood them to
7 say, they have concluded that none of them interfere
8 with their conclusion that there is readiness for
9 plant operation.

10 I've brought down three copies of this
11 report that I'd like to give each of you individually,
12 and I want to do that for one particular reason. And
13 that is that we believe that the heart of this report
14 is really a trenchant criticism of the staff review of
15 the problems. You as the Commissioners not only have
16 the ultimate responsibility for the issuance of the
17 license, but also certainly have the responsibility
18 for oversight of the staff. And in both of those
19 areas it seems to me that this report may be pertinent
20 to you.

21 The staff cites, as one would expect, their
22 own inspection reports and their action on closing out
23 open items from the June 22 event and things like
24 that. But I think that each of you as Commissioners
25 would want to compare their close-outs with the

1 allegations as they were dealt with in this report,
2 because there is trenchant criticism, as I say, of the
3 staff in here.

4 And the staff is quite correct. Many of
5 these allegations were raised years ago, in the 1986,
6 1987 time period, and this very same staff treated
7 them at that time as either not significant, not
8 substantiated, not involving a serious safety problem.
9 And now some of these have come back and said, yes,
10 essentially they were serious and the staff was in
11 error or did not properly treat these matters.

12 SECRETARY CHILK: Mr. Chairman --

13 CHAIRMAN CARR: Thank you.

14 MR. BACKUS: Five minutes? All right.

15 So with that, Mr. Chairman, if I could, for
16 your own use and the use of your personal staffs, I'd
17 like to furnish you with copies of the Environmental
18 Legal Project Report.

19 CHAIRMAN CARR: Thank you. Leave them there
20 with the Secretary. He'll get them to us.

21 COMMISSIONER ROBERTS: Is that acceptable?

22 MR. PARLER: That's fine.

23 COMMISSIONER ROBERTS: Thank you.

24 MR. BACKUS: If there are any questions, I'd
25 be happy to answer them.

1 CHAIRMAN CARR: Any questions, Commissioner
2 Roberts?

3 COMMISSIONER ROBERTS: No.

4 CHAIRMAN CARR: Commissioner Rogers?

5 COMMISSIONER ROGERS: No.

6 CHAIRMAN CARR: Thank you.

7 COMMISSIONER ROGERS: Thank you.

8 CHAIRMAN CARR: We'll now hear from Ms.
9 Curran, from the New England Coalition on Nuclear
10 Pollution.

11 Good morning.

12 MS. CURRAN: Good morning.

13 I don't know if you have it yet, but I gave
14 Mr. Chilk copies of a letter that I've written to the
15 Commission on behalf of interveners NECNP, who I
16 represent, the Seacoast Anti-Pollution League, and the
17 Massachusetts Attorney General concerning what we feel
18 are the major issues raised in the ELP report that Mr.
19 Backus was just describing to you. I think they're
20 right over there.

21 Apparently, the staff has reviewed the
22 allegations in the ELP report and concluded that
23 they're not significant for purposes of licensing
24 review or that they won't stand in the way of issuance
25 of an operating license. And I would just like to

1 reiterate and emphasis Mr. Backus' statement that one
2 of the key problems that was found by QTC was a lack
3 of adequate staff oversight of quality assurance at
4 Seabrook, and I'd just like to read you a paragraph
5 from the executive summary of the report.

6 "Many NRC reports list violations of federal
7 regulations, but fail to officially cite the utility.
8 Thus, the utility was not required to investigate root
9 causes, develop corrective actions, or describe the
10 violations' generic applicability. The NRC has also
11 resolutely refused to address questions about QA/QC in
12 connection with document falsification, cheating on
13 cadweld tests, maintenance problems, operator errors,
14 and lack of procedures." And these concerns are
15 detailed in the report.

16 I think it's absolutely imperative that the
17 Commission undertake an independent evaluation of the
18 quality assurance program at Seabrook, including the
19 adequacy of the staff's evaluation and oversight of
20 that program. As detailed in my letter, many of the
21 concerns, if they are corroborated, could be extremely
22 serious safety problems at Seabrook, including a lack
23 of adequate seismic qualification of reactor coolant
24 pump support legs and potentially inadequate strength
25 Uni-strut bolts installed throughout the plant.

NEAL R. GROSS
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

1 I'd also just like to touch on the letter
2 from Mr. Fred Anderson, which he sent to Mr. Russell,
3 that you should have a copy of. I've made copies for
4 the Commissioners. The staff has reported that Mr.
5 Anderson, who recorded about nine months of control
6 room discussions with Seabrook maintenance staff, has
7 not raised any significant safety issues.

8 But I would like to point out that some of
9 the problems that Mr. Anderson's transcriptions
10 reflect are maintenance problems, which is one of your
11 chief concerns. And before this plant is licensed to
12 operate, it certainly warrants a further investigation
13 into these tapes and the kind of potentially very
14 serious issues they raise.

15 You've heard a lot of generalities and, I
16 think, platitudes from the utility this morning about
17 the adequacy of this plant's program for operation
18 maintenance, and yet we have a voluminous record that
19 shows that there are serious problems that need to be
20 addressed before the plant can be licensed. I urge
21 you to begin an investigation of the ELP report and
22 Mr. Anderson's allegations before licensing Seabrook.

23 Thank you.

24 CHAIRMAN CARR: Thank you very much.

25 Any questions?

1 COMMISSIONER ROGERS: No.

2 CHAIRMAN CARR: At this point, we will offer
3 the applicant, New Hampshire Yankee, an opportunity
4 for additional remarks. Please limit your remarks to
5 five minutes, if you care to --

6 MR. FEIGENBAUM: We have no further remarks,
7 Mr. Chairman.

8 CHAIRMAN CARR: Thank you.

9 The staff, would you like to make any
10 additional remarks?

11 MR. TAYLOR: No additional, Mr. Chairman.

12 CHAIRMAN CARR: No additional remarks.

13 If there are no additional remarks and no
14 questions from the Commissioners --

15 COMMISSIONER ROGERS: No.

16 CHAIRMAN CARR: -- we stand adjourned.

17 Hold that. I'd like to make a closing
18 statement. Excuse me. I'm really in a hurry to get
19 it over with.

20 I would like to thank New Hampshire Yankee
21 and the NRC staff, as well as the Commonwealth of
22 Massachusetts, the Seacoast Anti-Pollution League, and
23 the New England Coalition on Nuclear Pollution for
24 providing your views on the readiness of Seabrook Unit
25 1 to operate at full power. The Commission will take

1 these views into account in reaching our decisions
2 regarding full power licensing of Seabrook Unit 1.

3 We are, of course, aware that a number of
4 issues, including adjudicatory items before the
5 Commission, must be resolved before a decision can be
6 made on a license. The Commission expects to conclude
7 its immediate effectiveness review and reach a
8 decision on the pending adjudicatory matters within
9 two to three weeks.

10 If there are no further comments, we stand
11 adjourned.

12 (Whereupon, at 11:01 a.m., the above-
13 entitled matter was concluded.)
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CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting
of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: IMMEDIATE EFFECTIVENESS REVIEW BRIEFING - SEABROOK

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: JANUARY 18, 1990

were transcribed by me. I further certify that said transcription
is accurate and complete, to the best of my ability, and that the
transcript is a true and accurate record of the foregoing events.

Carol Lynch

Reporter's name: Peter Lynch

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COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1/18/90

SCHEDULING NOTES

Title: Immediate Effectiveness Review Briefing - Seabrook

Scheduled: 9:00 a.m., Thursday, January 18, 1990 (OPEN)

Duration: Approx 2-1/2 hrs

Participants: New Hampshire Yankee 45 mins

- Ed Brown
President and Chief Executive Officer
Division of Public Service of New Hampshire
- Ted Feigenbaum
Senior Vice President and
Chief Operating Officer
- Bruce Drawbridge
Executive Director of Nuclear Production
- George Gram
Executive Director of Emergency Preparedness
and Community Relations

NRC Staff 30 mins

- James Taylor
- Tom Murley
- Bill Russell
- Vic Nerses

Commonwealth of Massachusetts (if needed) 5 mins

- John Traficonte, Chief
Nuclear Safety Unit
Department of the Attorney General

Seacoast Anti-Pollution League 5 mins

- Robert A. Backus

New England Coalition on Nuclear Pollution 5 mins

- Diane Curran

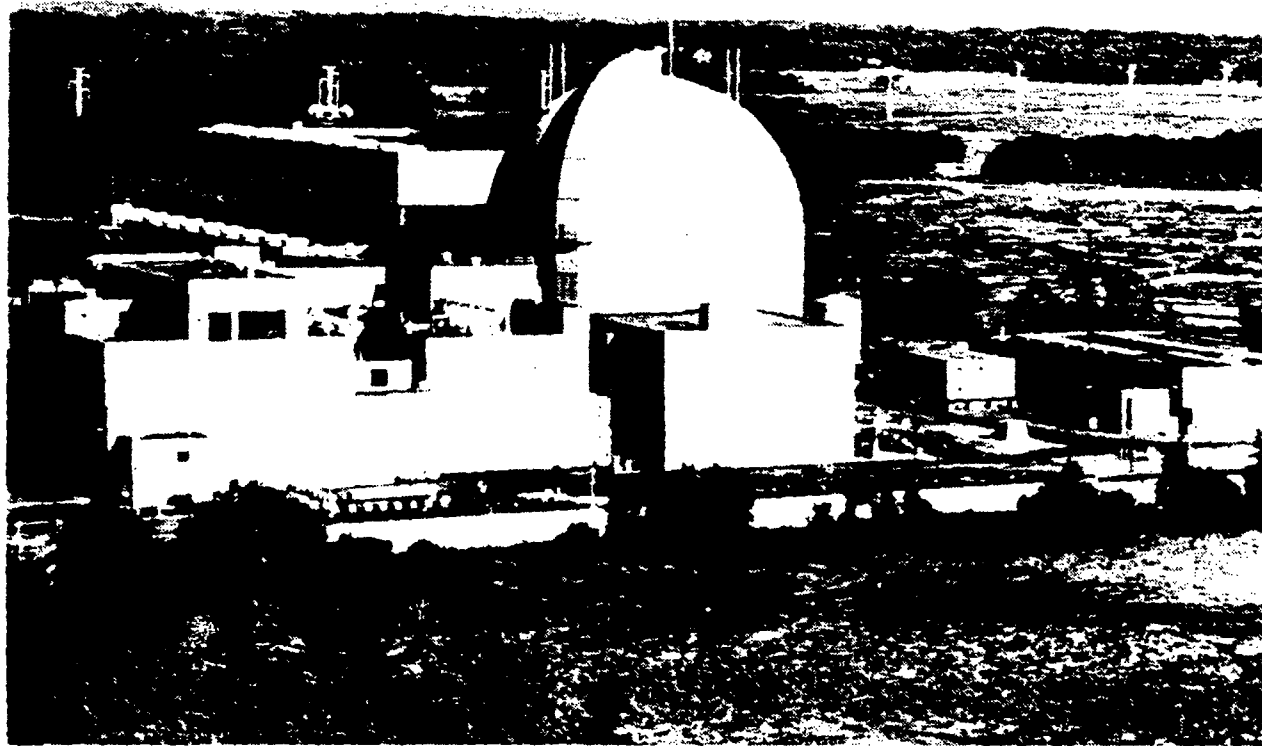
New Hampshire Yankee (rebuttal if needed) 5 mins

