NRC

Material For June 16, 2004 Assessment Mtg w/PSEG

C-197

5. Unacceptable Performance Column. Licensee performance is unacceptable and continued plant operation is not permitted within this column. In general, it is expected that entry into the multiple/repetitive degraded cornerstone column of the Action Matrix and completion of supplemental inspection procedure 95003 will precede consideration of whether a plant is in the Unacceptable Performance Column. The Commission will meet with senior licensee management in a regulatory performance meeting to discuss the licensee's degraded performance and the corrective actions which will need to be taken before operation of the facility can be resumed. The NRC oversight of plant performance will also be placed under the guidance of IMC 0350. Unacceptable performance represents situations in which the NRC lacks reasonable assurance that the licensee can or will conduct its activities without undue safety to public health and safety. Examples of unacceptable performance may include:

   (a) Multiple significant violations of the facility's license, technical specifications, regulations, or orders.

   (b) Loss of confidence in the licensee's ability to maintain and operate the facility in accordance with the design basis (e.g., multiple safety significant examples where the facility was determined to be outside of its design basis, either due to inappropriate modifications, the unavailability of design basis information, inadequate configuration management, or the demonstrated lack of an effective problem identification and resolution program).

   (c) A pattern of failure of licensee management controls to effectively address previous significant concerns to prevent the recurrence.

   Note: If the agency determines that a licensee's performance is unacceptable then a shutdown order will be issued.

6. IMC 0350 Process Column. The criteria for entrance into the IMC 0350 process, as discussed in section 06.06.g of this manual chapter, has been met. Subsequent management review of licensee performance has determined that entrance into the Unacceptable Performance Column is not warranted at this time. Additionally, NRC management will review licensee performance on a quarterly basis to determine if entrance into the Unacceptable Performance Column is warranted. The licensee is expected to place the identified deficiencies into their performance improvement plan and perform an evaluation of the root and contributing causes for both the individual and collective causes.

   As discussed in IMC 0350, the regional offices will conduct baseline and supplemental inspections as appropriate, as well as special inspections per the restart checklist. Performance indicator data should continue to be gathered in accordance with IMC 0608, "Performance Indicator Program" to the extent that it is applicable to shutdown conditions.

   Plants under the IMC 0350 process are considered to be outside of the normal assessment process and under the auspices of IMC 0350. However, this column has been added to the Action Matrix for illustrative purposes to demonstrate comparable agency response and communications and is not necessarily representative of the worst level of licensee performance. Plants under the IMC 0350 process should be discussed at the mid-cycle and end-of-cycle reviews to integrate inspection planning efforts across the regional office and to keep internal stakeholders abreast on ongoing inspection and oversight activities. Mid-cycle or annual assessment letters are generally not issued for these plants. Annual public meetings will not be conducted for these plants as the regional office conducts periodic public meetings to discuss licensee performance.

Exhibit 5 - ACTION MATRIX

		Licensee Response Column	Regulatory Response Column	Degraded Cornerstone Column	Multiple/ Repetitive Degraded Cornerstone Column	Unacceptable Performance Column
RESULTS		All Assessment Inputs (Performance Indicators (PIs) and Inspection Findings) Green; Cornerstone Objectives Fully Met	One or Two White Inputs (in different cornerstones) in a Strategic Performance Area; Cornerstone Objectives Fully Met	One Degraded Cornerstone (2 White Inputs or 1 Yellow Input) or any 3 White Inputs in a Strategic Performance Area; Cornerstone Objectives Met with Moderate Degradation in Safety Performance	Repetitive Degraded Cornerstone, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or 1 Red Input; Cornerstone Objectives Met with Longstanding Issues or Significant Degradation in Safety Performance	Overall Unacceptable Performance; Plants Not Permitted to Operate Within this Band; Unacceptable Margin to Safety
RESPONSE	Regulatory Performance Meeting	None	Branch Chief (BC) or Division Director (DD) Meet with Licensee	DD or Regional Administrator (RA) Meet with Licensee	RA (or EDO) Meet with Senior Licensee Management	Commission meeting with Senior Licensee Management
	Licensee Action	Licensee Corrective Action	Licensee root cause evaluation and corrective action with NRC Oversight	Licensee cumulative root cause evaluation with NRC Oversight	Licensee cumulative root cause evaluation with consideration of a Performance Improvement Plan with NRC Oversight	
	NRC Inspection	Risk-Informed Baseline Inspection Program	Baseline and supplemental inspection procedure 95001	Baseline and supplemental inspection procedure 95002	Baseline and supplemental inspection procedure 95003	
	Regulatory Actions	None	Supplemental inspection only	Supplemental inspection only	-10 CFR 2.204 DFI -10 CFR 50.54(f) Letter - CAL /Order	Order to Modify, Suspend or Revoke Licensed Activities
COMMUNICATION	Assessment Letters	BC or DD review/sign assessment report (w/ inspection plan)	DD review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)	
	Annual Public Meeting	SRI or BC Meet with Licensee	BC or DD Meet with Licensee	RA (or DD) Discuss Performance with Licensee	RA or EDO Discuss Performance with Senior Licensee Management	
	Commission Involvement	None	None	None	Plant discussed at AARM	Commission Meeting with Senior Licensee Management
	INCREASING SAFETY SIGNIFICANCE ------>					

