

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket No.: 50-443

License No.: NPF-67

Licensee: Public Service Company of New Hampshire

Facility: Seabrook, Unit 1

Location: Durham, N. H. (University of New Hampshire)

Date: September 6, 1989

Approved by: *E. C. McCabe, Jr.*
E. C. McCabe, Chief, Reactor Projects Section 3B

10/4/89
Date

Meeting Summary: A public meeting between the NRC staff and New Hampshire Yankee (NHY) management was held on September 6, 1989 to discuss the findings and conclusions of the NRC Region I Augmented Inspection Team (AIT) Inspection No. 50-443/89-82. Following this meeting, elected officials and interested members of the public were offered an opportunity to provide comments to the NRC staff on the results of the AIT inspection and the adequacy of licensee corrective actions.

Report Attachments

1. Meeting Agenda Prepared by New Hampshire Yankee
2. Slides Presented by New Hampshire Yankee at the Meeting
3. Meeting Transcript
4. Errata Sheet for Transcript

DETAILS

1.0 Participants

Nuclear Regulatory Commission

T. Martin, Deputy Regional Administrator, Region I (RI)
J. Johnson, Chief, Project Branch 3, Division of Reactor Projects, RI
P. Eselgroth, Chief, PWR Section, Division of Reactor Safety, RI
A. Cerne, Senior Resident Inspector, RI
N. Dudley, Project Engineer, RI
V. Nerses, Licensing Project Manager, Office of Nuclear Reactor Regulation
E. Reis, Deputy Assistant General Counsel, Office of General Counsel

New Hampshire Yankee

E. Brown, President and Chief Executive Officer
T. Feigenbaum, Senior Vice President and Chief Operating Officer
B. Drawbridge, Executive Director, Nuclear Production
J. Grillo, Operations Manager

2.0 Discussion

The NRC opened the meeting with a brief discussion of the purpose and agenda of this public meeting. The failure to trip the reactor on June 22, 1989 during the conduct of the natural circulation test and the failure to promptly review and resolve any personnel performance implications associated with the failure to trip are NRC concerns. As documented in the AIT inspection report, copies of which were made available to the public during this meeting, these issues and related items are considered potential violations of NRC requirements. The licensee was asked to comment on the inspection report, the issues identified, and the corrective actions in progress and proposed.

Copies of the Meeting Agenda (Attachment 1) published by the licensee were also made available to the public during this meeting. The NHY presentation included use of slides (Attachment 2) which addressed the corporate principles, an organizational realignment, and the specific issues in question as a result of the June 22 event. A portion of a video tape, made for operator training purposes, of activities in the control room during the natural circulation test was also shown and narrated to explain the sequence of events. In general, the licensee's presentation, in addition to the videotape showing, addressed three broad areas for discussion, as follows:

- an overview of the event and the corporate response to it in regard to policy and organization

- the events leading up to and immediately preceding the reactor trip, and a discussion of the NHY response to and assessment of the licensee performance during the natural circulation test, and
- a summary of the licensee's corrective action plan.

The NRC staff raised questions regarding not only the specific issues identified by the licensee as areas requiring attention, but also the overall direction of the licensee's corrective action program. In order to clarify the licensee's understanding of root cause identification, the basis for the subject reactor trip criteria was explored, as were the reasons for the personnel errors and supervisory oversight failures. Additionally, procedural changes, the post trip review process, the adequacy of training and of the root cause analysis for the identified problems were all questioned by the NRC staff and responded to by NHY participants at the meeting.

The licensee's presentation concluded with closing remarks by the NHY President and Chief Executive Officer.

3.0 Public Comments

The NRC staff received comments from elected officials and interested members of the public during the second half of the public meeting. The NRC staff provided responses to specific questions, where appropriate, and solicited specific information from the public regarding the licensee's performance during, and corrective action in response to, the events surrounding the natural circulation test on June 22, 1989. Attachment 3 to this report is a transcription of the meeting including specific public comments.

After all members of the public who had expressed a desire to provide comments to the NRC staff had spoken, the Region I Deputy Regional Administrator solicited any further comments from persons in the audience. None were forthcoming and the meeting was adjourned.

MEETING AGENDA

NEW HAMPSHIRE YANKEE (NHY) AND NUCLEAR REGULATORY COMMISSION (NRC) STAFF

TIME/DATE: 7PM, SEPTEMBER 6, 1989

PLACE: GREAT BAY ROOM
NEW ENGLAND CENTER
DURHAM, NEW HAMPSHIRE

SUBJECT: DISCUSSION OF FINDINGS AND CONCLUSION OF NRC REGION I AUGMENTED
INSPECTION TEAM (AIT) INSPECTION (50-443/89-80) OF THE NATURAL
CIRCULATION TEST AT SEABROOK STATION, UNIT NO. 1

- I. NRC OPENING REMARKS

- II. NHY PRESENTATION

- III. PUBLIC COMMENTS TO NRC

Seabrook Station Organization Chart

**President & CEO
NHY**

Edward A. Brown

**Senior Vice President
Chief Operating Officer**

Ted C. Feigenbaum

**Director of
Quality Programs**

Neal A. Pillsbury

**Exec. Dir.
Emer. Prep.
& Comm. Rel.**

George R. Gram

**Exec. Dir.
Nuclear Production**

Bruce L. Drawbridge

**Exec. Dir.
Eng. & Licensing**

Jeb DeLoach

**New Hampshire
Yankee**

New Hampshire Yankee Statement of Corporate Principles

- **Commitment to Safety**
- **Respect for Nuclear Technology**
- **Pursuit of Excellence**
- **Integrity and Ethical Behavior**
- **Teamwork**
- **Checks and Balances**
- **Respect for the Individual**
- **Accountability**
- **Open Communications**
- **Cost Effectiveness**

Respect for Nuclear Technology

We understand and respect that there are risks inherent in all technologies used to generate electricity, including nuclear technology. Our every action is taken with full regard for the health and safety of our fellow employees and the general public. We operate Seabrook Station in a safe, reliable, environmentally sound and cost-effective manner.