NRC Staff (rebuttal if needed) 5 mins

Briefing on Full-Power Licensing of Seabrook Station

January 18, 1990

EDWARD A. BROWN
President & CEO
New Hampshire Yankee



New Hampshire Yankee AGENDA

- **TED C. FEIGENBAUM**
Sr. Vice President and Chief Operating Officer
 - Organization & Staffing
 - Corrective Action Plan
 - Self Assessment
- **BRUCE L. DRAWBRIDGE**
Executive Director - Nuclear Production
 - Operational Readiness
 - Power Ascension Test Program
- **GEORGE R. GRAM**
Executive Director of Emergency Preparedness
and Community Relations
 - Emergency Preparedness
 - Vehicular Alert & Notification System (VANS)

SAFETY

PROFESSIONALISM



QUALITY

EXCELLENCE

Organization & Staffing

Corrective Action Plan

Self Assessment

TED C. FEIGENBAUM
Senior Vice President
and Chief Operating Officer

New Hampshire Yankee ORGANIZATION

PRESIDENT &
CHIEF EXECUTIVE OFFICER
E.A. Brown

SR. VICE PRESIDENT &
CHIEF OPERATING OFFICER
T.C. Feigenbaum

PRODUCTION
B.L. Drawbridge

ENGINEERING/
LICENSING
R.J. DeLoach

QUALITY
PROGRAMS
N.A. Pillsbury

EMERGENCY
PREPAREDNESS
G.R. Gram

ADMINISTRATIVE
SERVICES

CONTROLLER

CORPORATE
COMMUNICATIONS

CONFIRMATORY ACTION LETTER 89-11 CORRECTIVE ACTION PLAN

MAJOR CATEGORIES

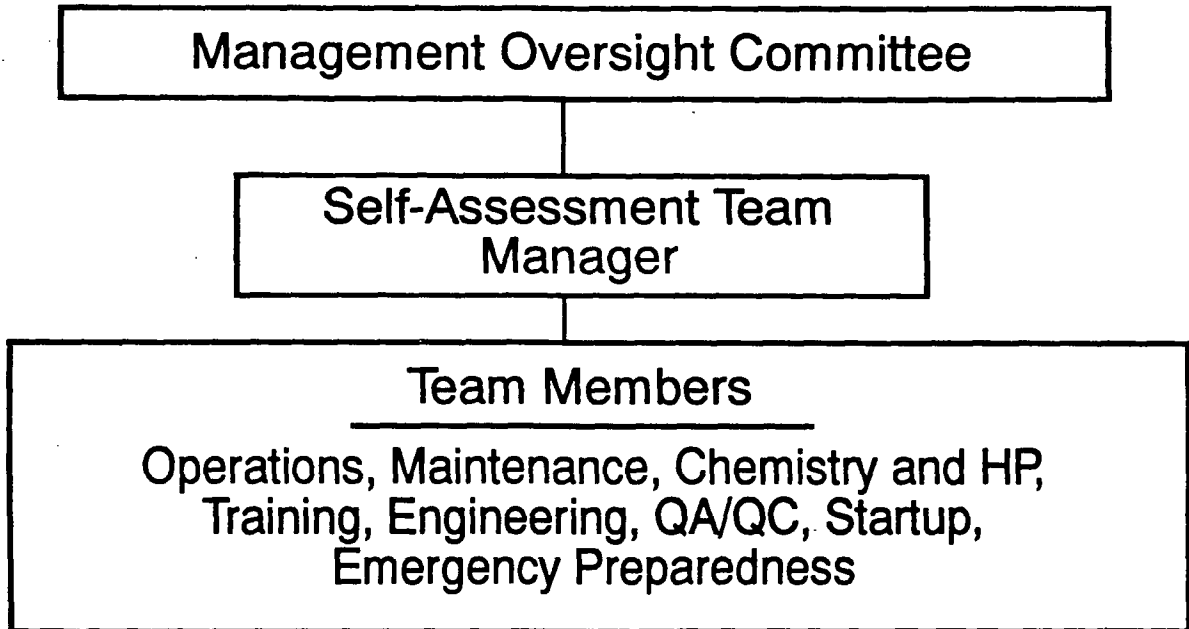
- Procedure Compliance
- Equipment Readiness
- Pre-test Preparation
- Power Ascension Test Program
- Post Event Management
- Operations Management
- Management Oversight

CONFIRMATORY ACTION LETTER 89-11 CORRECTIVE ACTION PLAN

KEY FEATURES

- **Improved Procedure Compliance Policy / Training**
- **Integration of Startup and Operator Crews and Procedures**
- **Emphasis on Simulator Training**
- **Dedicated Crews for Complex Tests**
- **Improved Pre-test Briefings**

SELF-ASSESSMENT TEAM ORGANIZATION



NHY SELF-ASSESSMENT OF THE POWER ASCENSION TESTING EVOLUTION

- **PHASE 1: Evaluate Preparations For and Readiness To Begin Power Ascension Testing**
- **PHASE 2: Evaluate Conduct of Activities and Effectiveness of Personnel, Programs and Equipment During The Power Ascension Testing Evolution**

MANAGEMENT OVERSIGHT

- OQAP Operational Quality Assurance Program
- NSARC Nuclear Safety Audit Review Committee
- SORC Station Operation Review Committee
- IRT Independent Review Team
- SAT Self-Assessment Team
- ISEG Independent Safety Engineering Group
- HPES Human Performance Evaluation System
- RSC Radiation Safety Committee
- EAR Employee Allegation Resolution Program

Operational Readiness
Power Ascension Test Program

BRUCE L. DRAWBRIDGE
Executive Director - Nuclear Production

MAJOR ACTIVITIES SINCE LOW-POWER TESTING

- Completed ECCS Outage
- Installed Low-Power Testing Design Enhancements
- Completed Containment Integrated Leak Rate Test

CURRENT PLANT STATUS AND SCHEDULE

- | | |
|--|----------|
| ● Licensing Items | Complete |
| ● Set Containment Integrity | 1/18/90 |
| ● Complete Surveillance Testing | 1/23/90 |
| ● Enter Mode 4 | 1/25/90 |
| ● Perform Mode 3 Testing | 1/26/90 |
| ● Ready to Initiate Power Ascension Test Program | 1/31/90 |

WORK REQUESTS OUTSTANDING

Mode 4, 3, 2, 1	205
Priority 1	1
Priority 2	67
Priority 3	457
Priority 4	<u>127</u>
TOTAL	857

(as of 1/10/90)

TRAINING

- Plant Specific Simulator
- Operator Programs Accredited
- Maintenance Programs -
Accreditation Visit - April 1990
- Remaining Programs -
Accreditation Visit - July 1990

NRC REACTOR OPERATOR LICENSES

	SRO	RO
Operations	25	8
Training	<u>9</u>	<u>1</u>
TOTAL	34	9

NRC REACTOR OPERATOR LICENSES OPERATIONS DEPARTMENT

ON-SHIFT

Required by Technical Specifications:

Seabrook
Actual

For Each Shift:

For 6 Shifts:

1 Shift Supt. (SRO)

6 SRO

6 SRO

1 Unit Shift. Supvr. (SRO)

6 SRO

7 SRO

2 Reactor Operators (RO)

12 RO

8 SRO,
8 RO

STAFF

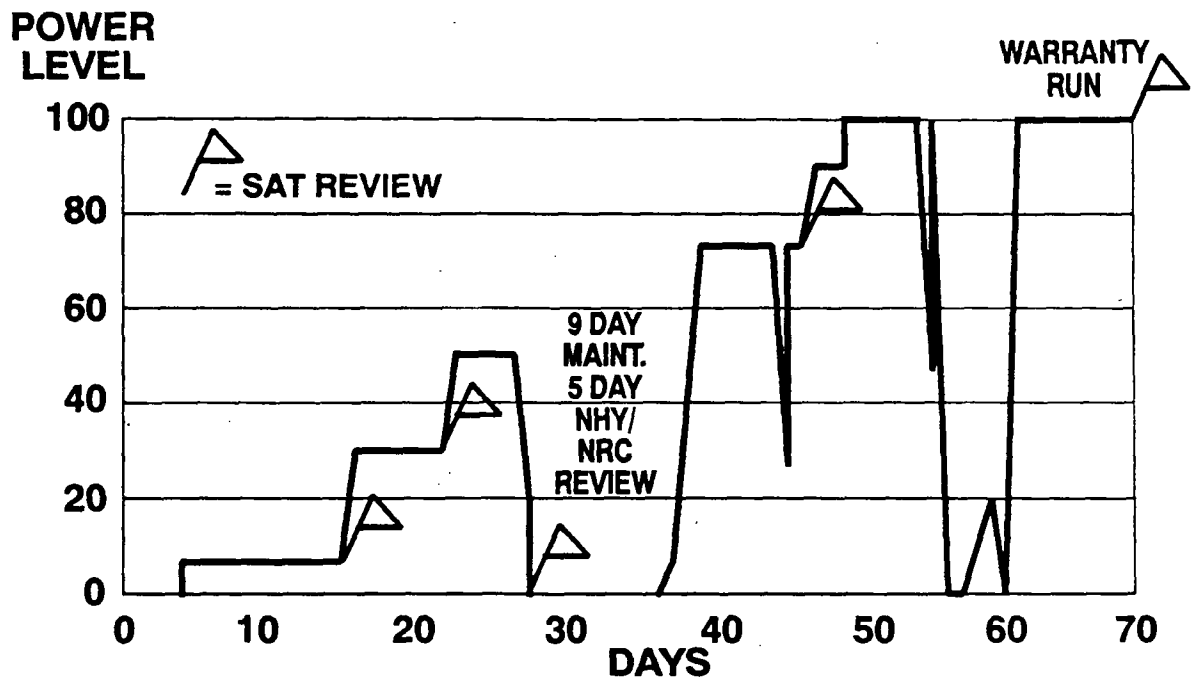
None Required

4 SRO

FITNESS FOR DUTY PROGRAM

- In Place - April 1986
- Implemented Revisions For Verification - 12/7/89
- Full Implementation - 1/3/90

