



State of New Jersey

Department of Environmental Protection

Christine Todd Whitman  
Governor

Robert C. Shinn, Jr.  
Commissioner

January 26, 1996

Larry Nicholson  
Chair, Salem Restart Panel  
Nuclear Regulatory Commission  
Region 1  
King of Prussia, Pa 19406

Dear Larry:

As you know, key members of the Salem Restart Assessment Team visited our office on January 19, 1996 so that we could share preliminary results of our review of PSE&G's Restart Plan for Salem Units 1 and 2 and provide input to your restart checklist. The meeting provided a valuable forum for exchange of information and in some cases resolved some of our questions and concerns regarding your efforts to assure these units operate safely.

Since the meeting we have finalized our list of open questions and comments concerning PSE&G's Restart Plan. These are delineated in the attachment. Our questions and comments concerning your restart plan and check list items are being finalized and will be provided soon. We expect to continue with you and PSE&G during the restart process.

We appreciate the opportunity to provide this input. We can make personnel available to assist in planning, scoping or participating in inspections in a more active role if the need warrants. Please call me at 984-7701 to discuss our comments or for follow up activities.

Sincerely,

Kent Tosch  
Manager, Bureau of Nuclear Engineering

- c: J. Stolz, Co-Chair, NRC
- J. Benjamin, PSE&G
- G. Nicholls, NJDEP
- J. Lipoti, NJRPP
- D. Zannoni, NJBNE

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## ATTACHMENT

### General Comments and Questions

1. There is a lack of measurable expected results. Where is the ability to measure the progress toward a milestone? PSE&G indicated that a clear picture will be provided, Pg. 7. What are the key performance indicators and goals that will be established.
2. How will the NRC determine if the plants are ready for restart? It is not apparent what NRC's measurement of restart is. The closest example providing objective basis for restart is outlined in Attachment 3, "System Readiness Review Program."
3. Concerning the department readiness assessment, it is not clear if this includes any departments outside of operations. It should if it doesn't. The significant changes in supporting departments dictate that a similar assessment be made.
4. On page 17 of Attachment 2, section 5.3b, ' To Implement System walkdowns and system problem database to capture past, current and future problems,' is an important function amid many other sections and it seems to be essential for improvement. How far into the past will it go? The plan states that it will be completed before restart. How will this be monitored? Can the State be part of the monitoring strategy?
5. Since weaknesses in handling industry experience have been identified, it is not clear in Appendix A how emerging issues during the shutdown are being addressed. How do these issues end up in the right hands - the professional who understands plant impact and can obtain the required results through effective corrective action? With the current changes occurring at the plant both individually and organizationally, there exist too many chances for this information not being considered.

6. In page 4 of 7 of Attachment 3, Section 4.0 states that other parallel and complementary activities are being conducted to assure effective corrective actions for recurring equipment problems now and in the future. What is the interrelationship between system fixes? Could the many fixes on-going in the plant result in unknown impacts on the interconnected systems? What is being done to ensure this does not occur?
7. There is to be a written affirmation of system readiness required from the System Manager and the Licensing Senior Reactor Operator assigned to each system. How will "inter system" problems be checked? What will NRC be checking to verify that inter system analysis is performed adequately? How is the overall system performance and readiness measured by the licensee and the NRC?
8. Appendix A, level 2 screening cites the UFSAR as a design basis document. Is this UFSAR used as input in the design change process? Are UFSAR changes independently verified? Should the UFSAR be characterized as a licensing basis document? If the UFSAR is a design basis document, are the drawings in the UFSAR controlled and verified in a similar manner to other engineering drawings?
9. Appendix A, level 2 screening, number 8 is clearly too restrictive. It states that PSE&G will eliminate conditions that may create a discharge of effluent in excess of limits. These are clearly modifications that are legally required to be done. A more appropriate criteria would be those that substantially reduce releases.
10. On page 6 of 7 in Appendix A, it is mentioned that over 500 design change packages will be implemented. When finished, will the licensee have an overall review of the design basis for the plant? How can the licensee be sure that the 500 design changes will have an improved affect on plant operations? What is in place by the NRC to verify that the 500 design changes do not have a "significant safety impact" when inter connected prior to power ascension?