Note 1: The regulatory actions for plants in the Multiple/Repetitive Degraded Cornerstone column are not mandatory agency actions. However, the regional office should consider each of these regulatory actions when significant new information regarding licensee performance becomes available.

Notes for Randy.

NRC & PSEG Meeting
Salem and Hope Creek

June 16, 2004

Nuclear Regulatory Commission - Region I
King of Prussia, PA

Agenda

- NRC Presentation
- PSEG Presentation
- NRC/PSEG Discussion
- NRC/PSEG Meeting Conclusion
- NRC Accepts Questions/Comments from Public

(1) Introduce SH
- brief intro remarks
- Overview agenda
- Handle intros

(2) Mtg between NRC & PSEG

Purpose: Two-fold
(1) Annual assessment of SH
(2) PSEG assessment of work environment that have been completed in response to a request by NRC

NRC: The meeting topics are closely related... inseperable... NRC believes that the organization effectiveness issues involving corrective action processes and work management effectiveness, as highlighted by key drivers of equipment reliability challenges in our assessments are key drivers at not only equipment reliability issues but also work environment challenges at the site.

(3) (sl. 2 & 2) Public are observers.

- After meeting with PSEG... short break... NRC reconvene to hear remarks from public & officials.

(4) Expecting a long meeting.

Key point is NRC oversight of PSEG efforts to assess and improve their org. effectiveness and work environment at Salem/H.C. We've recently received extensive information about the PSEG assessments, we expect to hear PSEG's action plan tonight. Lots of business to conduct with PSEG. The NRC staff will stay as needed to also hear from public & public officials.

(5) Agenda is shown on this slide and is modified on the next two.

Observers
- audibility
- handouts, introductory materials
- feedback forms
- sign up for comments

5/15/2004 6pm

1. Talking Points for Meeting Commencement - Dan Holody

- Welcome,
- Emergency Exit
- Category 1 public meeting - meeting conducted, then public time
- Discuss all the available documents;
  - Sign up sheet for all attendees
  - sign up sheet for people who wish to reserve speaking time - "we will assess allowed floor time based on the number of people who sign up...room is available thru midnight."
  - sign up sheet for people who wish to receive future notifications of meetings
  - Copies of the meeting notice with document access information
  - Copies of the slides
  - Copies of the Annual Assessment letters for Salem and Hope Creek
- Introduce yourself, others - Hub, Randy, Jim Clifford, Mel Gray, George Malone, Lisa Jarriel, Jay Persensky....etc
- Invite PSEG to introduce themselves
- Invite audience members like state officials to introduce themselves.

2. Talking Points for Q&A Session Commencement

- Outline ground rules:
  - one questioner at a time
  - stand up and speak up (microphone locations)
  - "if there are any questions we cannot answer for you, we can get back to you"
- State how many people have signed up.. .approx how much time they will each have

3. At Conclusion:

- Thanks
- Ask for feedback forms and attendance sheet, etc.

Agenda – NRC Presentation

- 2003 Annual Assessment of Salem and Hope Creek Performance
  - ➢Review of Reactor Oversight Process (ROP)
  - ➢National Summary of Plant Performance
  - ➢Salem & Hope Creek Performance Results
- Assessment of the Work Environment at Salem and Hope Creek, including organizational effectiveness of the Corrective Action Program and Work Management Process

Ltrs of March 3

Ongoing Special Review mentioned in our Ltr of Jan 28 and meeting in this room in mid-March

Agenda – PSEG Presentation

- Response to Annual Assessment
- Discussion of Work Environment Reviews/Assessments and Organizational Effectiveness
- Action Plan to Address Work Environment/ Organizational Effectiveness Issues and Ensure Plan Effectiveness