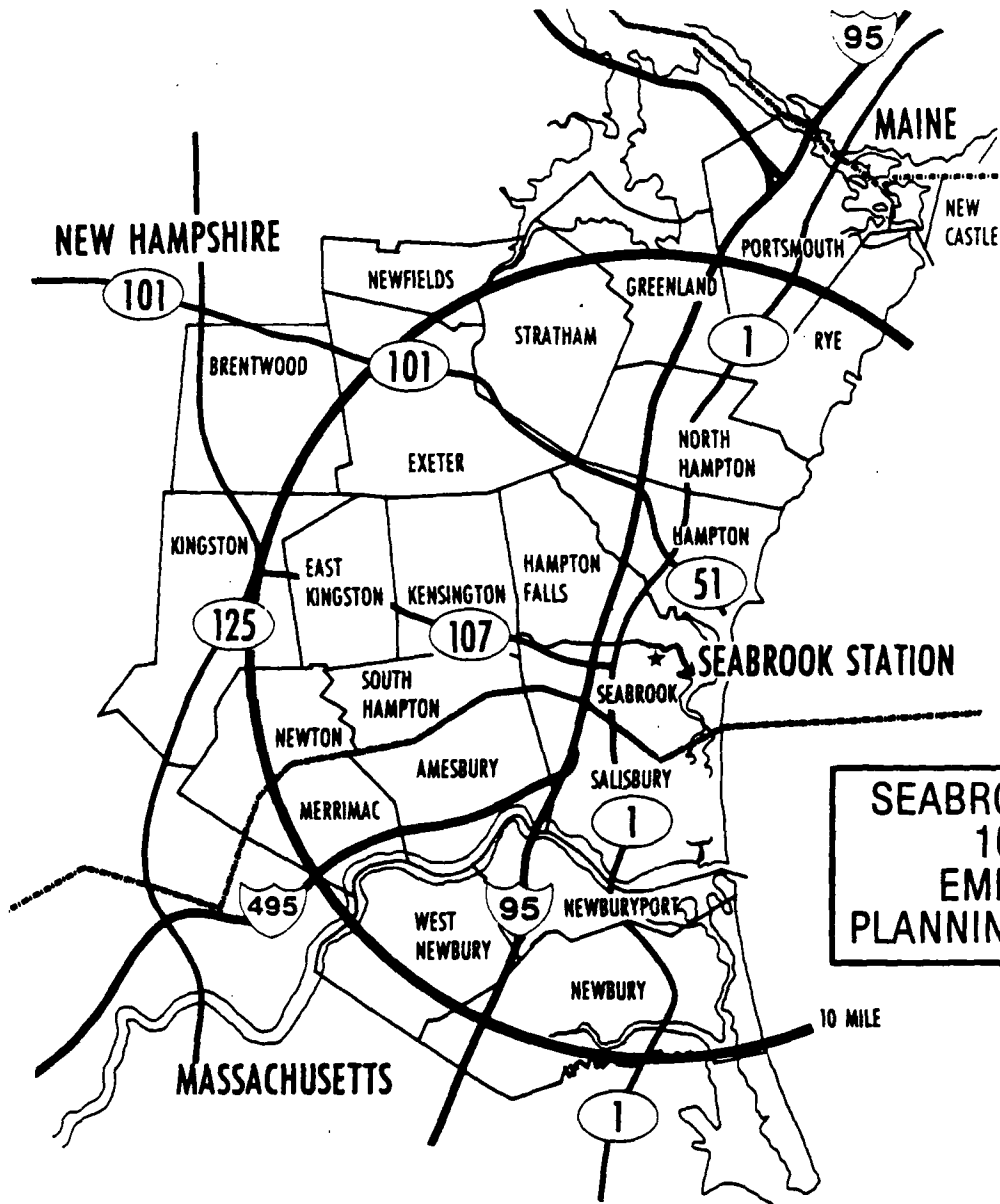
POWER ASCENSION TEST SCHEDULE



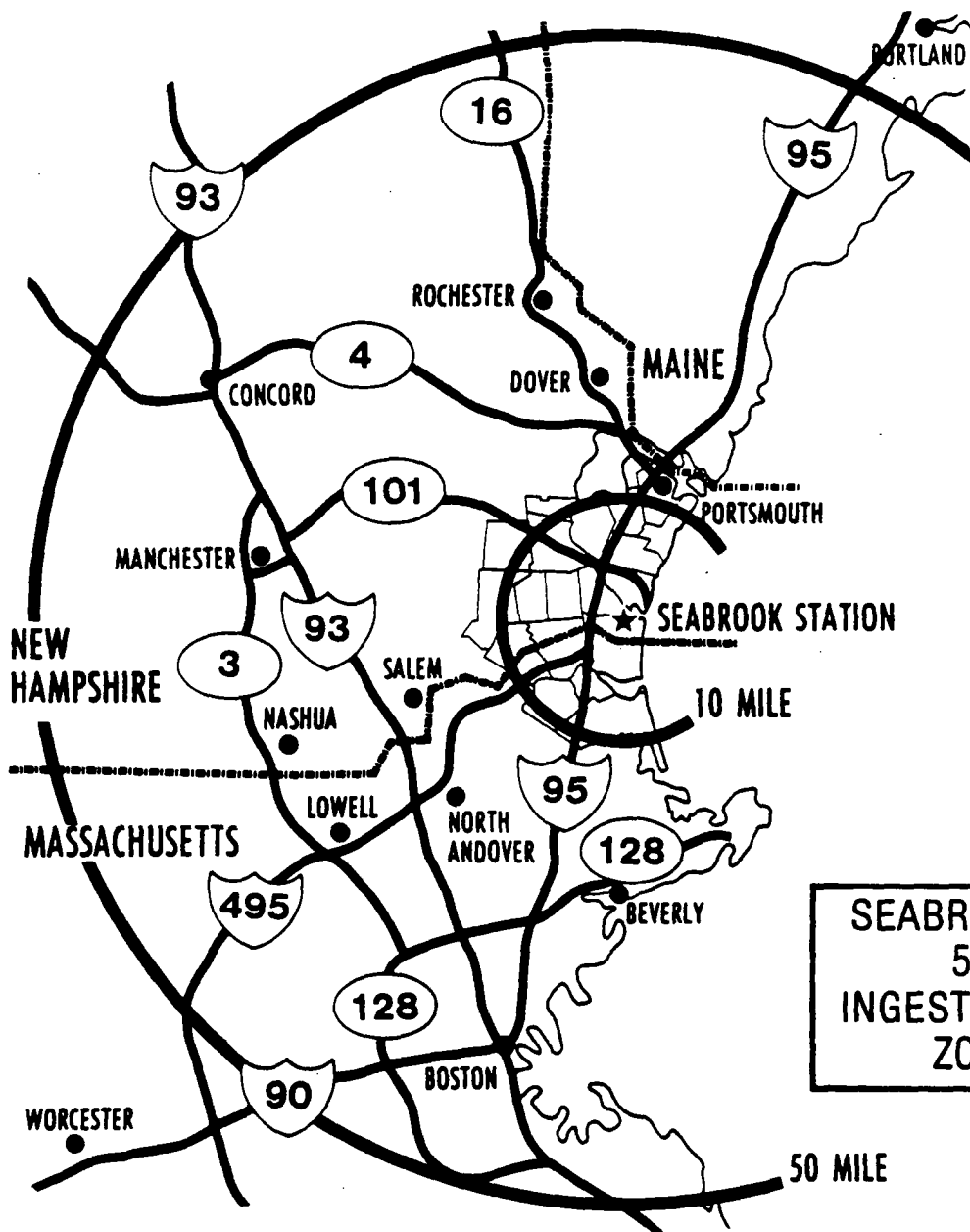
NOTE: Duration of SAT reviews will depend upon the success of the Power Ascension Testing at specified intervals. Management approval is required to proceed to the next power plateau.

Emergency Preparedness
Vehicular Alert and Notification System
(VANS)

GEORGE R. GRAM
Executive Director of Emergency Preparedness
and Community Relations