11. On page 8 of 30, there is a statement that senior management will review the performance indicators and compare them to expectations for an indication of readiness to restart. What are the NBU's expectations? What are the NRC's expectation? How does an expectation of one parameter (e.g. drawing revisions) relate to another parameter (e.g. communications feedback) and how do either one relate to restart?
12. Page 10 of 30 discusses an independent team of experienced personnel from outside PSE&G who will supplement the NBU team performing an independent readiness assessment. Who are these people? What issues are they concentrating on? What is their checklist? How are they looking at integrated actions?
13. What is the licensee's assurance as well as the NRC's verification of that assurance that a system is fixed with an adequate margin of safety and that the system stays fixed?
14. Regarding the establishment of hold points during startup, it is not clear which of these are required points for testing during a normal startup process and which are added by PSE&G for this startup. If the startup is begun and then a shutdown is needed, will these same hold points be used even if they were successfully passed the previous time?
15. An extended review will be conducted at 30% - 40% power. What will be the basis for a go or no-go decision at this point? Is it judgement? This could be at a summer peak demand time so a predefined criteria will be in everyone's best interest.
16. One action is to redesign the control room. Was this an action item from a previous human factors review? What problem is being solved by this redesign? Are emergency preparedness considerations being applied to this redesign?
17. Establishing voice-mail for operators. Does this mean that there is a possibility that calls to the control room will be answered by voice-mail?

18. At the public restart meeting PES&G cited the numbers of new personnel to be licensed as SRO'S and STA's. It appears that a complete turnover of personnel may be underway. Is this the intent? Is it realistic to expect so many new operators to function effectively in time for the restart? What about RO's? No mention of turnover at this level was mentioned? Does the problem that is being solved not apply to this level of personnel?
19. Is there an established, organized, useable Licensing Basis for either Salem or Hope Creek? The action related to this is merely a review of recent commitments. A more appropriate action would be to pull together the licensing basis into a format that can be used.

#### Maintenance

20. A new program of minor maintenance is mentioned in the restart plan. A thorough review of the scope and implementation of a new program such as this is warranted.
21. On page 7 of 30 in Appendix 1, Section 2.4, NBU discusses its plan for performance improvement monitoring. The use of indicators to monitor the effectiveness of the restart actions and to determine if organizational performance levels have improved sufficiently to restart the plant. Some of these indicators are listed as "Corrective and Preventive" maintenance work orders, operator work around, action tracking system backlog and engineering backlogs. Where is the numerical guidance for how big a backlog can be and still provide an adequate margin of safety for plant operation? What backlog is acceptable? How is safety priority determined? What is the acceptable number of "work around" prior to restart? How will the NRC prioritize and communicate their priority to the NBU?

22. On page 24, there is a statement to evaluate existing operator workarounds to determine required maintenance actions. Ensure a method is in place to regularly assess the maintenance implications of operator workarounds. Is the NRC reviewing this in the restart?

### Training

23. The problems with the licensed operator training program have not been made public, but they have been alluded to in the restart plan. In order to evaluate the actions and expected results, the problems with training need to be made public. What actions has the NRC taken as a result of these training problems? It seems like INPO may have taken action too late, when earlier identification of problems may have preempted many of the current operator performance issues.
24. Under the action statements for accredited training, one item is to upgrade qualification instruments to industry standards. What instruments are these?
25. The consolidation of identification methods and lowering of thresholds are positive steps.
26. How will the NRC judge that the plant is ready to restart and the people are ready to work when their procedures have been significantly revised? How will the licensee assure and the NRC verify that changed procedures which interrelate (e.g. EOPs to ECGs) do not create a safety significant condition?
27. Under training, (page 51) is there any emergency preparedness training? If not, why not?