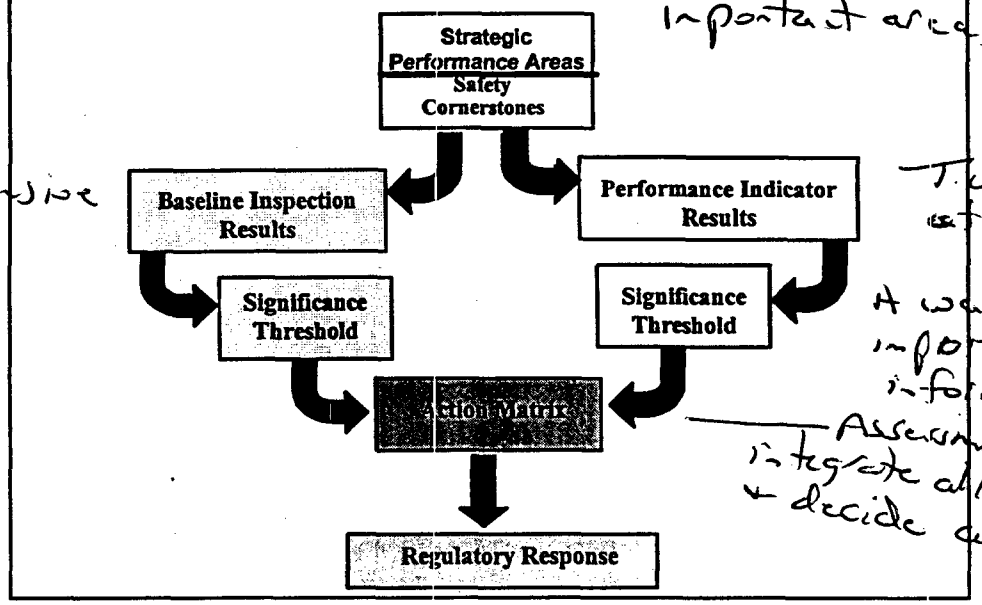
Assessment promised in the March 18 and submitted on May 21

Action plan for addressing the issues and monitoring their own progress

Self intros of participants
optional self intros of observers
st[redacted]/ Dan – Anthony else?

Depicts a conceptual views

Reactor Oversight Process



important areas

Extensive

Two key types of input data

A way of determining importance of the information

Assessment process to integrate all the results & decide action

Action Matrix

A plant's assessment results

S1/S2/1R

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance

Since our past several years

SID?

Tech Specs / Licensee

Overall unacceptable performance judgement call

"Issues and significance"

- Increased Safety Significance
- Increased NRC Inspection Efforts
- Increased NRC/Licensee Management Involvement
- Increased Regulatory Actions

Significance of Findings and Performance Indicators

- **Significance** involves determining potential or actual safety consequences

- **Green** – *very low safety significance*
- **White** – *low to moderate safety significance*
- **Yellow** – *substantial safety significance*
- **Red** – *high safety significance*

1 I mentioned our significance thresholds

National Summary for ROP in 2003

(2)

- Performance indicator results (at end of CY 2003)
  - **Green** 1825 normal range; end of 2003 S1, S2, HC all Green
  - **White** 15
  - **Yellow** 0 historically there have been an occasional white PI's at Salem
  - **Red** 0

(3)

- Total inspection findings (at the end of CY 2003)
  - **Green** 748 — not normal range: probably very low safety
  - **White** 19
  - **Yellow** 2
  - **Red** 4

Unlike PIs,

low to moderate significance end of 2003 S1 - EDG; recently, in 2004 one white issue at HC involving service water system

Dan: List sites that were yellow + red + issue if known.

S/HC high end of Green finding, # no official significance but more ... common themes ... scattering at Sal/HC

(1) Davis-Besse: Failure to effectively implement corrective action for degradation of containment coatings + fibrous material

(2) ? Dropped off @ end of 1Q04

(1) Point Beach 1: Potential common mode failure of aux feed pumps

(2) Point Beach 2: " " " " " " "

(3) Point Beach 2: Failure to establish appropriate design control for installation of AFW recirc orifices

(4) Davis-Besse: Failure to properly implement QA control and CAP

National Summary of Plant Performance Status at End of ROP Cycle 4

Status at End of CY 2003

Licensee Response	75
Regulatory Response	22
Degraded Cornerstone	2
Multiple/Repetitive Degraded Cornerstone	3
Unacceptable	0
Total	102*

*Davis-Besse is in IMC 0350 process

NRC Oversight of Salem & Hope Creek

(January 1 - December 31, 2003)