- **We accept responsibility for nuclear and industrial safety and minimizing radiation by demonstrating a commitment to safety in all our actions.**
- **We review, comprehend and comply with licensing and governmental requirements.**
- **We identify issues of safety and quality, and we initiate appropriate action to assure corrective action.**

Checks and Balances

- Each of us recognizes that we collectively achieve excellence by seeking improvement in our own performance.
- We fully recognize the importance of internal and external reviews of NHY's activities and provide candid, honest responses to all questions.
- We participate in self-assessments by providing factual information.
- We provide timely and complete responses to identified deficiencies and take appropriate corrective actions.
- We investigate problems in depth to ensure that the solution adequately identifies and corrects the cause.

Communication

Open, frank communications in plain English are absolutely necessary to help us meet our goals. This applies to all communications throughout New Hampshire Yankee -- up, down and sideways throughout the organization.

- We communicate goals and objectives clearly and concisely throughout the organization, and provide feedback regularly on how we are doing.
- We foster open discussions on problems so as to determine root causes and find solutions.
- We contribute to the systematic collection of data for the trending of key performance indicators which provides feedback throughout the organization to help improve performance and achieve excellence.
- We provide timely information and encourage communications that will fully brief management to enable proactive response to the needs of the organization.

Overview

- Introduction
- Categorization of Issues
- Discussion of Issues, Root Causes and Corrective Actions
- Discussion of Safety Significance

Introduction

Our review of the June 22nd event commitment to correct the issues raised by the event characterization of issues

Issues

- Procedural Compliance
- Equipment Readiness
- Pretest Preparation
- Startup Program
- Post-Event Management
- Management Involvement

ISSUE

Procedural Compliance

Failure of operators to trip reactor at startup test procedure trip setpoint

ROOT CAUSE

Misunderstanding by operations personnel. They did not understand that the Startup Test Criteria must be followed like other operating procedures.

Procedural Compliance Corrective Actions

- **Strengthened procedural adherence policy and revised manuals and procedures**
- **Discussed revised policy with shift crews**
- **Disseminated revised policy to all NHY personnel**
- **Implemented core values and work ethic policy**
- **HPES program will be implemented**
- **Operations will be reorganized to provide procedure review support**
- **License operator training program to include simulator training to challenge operators on procedural adherence**

ISSUE

Equipment Readiness

The startup test prerequisite confirming availability of SDVs was signed off despite an open work request requiring a stroke test

ROOT CAUSE

The startup test program did not require that open work requests be identified or evaluated as a prerequisite to the test

Equipment Readiness Corrective Actions

- Evaluate and rework all (12) SDVs
- Dynamically test all SDVs
- Increase routine maintenance frequency for SDVs
- Evaluate valves similar to SDVs
- Require verification of plant material condition prior to testing using a multi-discipline team
- Revise the startup test program to ensure relevant open work requests are closed out prior to testing

ISSUE

Pre-Test Preparation

- Pre-test briefing was fragmented, abbreviated and insufficient in detail
- A lack of recent classroom and simulator training

ROOT CAUSE

- Lack of coordination to conduct a briefing prior to the test crew going on shift
- Not required by procedure

Pre-Test Preparation Corrective Actions

- **Require comprehensive pretest briefing for test crew prior to shift**
- **Require simulator training for test crews performing complex tests**
- **Require test specific training within three months of power ascension tests**

ISSUE

Startup Program

No interruptions or termination actions initiated by startup organization when 17% trip setpoint reached. No counsel given by startup to operations that a trip was required.

ROOT CAUSE

Personnel error on the part of the startup personnel in that they did not aggressively implement their responsibilities to terminate the test or recommend a reactor trip.

Startup Program Corrective Actions

- **Integrate startup test procedures into station operating procedures**
- **Give operations department sense of ownership and responsibility for correctly implementing startup test procedures**
- **Utilize startup personnel in a technical support capacity**
- **Provide explicit instructions to startup crew on test interruption and termination criteria**

ISSUE

Post Event Management

Initial management thrust was to resolve equipment problems necessary to resume testing.

ROOT CAUSE

The Vice President Nuclear Production did not recognize the seriousness of the procedure non-compliance. He suggested restarting the reactor prior to complete resolution of the issues.

Post Event Management Corrective Actions

- **Relieved Vice President Nuclear Production of his duties at Seabrook Station**
- **Require human performance issues to be evaluated as part of post-trip review prior to restart**
- **For power ascension testing or any special test require completion of event evaluation report prior to considering restart**

ISSUE

Operations Management

Management in control room with authority to terminate test and order a reactor shutdown did not do so

ROOT CAUSE

The Operations Manager and the Assistance Operations Manager were not knowledgeable of the 17% pressurizer trip criterion, and therefore were not prepared to order a reactor trip

Operations Corrective Actions

- **Issued letters of reprimand**
- **Management encouraged to be in control room for normal operations and special evolutions, and expected to be cognizant of safety and operational limits**
- **Production workshops and courses to reinforce a conservative operating philosophy that is questioning, self correcting and always trying to improve**
- **Revised operations management manual to clarify authority and responsibility of operations management personnel in the control room**

Safety Significance

The Test Procedure

Safety Significance of Specific Issues

Management Concerns