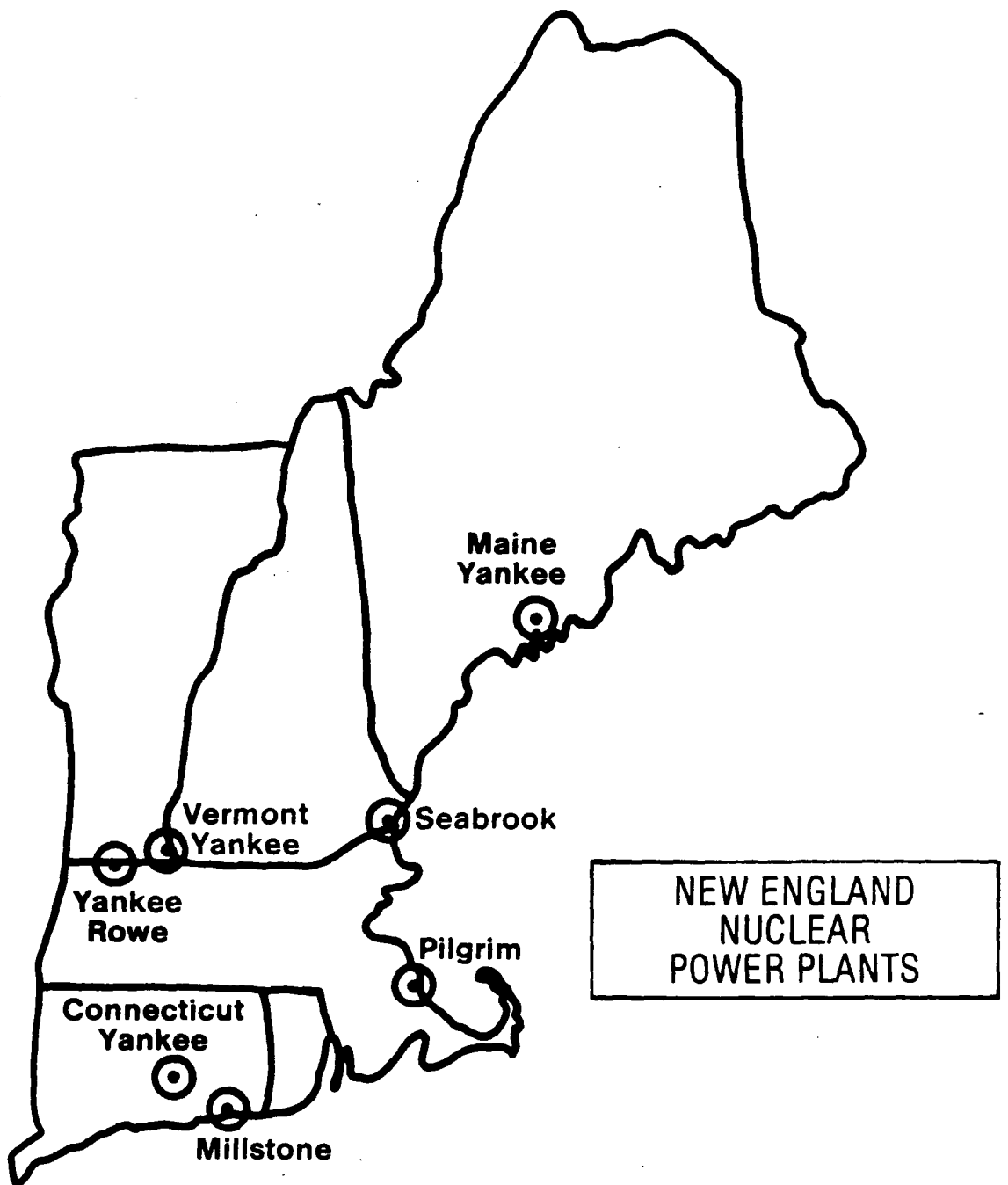
SEABROOK STATION
10-MILE
EMERGENCY
PLANNING ZONE (EPZ)



SEABROOK STATION
50-MILE
INGESTION PATHWAY
ZONE (IPZ)

FOUR MAJOR RESPONSE ORGANIZATIONS

- New Hampshire Yankee (NHY) Onsite
- State of New Hampshire Offsite 10 Mile EPZ
50 Mile IPZ
- State of Maine Offsite 50 Mile IPZ
- NHY / Massachusetts Offsite 10 Mile EPZ
Offsite Response 50 Mile IPZ
Organization (ORO)

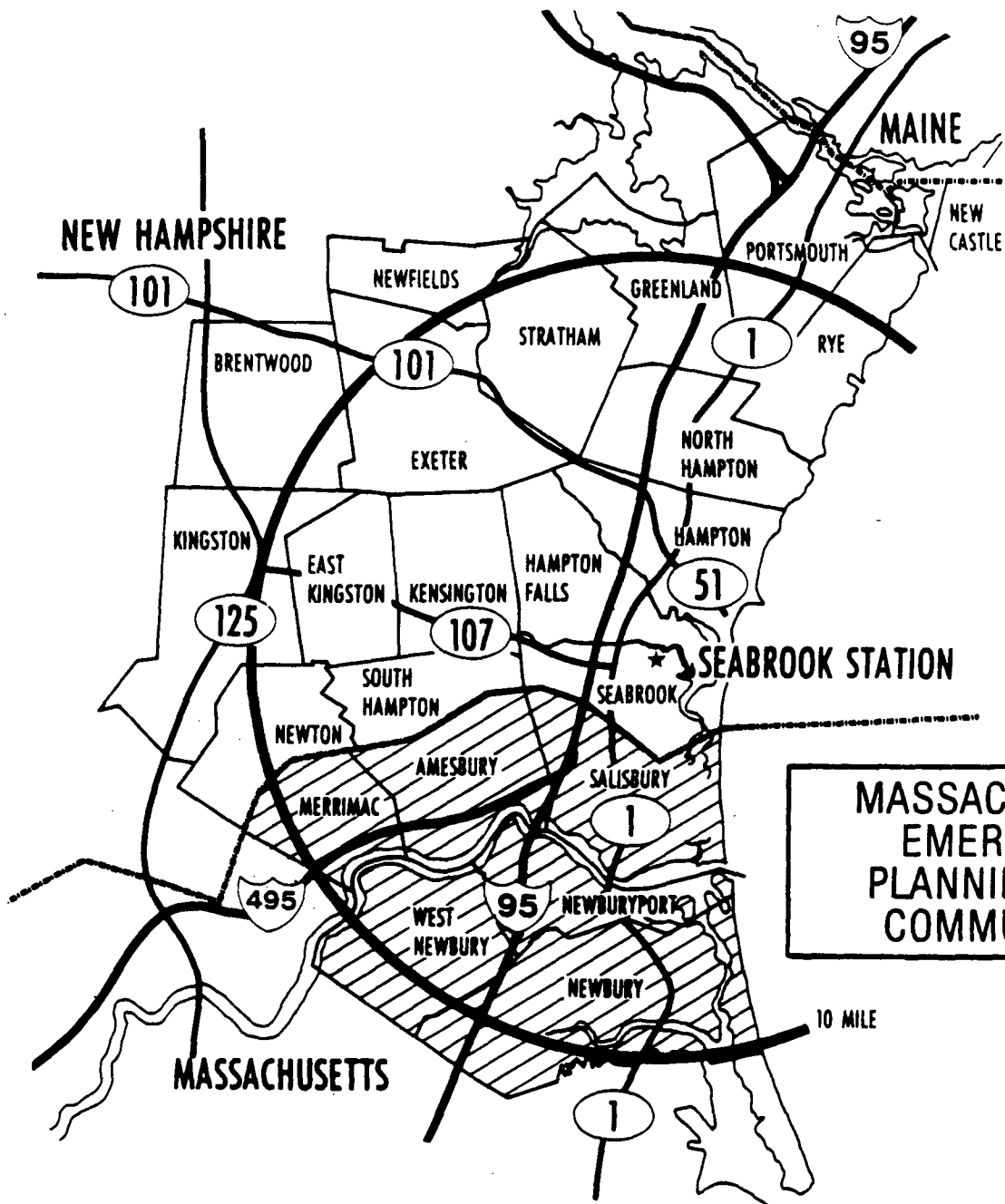


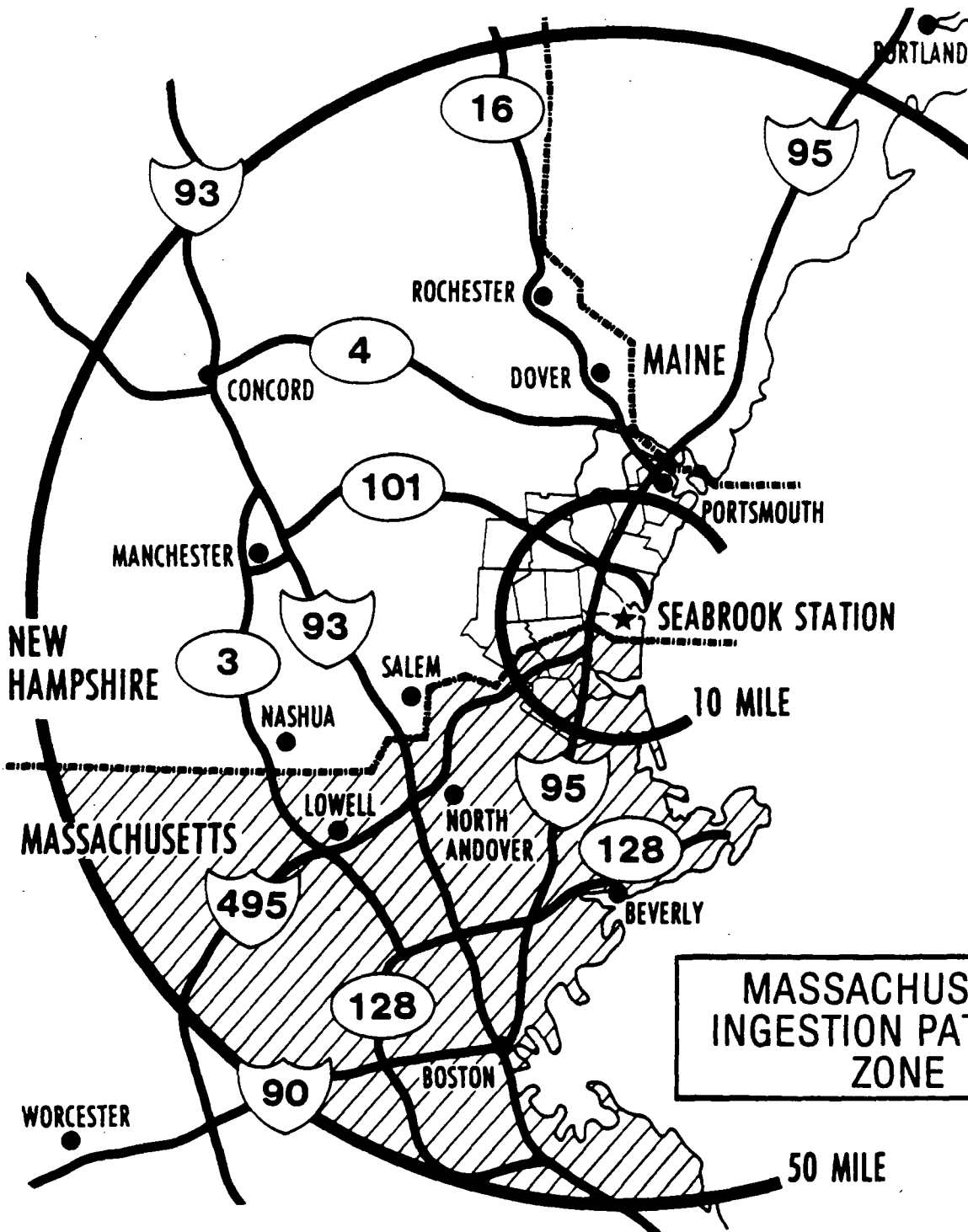
COMMONWEALTH OF MASSACHUSETTS PLANNING AND RESPONSE

- **Utility Developed Plan -- Seabrook Plan
for Massachusetts Communities (SPMC)**