- Significant NRC inspection effort
- Significant NRC inspector oversight
- Significant NRC management oversight and attention

Inspection Program at Salem 1 & 2

(January 1 - December 31, 2003)

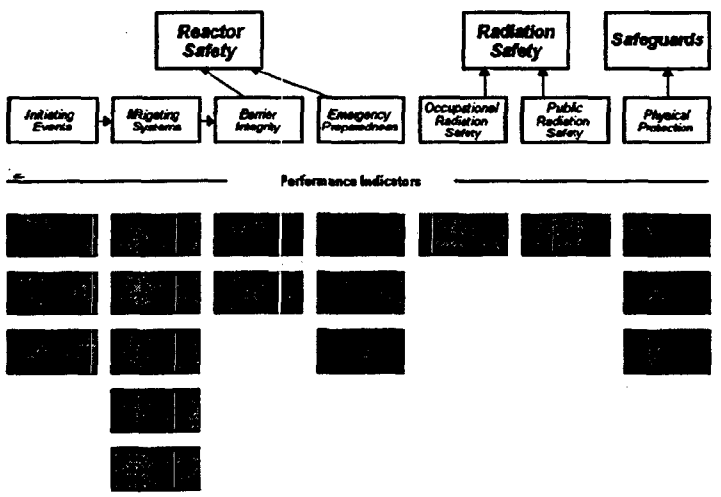
- 3250 Hours of Direct Inspection, plus 4730 hours of additional inspection-related effort
  - ➢2 Resident Inspectors
  - ➢11 Regional Specialist Inspections
  - ➢5 Team Inspections
    - ➢ 2 Special Inspections
    - ➢1 Supplemental Inspection
- 25 Green Findings and 1 White

High End

① SFP Insp (Nimitz) - 1 Gr.
② 500kV Electrical transient (School) - 3 Greens.