28. On page 23 of Attachment 2 there is a problem statement that maintenance management has not been effective in oversight of non-station personnel performing maintenance on plant equipment. There are many actions listed including " Review contractual terms and conditions and develop improvement in work methods to optimize flexibility and productivity...etc. Aren't there better alternatives such as sign off on payment for contractual services?

### Engineering

29. Under Problem Statement 3, PSE&G states that several engineering programs and procedures do not meet regulatory requirements. Have these deficiencies been identified to the NRC? Are these documented in the corrective action system and have these been reported to the NRC?
30. Is the NRC satisfied with their Engineering inspections of PSE&G? These problems appear to have existed without being discovered by the NRC inspection process. It is the inspections that significantly contribute to the engineering rating in the SALP.
31. How is the NBU addressing the shortcomings of engineering staff which are self-identified by PSE&G?

### Cultural Performance Measures

32. What are the mechanisms the licensee and NRC will use as an indication of positive culture changes now and into the future.

33. In Section 3.7 the third statement states "The team qualifications will ensure that issues are examined thoroughly..." How do team qualifications ensure that issues are examined thoroughly? Will the team do walkdowns? Will they conduct interviews? Will there questions be thorough? What is their plan?
34. In Attachment 1 Page 18 of 30, there are 12 common causes identified. PSE&G is confident that sufficient evaluation has been performed to isolate these twelve common causes. Additionally, PSE&G says that significant improvement in these twelve areas will resolve the people and process performance issues identified. Finally, PSE&G says that they may combine issues for implementation purposes without sacrificing the quality of results and that they will consider combining issues if appropriate. From these statements a set of questions must be asked. Is the NRC confident with 12 common causes? Does the NRC agree that through significant improvement of the 12 common causes that people and process performance will improve? Who will determine what is appropriate? How will the licensee and NRC measure significant improvement? How can the licensee and NRC measure that higher standards for equipment performance and maintenance are built into the operations culture? How do you measure the existing culture? How do you measure improvement in the culture? At the same time PSE&G is downsizing, how do they ensure that all personnel have sufficient time to carry out core responsibilities? Are all safety related duties core responsibilities? Is "communication" a core responsibility? How do you measure "communication"? What possible measure is there to show significant improvement in "conservative decision making and safety perspective must be enhanced"?
35. Page 21 of 30, in section 2.2, one of the action statements is to identify and communicate Salem's Vision, Mission, Goals, Department Roles and Responsibilities and align goals to hold station personnel accountable for results. Is this a top down approach to management? With the past and current operational culture will a top down management approach work? Are their bottom up initiative? How are they factored in? How do they build in positive incentives?



36. In section 2.3, expected results there are two conflicting statements. PSE&G wants a "strong stable Salem Management" yet PSE&G "encourages turnover of employees and new hires." What is the correct balance of new ideas and institutional memory? If PSE&G is relying on the new hires to change the culture of the plant, are the old employees so afraid of losing their jobs that they don't identify with constructive changes.
37. On page 23 of 30, in the section on work control process improvement, some emphasis is place on "interface areas". What are they? Are they people?
38. On page 26 of 30, there is a measurable goal, "reduce the frequency of missed or extended due dates." Can NBU establish how many missed or extended due dates that were in the past to show progress? Is it starting now? A bullet within the measurable goals section is to "Trend the corrective action program to support NBU needs." A trend can be monitored and a conclusion can be drawn on how that trend is proceeding. No predetermined conclusions should be introduced before the data is collected. The statement "support NBU needs" is vague. Which needs? Safety needs? Economic needs?
39. Appendix D and E list systems and other restart considerations. Nowhere is the emergency preparedness program listed. It needs improvement now. How will it be measured?