COMMONWEALTH OF MASSACHUSETTS PLANNING AND RESPONSE

- **Utility Developed Plan -- Seabrook Plan
for Massachusetts Communities (SPMC)**
- **Covers 10-Mile EPZ and 50-Mile IPZ**





COMMONWEALTH OF MASSACHUSETTS PLANNING AND RESPONSE

- **Utility Developed Plan -- Seabrook Plan for Massachusetts Communities (SPMC)**
- **Covers 10-Mile EPZ and 50-Mile IPZ**
- **Provides for Full Implementation by Utility**

SEABROOK PLAN FOR MASSACHUSETTS COMMUNITIES IMPLEMENTATION

- Standby Mode

SEABROOK PLAN FOR MASSACHUSETTS COMMUNITIES IMPLEMENTATION

- **Standby Mode**
- **Supply Resources Only Mode**

New Hampshire Yankee ORO EMERGENCY RESPONSE RESOURCES

Qualified ORO Personnel	Required Per SPMC	Actuals
ORO - Contracted Companies	797	1,221
ORO - Excluding Contracted Companies	831	1,117

(as of January 1990)

New Hampshire Yankee ORO EMERGENCY RESPONSE RESOURCES

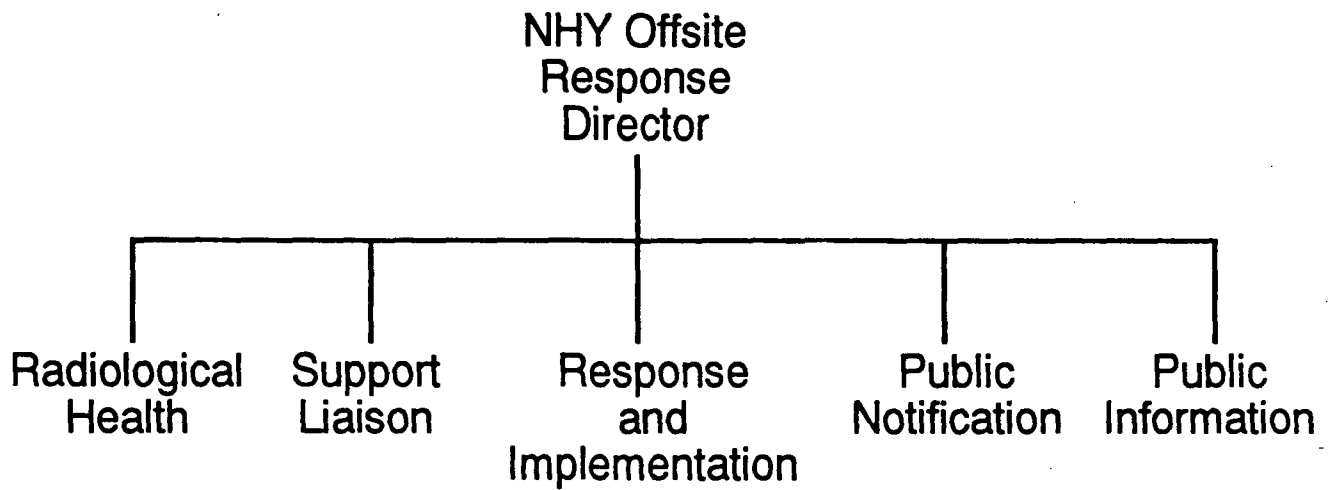
ORO Resources	Required Per SPMC	Actuals
Ambulances	88	93
Buses	403	789
Tow Trucks	12	21
Vans / Wagons / Half Buses	62	273
Wheel Chair Vans	76	112
Congregate Care	684,000 sq. ft	731,000 sq. ft

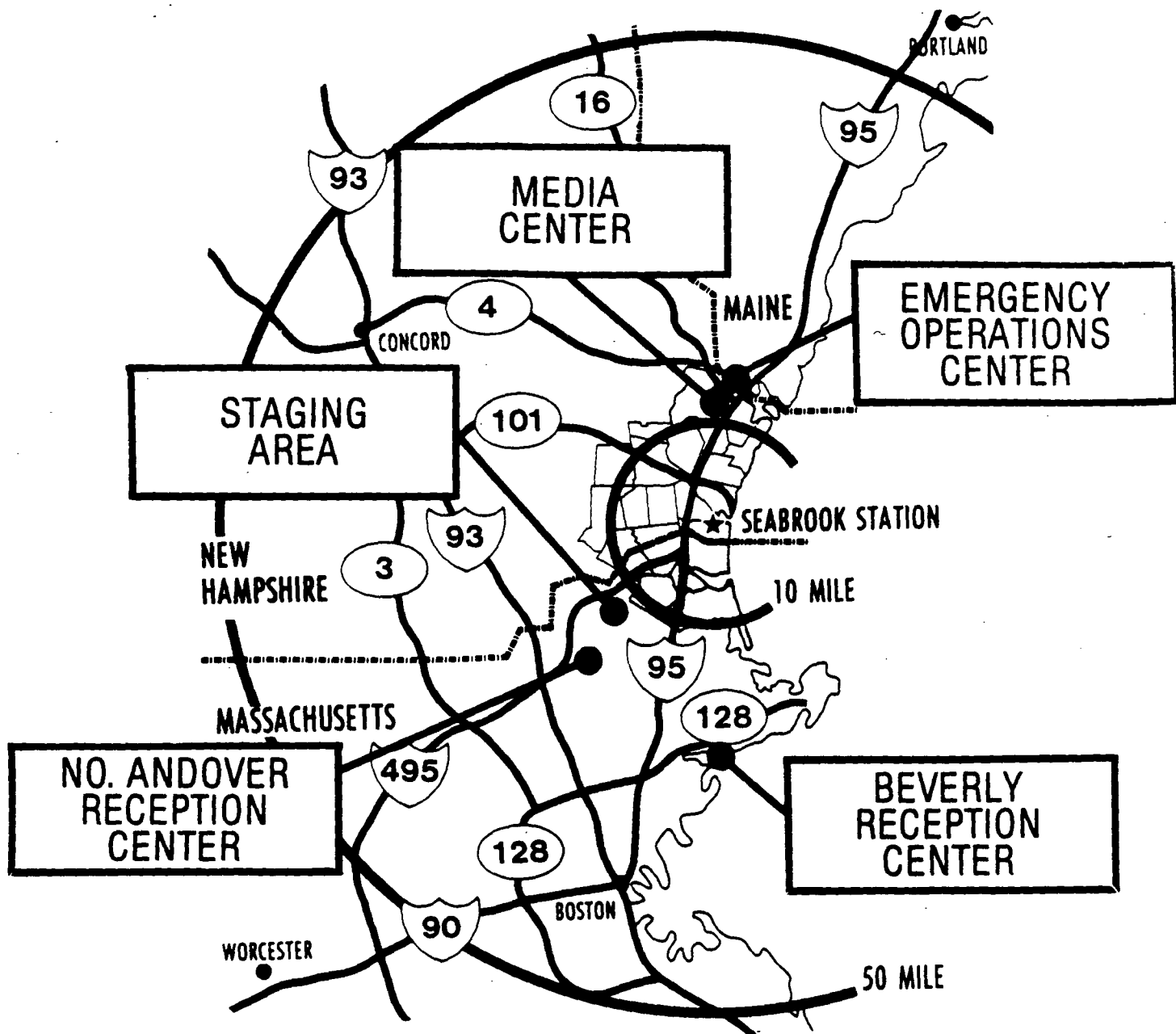
(as of January 1990)

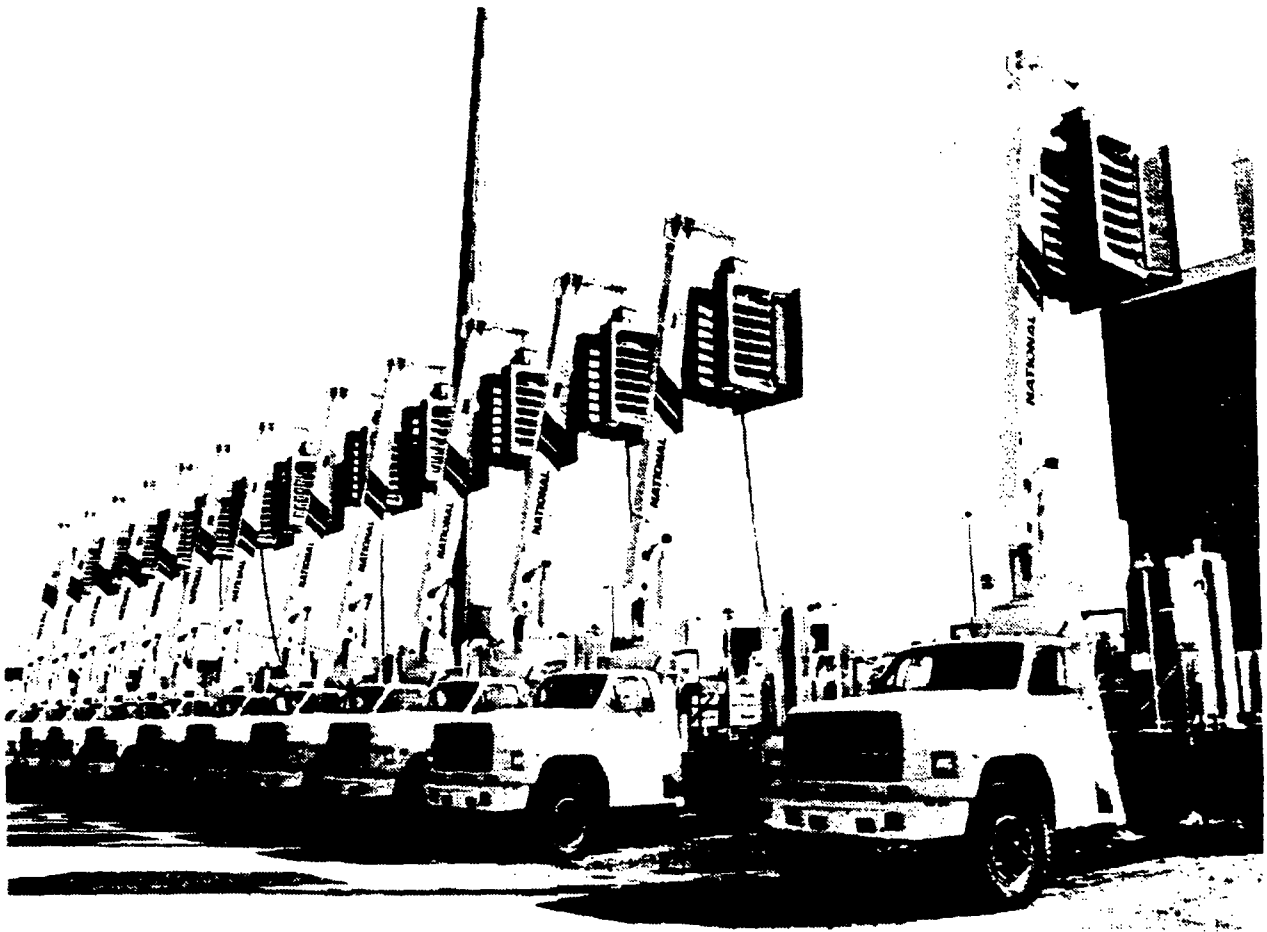
SEABROOK PLAN FOR MASSACHUSETTS COMMUNITIES IMPLEMENTATION

- **Standby Mode**
- **Supply Resources Only Mode**
- **Full Implementation of SPMC by Utility
Offsite Response Organization (ORO)**