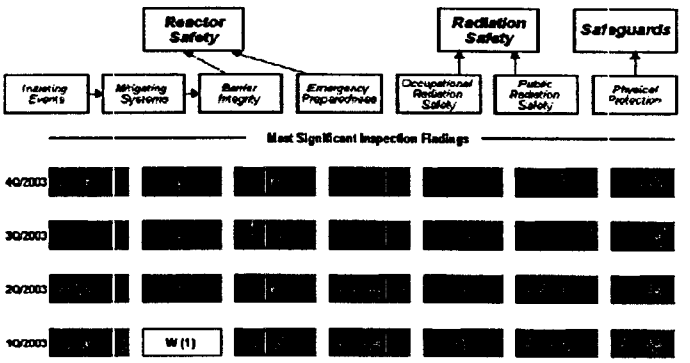
Salem 1 Performance Indicators

Http://WWW.NRC.GOV then click Nuclear Reactors/Reactor Oversight Process



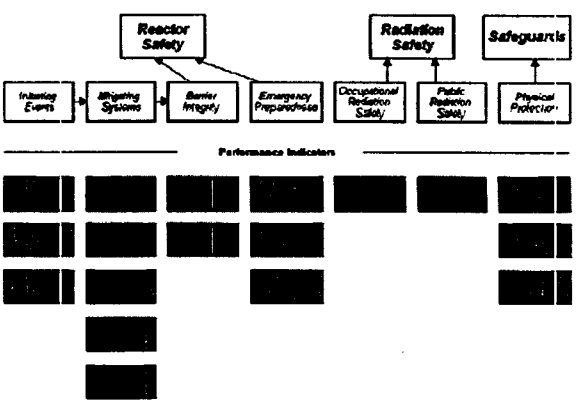
Salem 1 - Inspection Results

Http:\\WWW.NRC.GOV then click Nuclear Reactors/Reactor Oversight Process



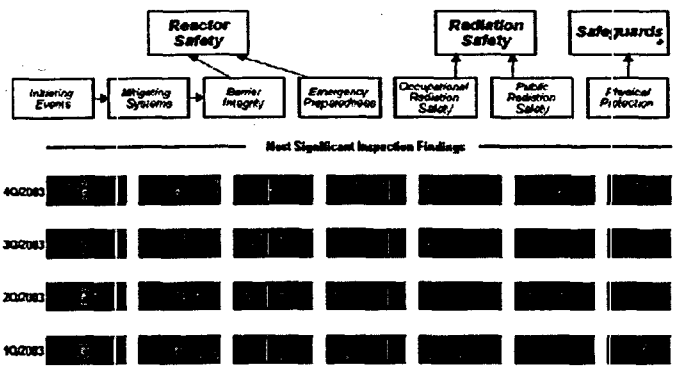
Salem 2 Performance Indicators

Http://WWW.NRC.GOV then click Nuclear Reactors/Reactor Oversight Process



Salem 2 - Inspection Results

Http:\\WWW.NRC.GOV then click Nuclear Reactors/Reactor Oversight Process



On October 15, 2003 during the 2R13 refueling outage, the Salem Unit 2 containment spray and residual heat removal systems experienced water-hammer during performance of a containment spray surveillance test. The water-hammer was attributed to an air pocket in the RHR system that was identified months previously. Failure to implement corrective actions in a timely manner resulted in this event. There were also elements of human performance weaknesses associated with work management and operations that could have prevented the event.

NRC Assessment of Salem 1 & 2

(January 1 - December 31, 2003)

- Preserved Public Health and Safety
- At completion of 2003:
  - ➢Salem 1 – Regulatory Response Column
  - ➢Salem 2 – Licensee Response Column
- Baseline inspection in 2003
- 1 supplemental at Unit 1 (EDG turbocharger failure in September 2002 that resulted in a white finding during 2003)
- Substantive Cross-Cutting Issue –Problem Identification and Resolution

The 2A EDG was rendered inoperable due to a loss of starting air. An air leak was identified on the 21B air compressor on September 2, 2003 and entered into the corrective action program. On November 8, 2003, the 21A starting air compressor was removed from service for maintenance. Independently, 21B was not capable of maintaining starting air pressure above the minimum required for operability. Failure to evaluate and implement corrective actions in a timely manner resulted in the loss of the 2A EDG.

Now, Mal Gray will cover the Hope Creek assessment.

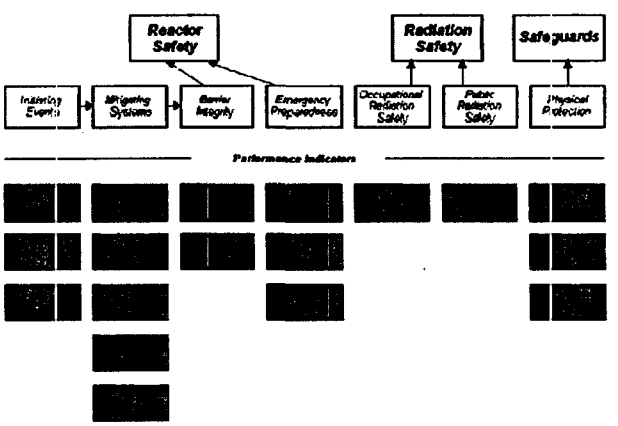
Inspection Program at Hope Creek

(January 1 - December 31, 2003)

- 2410 Hours of Direct Inspection, plus 3310 hours of additional inspection-related work ← About Average
  - ➢2 Resident Inspectors
  - ➢12 Regional Specialist Inspections
  - ➢2 Team Inspections
- 19 Green Findings

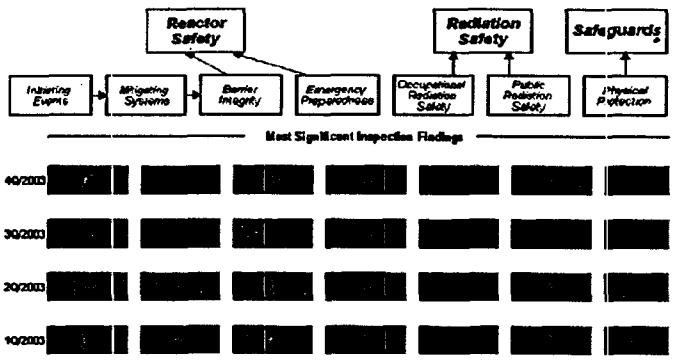
Hope Creek Performance Indicators

Http://WWW.NRC.GOV then click Nuclear Reactors/Reactor Oversight Process



Hope Creek - Inspection Results

Http:\\WWW.NRC.GOV then click Nuclear Reactors/Reactor Oversight Process



Hope Creek - Assessment

(January 1 - December 31, 2003)

- Preserved Public Health and Safety
- At Completion of 2003:
  Hope Creek – Licensee Response Column
- Baseline Inspection in 2003
- May 10, 2004 White Issue Shifted HC to Regulatory Response Column
- Substantive Cross-Cutting Issue –Problem Identification and Resolution

See egs

In June 2003 an intercooler pump leak on the A emergency diesel generator EDG required the initiation of a plant shutdown after troubleshooting efforts were ineffective. NRC identified that design information previously provided by the vendor four months prior was available that would have helped identify the cause of the EDG intercooler pump seal leak. However the information had not been incorporated into procedur

In October 2003 operators manually tripped the Hop Creek plant after alarms indicated there was an electro-hydraulic control (EHC) leak that could aff turbine valve control. Fo up plant walkdowns reve the leak was from the #4 combined intercept valv hydraulic actuator. The cause investigation into problem identified that leak from CIV#4 had previously been identif was not repaired in a manner and EHC oil was not adequately t address this problem the plant trip.