OFFSITE RESPONSE ORGANIZATION MAJOR FUNCTIONS





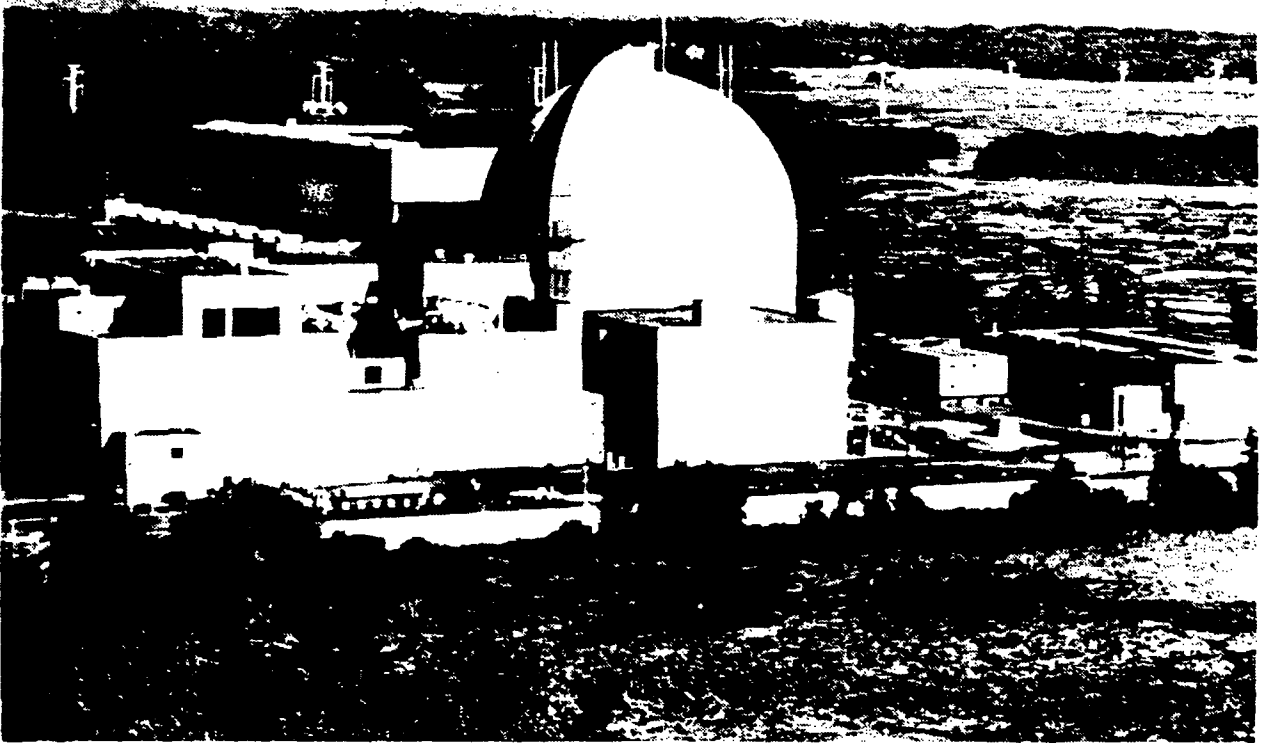


EMERGENCY PREPAREDNESS KEY FEATURES

- NH/Maine Full Cooperation
- NH, Maine and Massachusetts Experienced in Radiological Emergency Response Planning
- SPMC's Flexible Response
- Massachusetts Response Capabilities
- Precautionary Actions for Nearby Beaches

EMERGENCY PREPAREDNESS KEY FEATURES (continued)

- Mutual Assistance Agreements
- Co-Location of Utility, ORO and NH
- FEMA/NRC Review
- Highly Skilled Team



COMMISSION BRIEFING
ON
SEABROOK STATION NUCLEAR POWER PLANT, UNIT 1
FULL POWER LICENSE

JANUARY 18, 1990

THOMAS MURLEY

WILLIAM RUSSELL

VICTOR NERSES

CONTACT: VICTOR NERSES
PHONE: 492-1441

BRIEFING OUTLINE

- ° BACKGROUND
- ° LICENSING MILESTONES
- ° LICENSE CONDITIONS AND EXEMPTIONS
- ° EMERGENCY PLANNING
- ° CONSTRUCTION
- ° PREOPERATIONAL AND LOW POWER TESTING
- ° FAILURE TO MANUALLY SCRAM ON 6/22/89
- ° READINESS FOR POWER OPERATION
- ° STAFF CONCLUSIONS

BACKGROUND

- ° LOCATION

- SEABROOK TOWNSHIP, ROCKINGHAM COUNTY, NH
- 11 MILES SOUTH OF PORTSMOUTH, NH
- 40 MILES NORTH OF BOSTON, MA

- ° PLANT

- WESTINGHOUSE 4 LOOP PWR; 3411 MWT, 1150 MWE
- ARCHITECT ENGINEER: UNITED ENGINEERS
- GENERAL CONTRACTOR: UNITED ENGINEERS
- LARGE, DRY CONTAINMENT

LICENSING MILESTONES

APPLICATION FOR CONSTRUCTION PERMIT	7/73
CONSTRUCTION PERMIT ISSUED	7/76
OPERATING LICENSE APPLICATION DOCKETED	10/81
FUEL LOAD LICENSE ISSUED	10/86
LOW POWER LICENSE ISSUED	5/89
INITIAL CRITICALITY	6/89
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS FULL POWER LETTER	9/89
ATOMIC SAFETY LICENSING BOARD (ASLB) DECISION TO AUTHORIZE FULL POWER LICENSE	11/89

LICENSE CONDITIONS AND EXEMPTIONS

- LICENSE CONDITIONS ON SAFETY PARAMETER DISPLAY SYSTEM IMPOSED BY THE ASLB
- STANDARD CONDITIONS ON
 - PHYSICAL SECURITY AND SAFEGUARDS PLANS
 - FIRE PROTECTION PROGRAM
- EXEMPTIONS
 - 10 CFR PART 50 APPENDIX J AIR LOCK TESTING
 - CRITICALITY MONITORING SYSTEM,
10 CFR 70.24

EMERGENCY PLANNING

- ASLB RENDERED FAVORABLE DECISION ON NEW HAMPSHIRE RADIOLOGICAL EMERGENCY RESPONSE PLAN (NHRERP) IN DECEMBER 1988.
- ATOMIC SAFETY & LICENSING APPEAL PANEL REMANDED CERTAIN ISSUES ON THE NHRERP.
- ASLB RENDERED FAVORABLE DECISION ON SEABROOK PLAN FOR MASSACHUSETTS COMMUNITIES AND THE 6/88 FULL PARTICIPATION GRADED EXERCISE IN NOVEMBER 1989. ASLB AUTHORIZED ISSUANCE OF FULL POWER LICENSE.
- FEMA HAS PROVIDED REASONABLE ASSURANCE FINDING IN DECEMBER 1989.
- STAFF INSPECTION HAS CONFIRMED IMPLEMENTATION OF EMERGENCY PREPAREDNESS PLAN.

CONSTRUCTION

- ° NRC INSPECTION - 30,000 HOURS INCLUDING SEVERAL TEAMS
- ° FSAR REFLECTS AS-BUILT PLANT
- ° NO ALLEGATIONS WHICH PRECLUDE ISSUANCE OF A FULL POWER LICENSE
- ° OPEN ITEMS NEEDED FOR POWER OPERATIONS
 - TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP TEST
 - OTHER MAINTENANCE/TESTING
 - ALL SCHEDULED TO BE COMPLETE BY 1/29/90

PRE-OPERATIONAL & LOW POWER TESTING

- ° TESTING WELL PLANNED AND EXECUTED
- ° OPERATIONS INTEGRATED INTO PRE-OPERATIONAL TESTING
- ° CONSERVATIVE AND CAUTIOUS APPROACH
- ° TEST RESULTS SATISFACTORY
- ° FEW TEST EXCEPTIONS
- ° EXCELLENT OVERALL PERFORMANCE (EXCEPT FOR 6/22/89 EVENT)

FAILURE TO MANUALLY SCRAM ON JUNE 22, 1989

- OVERCOOLING DURING NATURAL CIRCULATION TEST CAUSED PRESSURIZER LEVEL TO DROP BELOW PROCEDURAL LIMIT FOR MANUAL SCRAM
- ACTUAL EVENT WAS NOT SAFETY SIGNIFICANT
- ROOT CAUSE AND COMPREHENSIVE CORRECTIVE PLAN DEVELOPED
- NRC CONFIRMED ADEQUACY OF ALL (55) CORRECTIVE ACTIONS INCLUDING:
 - MANAGEMENT CONTROLS FOR TESTING
 - TESTING/OPERATIONS INTERFACE
 - REASONS FOR TEST LIMITS AND TERMINATION
 - EXTENSIVE LICENSEE RETRAINING

READINESS FOR POWER OPERATION

- ° EXPERIENCED SITE MANAGEMENT
- ° SIX OPERATING SHIFTS FULLY STAFFED
- ° POWER ASCENSION SELF-ASSESSMENT PROGRAM IN PLACE AND IMPLEMENTED
- ° NRC READINESS ASSESSMENTS CONCLUDE LICENSEE CAN OPERATE SEABROOK SAFELY

STAFF CONCLUSIONS

- ° THE PLANT MEETS THE REGULATIONS
- ° THERE IS REASONABLE ASSURANCE THAT THE PLANT CAN AND WILL BE OPERATED WITHOUT ENDANGERING THE HEALTH AND SAFETY OF THE PUBLIC
- ° STAFF RECOMMENDS COMMISSION APPROVAL TO ISSUE FULL POWER LICENSE UPON COMPLETION OF IMMEDIATE EFFECTIVENESS REVIEW

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January 18, 1990

Kenneth M. Carr, Chairman
Thomas M. Roberts
Kenneth C. Rogers
James R. Curtiss
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Seabrook "readiness" review

Dear Commissioners:

On behalf of Intervenors New England Coalition on Nuclear Pollution, Seacoast Anti-Pollution League, and the Massachusetts Attorney General, I am writing to alert you to a number of serious potential defects in the design and construction of the Seabrook nuclear power plant, which we believe must be addressed and resolved before the Commission can conclude that the Seabrook reactor is ready to operate.

These concerns are based on the report recently filed with you by the Employees Legal Project, concerning Quality Technology Company's ("QTC's") "Investigation of Seabrook Station" (hereinafter "QTC Report"). The report, which is based on QTC's review of Seabrook's construction history, NRC oversight activity, and allegations of concerned Seabrook employees, raises a number of potential safety problems at the plant which, if confirmed, would implicate the safety of the reactor. Intervenors believe that the following major findings of the report warrant the Commission's immediate attention:

1) According to QTC, reactor coolant pump support legs are held in place by 113-inch bolts that are embedded in the concrete floor of the reactor. These bolts, which have a required strength of approximately 115 KPSI, cannot be moved easily.

Sometime after its original installation, an RCP support leg was moved horizontally, either two inches or five inches. There is no indication in publicly available records that the RCP support leg has been re-secured to the appropriate specifications, nor is there any apparent means of doing so. QTC Report at 8-9.

NRC Commissioners
January 18, 1990
Page 2

If corroborated, this apparent failure to re-install the RCP support leg in compliance with safety standards raises questions not only about the reliability of the RCPs, but about the overall adequacy of the Applicants' quality assurance program and the NRC Staff's ability to detect serious QA problems through its oversight and inspection program.

2) According to a concerned individual, cadwelders were fired for cheating on required test welds. Although the incident violated several quality assurance requirements and the NRC was aware of this fraudulent activity, it did not issue a violation to the utility. This cheating was discovered by accidents, not through quality inspections. Even so, the NRC did not address, nor did it require the utility to address, the deficiencies which allowed the cheating to occur without detection. The NRC did not require Applicants to identify the root cause of the problem and correct it. QTC Report at 24-35.

3) A quality control inspector was imprisoned for falsifying approximately 2,400 weld inspections. A concerned individual reported that many other weld inspectors falsified their reports because of management deadlines. A second individual documented falsification on a specific weld inspection, and the NRC reported another such instance. Despite this evidence of widespread weld falsification, the NRC maintains that these are unconnected incidents which do not indicate a pattern needing further investigation. Many of the 2,400 welds were never re-inspected. QTC Report, Appendix B.

4) QTC reports a concern from a Seabrook employee who stated that in 1985, he and many others were required to replace "understrength Uni-strut bolts." He stated that the bolts were replaced in a haphazard fashion, and that bolts in difficult-to-reach places were not replaced. No records were kept of the location of replaced bolts. The only record kept was of the number of new bolts that crews received at the beginning of a shift and the number of old bolts they returned at the end of a shift. QTC Report at 63.

If this whistleblower's account is confirmed, it raises serious questions about the structural integrity of the Seabrook reactor and the adequacy of the Applicants' quality assurance program to generally assure plant safety.

5) In general, QTC found that NRC's oversight of quality assurance at Seabrook was inadequate in that it too often failed to cite Applicants for regulatory violations and did not require Applicants to investigate root causes, develop corrective actions

HARMON, CURRAN & TOUSLEY

NRC Commissioners
January 18, 1990
Page 3

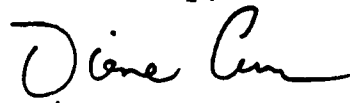
or describe the violations' generic applicability. The Staff showed a general inclination to treat quality assurance problems as isolated events rather than probe their significance for general plant safety.

In addition to the items discussed above, we refer to you a letter from Fred Anderson, Jr., of Ideas & Information, Inc., to William Russell, NRC Regional Administrator, dated January 9, 1990, which contains partial transcriptions of conversations between control room operators and maintenance personnel at Seabrook. A copy of the letter is attached. While Mr. Anderson has been unable to transcribe all of the conversations that he taped, the excerpts provided in his letter suggest a pattern of incompetence by maintenance personnel, equipment malfunctions, and poor attitudes shown by control room personnel.

This pattern is particularly disturbing in light of Applicants' poor performance during the low power test. Given the utility's troubled history and the problems raised by even a limited airing of Mr. Anderson's tapes, it is imperative that the Commission review Mr. Anderson's tapes and assess their safety significance before approving the Seabrook reactor's readiness to operate.

In conclusion, the Intervenors believe that in addition to the specific design and construction problems raised by QTC, the overall adequacy of the Seabrook quality assurance program has been placed in serious doubt. Before approving operation of the reactor, the Commission should investigate this apparent breakdown in quality assurance and obtain assurances that the plant is indeed safe to operate.

Sincerely,


Diane Curran

cc: Seabrook service list



Ideas + Information, Inc.

4 Elm Street, Exeter Business Center, Exeter, N.H. 03833 USA (603) 778-7000

Fax to: 1-215-337-5241 (Copy also sent via Federal Express)

Page 1 of 17

January 9, 1990

William Russell
Regional Administrator
U.S. NUCLEAR REGULATORY COMMISSION
475 Allendale Road
King of Prussia PA 19406

Dear Mr. Russell:

Since January 1, 1989 I have been monitoring and taping broadcasts by the control room operators at Seabrook Station. I understand that the NRC staff will be meeting with NH Yankee personnel this Friday (12th) in Seabrook to review open items prior to a recommendation to the full commission regarding full power licensing for Seabrook Station.

I have recently only had time and resources to review a few of the tapes I have made, but I believe these few samples demonstrate that significant safety concerns still need to be resolved before a full power license is granted. You will remember that the plant was shut down during its low power test. If these problem areas are not corrected, I believe that the plant will have many un-planned shutdowns, which could affect public safety.

The areas for concern involve both plant personnel and hardware. The next page outlines specific concerns about Maintenance personnel competence and Control Room Operator attitude; as well as problems with a variety of valves, leaks, and the control room to maintenance personnel communications system (the one I have monitored). The pages that follow provide my own transcript, made today, of these examples.

I would be willing to provide you with copies of any of these tapes so that you might make your own transcripts. As I noted, I have listened to just a few sections of tape in order raise the many areas of concern noted below. I believe the other tapes might disclose other problem areas.

I look forward to hearing from you regarding this information.

Regards,

Fred Anderson, Jr.
President

Letter from Frederick H. Anderson, Jr.,
IDEAS + INFORMATION INC. 1/9/90

SEABROOK CONTROL ROOM TRANSMISSIONS

AREAS OF CONCERN

Personnel:

Maintenance Personnel Competence

- Drinking prior to work -- 11/30/89
- Leaving light bulb on plastic -- 12/1/89
- Accident rate -- 12/20/89 (Several others in December)
- Water treatment or boiler room that was messy -- 12/29/89

Control Room Operator Attitude

- "Hey, what's the worst that can happen. You have to get naked and come on out" -- 12/6/89
- "You're being paid by the hour" -- 12/29/89
- "Your favorite Nitrogen alarm has just come in again" -- 1/6/90

Hardware:

Valve Problems

- "See if we can get the recirc valve to go closed" -- 12/1/89
- "I've got a bad feeling about these valves" -- 12/6/89
- "Brand new valve installed by DCR" -- 12/28/89
- "Favorite nitrogen alarm has just come in" -- 1/6/90

Leaks

- Fan leaking oil in fuel storage building -- 12/29/89

Communications

- Repeated problems hearing maintenance personnel
- See 1/6/90 for one example

Seabrook Control Room

Maintenance Personnel Competence

November 30, 1989 (Thursday)

10PM

Go ahead

326 and 328 Unlocked and shut both valves

Workman control

Keith. How come we unlocked and closed those two RC valves please?

Restoring a partial. What's the tag order number please?

1976 copy

Joe Mayer control room

Yeah Joe give me a call if you get a minute would you please

Mayer control room

10:15PM

Joe I believe Mr. Fanning is your relief tonight. You know he might be more than a little late

****I just looked on their shift rotation and it shows that Rob is the ah late man tonight. We'll get a spare out to you as soon as we can. He's ah been delayed down by the Golden Banana.****

Walz control

Seabrook Control Room

Maintenance Personnel Competence

Fire Hazards

Recirc Valve Problems

Nitrogen Valve Problems

December 1, 1989 (Friday)

12:45 AM

Go ahead Hugh

Understand Hugh

Control Room. Go ahead Hugh.

Go for it.

Go ahead Hugu.

I like the sound of that Hugh.

Hugh. Rob Fanning was looking for you but I pretty much took care of it.

Control room. Go ahead Hugh

**** You said you had a light bulb explode? ****

Understand. I'll see if I can get him to come out there. You're at the recirc and wet layup pump?

OK Hugh

Go ahead Hugh

Understand Hugh

We have. Everything looks good from up here

Control room. Go ahead Hugh

OK have at it

Tom Thompson Control Room

Hi Tom. I just got a call from Wes Burnham. He was wondering if you could possibly meet him down in the Admin Building cafeteria?

Seabrook Control Room 12/1/89 Page 2

OK thanks Tom

Control room. Go ahead Hugh

Hey Hugh could you go to a phone and give me a call please

Bring something along to write on and with when you go to the phone also

Control room go ahead Hugh

Understand excellent. After you crack it open let it go like that for a couple of minutes.

Tyrell Control Room

Tyrell Control Room

****Steve we found out what the problem was. There was a drop light on some plastic and the plastic was starting to melt. Ah the fire watch has taken care of it.****

Control Room go head Hugh.