(Back to me)

Overall Performance Assessment Using Reactor Oversight Process 2003

- Performance Indicators and Inspection Results indicate Salem and HC have preserved adequate safety margin
- Substantive cross-cutting issue continues to exist in area of Problem Identification & Resolution

Prior NRC Assessment Letters

Identified substantive cross-cutting issue:

- Problem Identification & Resolution
  - ➢Untimely and ineffective
  - ➢Longstanding problems uncorrected
  - ➢Poor implementation of maintenance
  - ➢Insufficient coordination & work control
  - ➢Equipment reliability weaknesses
  - ➢Deficient engineering evaluation of root causes

Initiation of NRC's Special Review

Based on: *a number of factors we initiated last fall, an ~~special~~ interim special review at Salem/HC.*

- NRC August 27, 2003 Mid-Cycle Assessment Letter
- NRC Inspection Findings
  - Baseline and Supplemental
- Allegations

I won't go into a lot of detail here

NRC Request for PSEG Assessment

because we issued interim result *discuss @ a meeting in March, but as a result of what we're seeing in our review*

Jan. 28, 2004 NRC letter to PSEG:

- Based on ongoing NRC special review
- Expressed concerns about work environment
  - Raising concerns
  - ~~Addressing concerns~~
- Request that PSEG conduct in-depth *detailed* assessment
- Prior surveys may form a part of PSEG assessment

This slide synopsizes information from our Jan 28 letter

NRC Request for PSEG Assessment

NRC concerns related to work environment for:

- Handling emergent issues and associated operational decision-making
- Addressing potential safety issues

These concerns included:

- Openness of management to concerns and alternate views
- Strength of communication
- Effectiveness of corrective actions and feedback processes

Concerns did not involve any serious safety violations (e.g. no Yellow or Red findings)

PSEG has now ~~completed~~ submitted their assessment on the docket.

NRC Request for PSEG Assessment

- NRC letter to PSEG 1/28/04
  - ➢ Described potential work environment concerns and requested assessment
- PSEG letter to NRC 2/27/04
  - ➢ Provided interim assessment plans
- Public meeting 3/18/04
  - ➢ Discussed assessment plans
- PSEG letter to NRC 5/21/04
  - ➢ Described assessment results
- NRC Public Meeting 6/16/04
  - ➢ Discuss assessment results and action plan

These assessments confirm needed improvement in a number of areas. We will hear their action plan tonight.

After this meeting
NRC plans

NRC Next Steps

- Finalize NRC Special Review — nearly finalized
- Complete Evaluation of PSEG Assessments
- Compare NRC & PSEG Results and address any key differences we see
- Receive/Evaluate PSEG Plans — a letter outlining PSEG's key points for tonight
- Decide Additional Regulatory Actions and Follow-up
  - Monitor Progress & Results

I said earlier we're at a key point

NRC Representatives

- H. Miller, Regional Administrator, Region I
- A. Randolph Blough, Director, Division of Reactor Projects
- D. Holody, Acting Branch Chief
  - ➢(610) 337-5312
- E. Cobey, Incoming Branch Chief
  - ➢(610) 337-5171
- D. Collins, Project Manager, NRR
- D. Orr, Senior Resident Inspector, Salem
- G. Malone, Resident Inspector, Salem
- M. Gray, Senior Resident Inspector, Hope Creek
- M. Ferdas, Resident Inspector, Hope Creek
- N. Sheehan, Public Affairs Officer
  - ➢(610) 337-5331
- L. Jarriel, Agency Allegation Advisor
- J. Clifford, Section Chief, Nuclear Reactor Regulation

For those who picked up the NRC slide package / key points / additional info.

Reference Sources

- Reactor Oversight Process
  http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html

- Public Electronic Reading Room
  http://www.nrc.gov/reading-rm/adams.html

- Public Document Room
  1-800-397-4209 (Toll Free)