Understand I'm going to be very slowly initiating flow to the A generator

Hawkins Control

Yeah Hugh this is ah Skip. I've got to go down the ah vaults so I'll check them out for you and ah check the running RHR pump and stuff to see if everything is OK so you don't have to go down there this set

Dave Carpenko Control Room

Dave

Where you at Dave I'm sorry I didn't hear you

Nevermind

Carpenko Control Room

Skip Morrissey is going to check that valve in the EFW pump house
We'll give you a yell if there was any problems

Taylor Control Room

Mike you doing anything with the Demin water system?

Seabrook Control Room 12/1/89 Page 3

OK the standby pump may have just started. We got a low system pressure alarm in momentarily

OK Hugh I'm up to 55 GPM flow

OK Hugh I'll let you know when I get to 100.

Let me know when the recirc valve goes closed

1:45AM

Hawkins Control Room

How's it looking down there Hugh. I show 105 up here

Understand

****So I'm going to increase flow to see if we can get the recirc valve to go closed****

Control Room. Go ahead Hugh

What were you trying to say about the limit switch Hugh as far as the valve knowing whether or not it should open?

Understand. Rick doesn't think that matters.

The follower connected for the positioner?

Nevermind Hugh that's not that type of valve that would have a follower

OK Hugh I'm continuing to go up on flow. I'm at 130

Hawkins Control Room. What do you show for suction pressure?

And the recirc valve is still open?

OK Hugh I'm at 155 GPM right now. I'm going back down to 100

Understand. Let's go ahead and get Nitrogen on the Generators. You can isolate the two Nitrogen valves to the RCDT and the PRT please

Yes we are. Thank you very much for your persistence Hugh

2AM

OK great

Seabrook Control Room 12/1/89 Page 4

Duty Chemist control room

Hugh Hawkins control room

~~Rob~~ Rob says fuel storage building temperature 72

Understand

Go ahead Hugh

Understand so all four valves are open on the generators?

(SEE DECEMBER 6TH -- 6:15 AM)

Thank you very much

Carpenko control room

Yeah where are you at?

On your way back in head over towards the Nitrogen regulator station and give us a call when you get there

Seabrook Station Control Room

Nitrogen Valve Problems Control Room Operator Attitude

December 6, 1989 (Sunday)

6:15 AM

No. were trying to blow the loop seal to the generator

B is isolated. Copy

"Copy Rick. I've got a bad feeling about these valves"

Copy. Rob. did you copy that?

Yeah Rob. Why don't you open up 42 and leave all four of them open

Yeah you're right Rick

Rob open 42 and we'll see what we've got there and then we'll open the Alpha one

Copy

Yeah. Bravo Charlie and Delta Right. We're going to try that X.

Actually Rick I don't think it'll matter. Do you have it boosted up out there to 35 or 40 pounds?

Going too fast. OK I've got you

Rob go ahead and shut 39 please

OK Rick. Why don't you go ahead and boost it up. NGB 39 is closed and when you get it up to 45 let us know and then Rob try to do your thing.

Copy Rick. You seeing a change in pressure?

You said you got it Rob

6:30 AM

Rob I want to open up ah 39 now so we've got all four of them open. Rick will pressurize all four of them up until ah we get each of them to three or four pounds and then we'll put it back on the regulator

Four open right now Rob. Copy. 39 to 42.

Seabrook Control Room 12/6/89 Page 2

Rick I am definitely seeing a rise in A, B and C. D started out negative so it's a little hard to tell but I think that it's come up

OK as soon as I get a couple of pounds on the lowest one we'll put it on the regulator

And Rick the answer to your question is D is definitely coming up now

I'm at 0.1

Rick I'm looking at a half a pound positive now on the Delta generator if you want to slowly go closed on those bypasses and see if the regulator will take it the rest of the way I think you're in good shape

****Let me know when they're closed and I'll watch it more closely****

Hawkins air dryer A trouble

Rob

The logs are more priority

Hugh the dryer trouble has reset

On the regulator, copy Rick

Yes we are Rick

OK A is dropping down toward the others and it looks like it's going to be fine

No thank you Rob. Good job

****Hey, what's the worst that can happen. You have to get naked and come on out. ****

6:45AM

You're clear for a round trip

Go ahead Rick

Ah not really. Hold on a minute and let me ask Mike

Mike needs a Chalkman fix

Whatever looks good

7AM

Seabrook Control Room**Maintenance Personnel -- Recent High Accident Rate?**

December 20, 1989 (Wednesday)

1:30 PM

Go ahead Rick

Rack in and close the battery breaker for Bus 11 Bravo

Control Bravo

Thank you Rick

Conte control room

Dave Conte control room

Radio check

Sounds good Mike thank you

X with parking lot Delta

(High pitched tone)

Sue Hackney should be on her way

Understand. You are going to need the Seabrook ambulance at the Termination Yard

This is Lavoie in the Control Room. You are going to need the ambulance to go off site right. Is the victim conscious and breathing?

OK Mike I'm calling Seabrook ambulance right now to meet you at the Termination Yard

1:45 PM

Connors control

The Seabrook ambulance has been requested. Security has been informed

Seabrook Control Room 12/20/89 Page 2

Connors control room. When possible could I please have somebody call me with the name of the injured person please?

Seabrook ambulance on the scene. Copy

Tom go ahead this is Lavote. No but I didn't copy his name please.

Jay Smithers copy

Find out if you can from him whether he wants anybody notified such as friend or family

Negative copy

Go ahead Russ

The ambulance has the patient and they are transporting to Exeter Hospital
copy

Go ahead Mike

Yes I do but thanks for the call. I'm going to lower my flow. I'll see you when you get up here Mike.

Yes

Please do so

Thank you Rick

2 PM

Seabrook Control Room

New Valves Sticking?

December 28, 1989 (Thursday)

9:30 PM

Allright. That's supposedly a locked open valve. Is that true?

Allright. It looks like its a brand new valve installed by DCR.
There's a vent downstream of 471 labeled 472. Is that closed?

Go head Chris.

Copy. Go head and open valve 471

Chris O'Connor Control. I'm going to go ahead and reopen the vent and we should flow at this time

9:45 PM

Chris O'Connor control

We definetly look like we're moving water now so ah we're happy. Thanks

Seabrook Control Room

Fire Hazards

December 29, 1989 (Friday)

2:30 AM

Gould control room

We just got a report from the roving fire watch. 21 Elevation in the fuel storage building just when you go inside the door. Apparently there's a fan there that's leaking some oil. Would you get me some information on that please?

Gorsky control

Jeff would you give me a phone call please?

2:45 AM

Seabrook Control Room**Control Room Operator Attitude****December 29, 1989 (Friday)****1PM**

He's still playing with it

Ah Shawn do you have problems with the boiler? Is that why you're asking?

No there's every reason. You're being paid by the hour

Control room. Go ahead Keith. OK. Thank you much

1:15 PM

Seabrook Control Room

Lack of Cleanliness

December 29, 1989 (Friday)

3:15 PM

Kennet control

Is that the water treatment or the boiler room that was so messy?

Understand. Thank you

3:30PM

Seabrook Control Room

Communications Problems
Control Room Operator Attitude
Nitrogen Problem

January 6, 1990

12:45 AM

Morrill Control

You got it. Thanks

1 AM

One more time Mark. I didn't get that

76

Morrill control room

Morrill control room

1:15 AM

1:30 AM

Go ahead Chris

Please repeat

That's 6-0?

6-8?

Copy finally

O'Connor control room

Yeah Chris could you please give me a phone call?

1:45 AM

2 AM

Thompson control room

Thompson control room

Seabrook Control Room 1/6/90 Page 2

Mark, could you give me a phone call please?

2:15 AM

Thompson control room go ahead. And security wants me to call them back for you to come back in

Go ahead
Go ahead Mark

(Swings) will do that for us

2:30 AM

2:45 AM

Morrill Control room

Morrill Control room

****Yeah Mike your favorite nitrogen alarm has just come in again****

Thank you

3 AM

Go ahead Mike

Yes Mike the alarm has reset

3:15 AM

Full open Nitrogen is reset

Yeah I'm going to do the B feedwater isolation valve

Copy

X and Nitrogen

Full open Ken but I still got my Nitrogen in

I'll do the A one again

Copy

3:30 AM


17 Grist Mill Road
Littleton, Ma 01460
January 17, 1990

Bill Hill
Secretariat

Dear Mr. Hill:

As per our phone conversation, I am requesting that the two attached letters be added to the transcript of the NRC hearing on January 18th and be included in the records. Thank you.

Sincerely,

A handwritten signature in cursive script, reading "Christine A. Oatis".

Christine A. Oatis, Clerk
Amesbury Religious Society of Friends

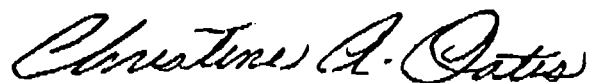
January 18, 1990

Nuclear Regulatory Commission

Dear Members of the Commission:

As Quakers we are very concerned about the safety of people who live near the Seabrook nuclear power plant. This plant is located in a densely-populated coastal area with predicted seismic activity and inadequate evacuation routes. We are also distressed by reports of safety violations, dismissal of our attempts to meet with top officials, and their subsequent failure to put safety as top priority during the tests last summer. Congress has legislated 1991 as the target date for locating a safe repository for nuclear waste and a site has not been located. This plant should not be licensed.

Sincerely,

A handwritten signature in cursive script, reading "Christine A. Oatis".

Christine A. Oatis, Clerk
Amesbury Religious Society of Friends

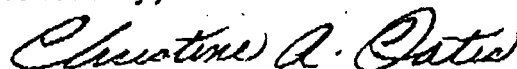
17 Grist Mill Road
Littleton, MA 01460
(508) 486-4137

Mr. Samuel Chilk, Secretary
Nuclear Regulatory Commission

Dear Mr. Chilk:

This letter is to request three minutes of time at the hearing on Seabrook, thursday, January eighteenth, to read a letter. As Clerk of the Meeting, I represent a Quaker group, The Amesbury Religious Society of Friends, which is located in the Seabrook area. We have been very concerned about the serious safety issues and location of the Seabrook nuclear power plant in a crowded coastal area. We tried to meet with Seabrook officials last summer to reflect with them on the gravity of these concerns; and were dismayed that there seemed to be an attitude of dismissal in their efforts to get the plant "on line" - no matter what the cost. We feel that, in this all-out approach, many lives are being put at risk. Please allow me one minute of silence so that I might read my letter in the remaining two minutes out of the silence-to express our deep concern which this deliberation deserves.

Sincerely,



Christine A. Oatis, Clerk

Amesbury Religious Society of Friends