

From: G.L. PLUMLEE III <plumleg@songs.sce.com>
To: WCD1.WCP1(dfk,dga,wpa),ARD1.ARP1(cav),ud1.internet...
Date: 9/26/96 12:30pm
Subject: Exit minutes: Engineering/Fire Protection self-assessment

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Engineering/Fire Protection Self-Assessment
Exit Meeting Minutes

The Engineering/Fire Protection Self-Assessment team held an Exit on Friday, September 20, 1996, to present the results of their two week self-assessment. Dave Pilmer, the self-assessment team leader, presented the self-assessment results.

I. ENGINEERING GENERAL SUMMARY

Mr. Pilmer stated the self-assessment team's overall conclusion of Engineering Programs was that SONGS engineering is meeting program requirements. He noted that for the areas reviewed, the material condition of the plant is well maintained by Engineering, and plant equipment receives adequate engineering attention. Mr. Pilmer stated that he would present the teams general conclusions of strengths and weaknesses, and then present the specific findings identified in each area reviewed. He noted that the findings were based on the limited sample review, and interviews conducted by the team. He noted the team was not in a position to draw conclusions pertaining to the root cause of the findings. Mr. Pilmer stated that the results of the teams self-assessment will be documented in a final report and submitted to the NRC.

A. Strengths:

Mr. Pilmer noted the following areas were found by the team to be strengths:

- 1) Strong engineering departments - Staff is knowledgeable, experienced, and exhibit strong analytical capabilities.
- 2) Engineering is responsive to plant safety/operability issues.
- 3) NEDO generates fundamentally sound designs that work well.
- 4) Engineering computer tools and trending are comprehensive.

B. Weaknesses:

Mr. Pilmer noted the following areas were found by the team to be weaknesses:

- 1) Lack of Management attention on low priority engineering tasks.
- 2) Incomplete task coordination between engineering groups - support from one engineering group for another is incomplete.
- 3) Lack of attention to detail; Engineering needs to challenge existing design criteria.
- 4) Interface weakness in integrating vendor equipment with field equipment.

II. SIGNIFICANT FINDINGS IN ENGINEERING AREAS REVIEWED

A. Vertical Slice

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Mr. Pilmer stated the team conducted a "Vertical Slice" of the chilled water system and identified the following findings:

- 1) Some ECW/HVAC I & C circuits are not powered in accordance with UFSAR requirements for shared systems. The DBD review did not pick up the power source for the Aux building CWS.
- 2) Chilled water set point calculations are inconsistent and don't clearly reflect the systems design; contain an unnecessary system trip, and low flow setpoint doesn't adequately consider total loop uncertainty (TLU). Mr. St. Onge agreed that the low flow setpoint did not consider TLU, but stated the trip was recommended by the vendor to protect the equipment. He commented that he did not agree that the calculations were inconsistent.
- 3) ECWS DBD OIR actions deferred for an excessive period of time (5 years). Mr. Pilmer stated this was an example of the low priority of engineering tasks.
- 4) Incomplete engineering evaluation supporting an NCR conclusion that ECWS instrumentation is qualified to perform at elevated temperatures. Mr. St. Onge stated he believed that the NEDO engineers properly considered the qualifications of all the instrumentation, and he considered the NCR evaluation adequate. Mr. Nunn asked that NOD review the AR disposition and evaluate whether the NCR conclusion that the instrumentation was qualified was based on an adequate evaluation.

B. General Engineering Capabilities

- 1) Configuration control on IDCNs was inadequate; not properly converted to as-built documentation after turnover.
- 2) Mechanical heat load calculation for Control Room complex incorporated interim design inputs, not an as-built source. Engineering should have validated the source.
- 3) Ammonia setpoint in calculations was not updated into loop drawings. Mr. Ken Johnson noted that loop drawings do not normally contain setpoint information.

C. Design Change Review

- 1) 50.59 evaluation for DG crosstie does not clearly support conclusions by failing to address operation issues associated with use of design. There was extensive discussion by engineering management and the self-assessment team on this issue. NEDO believes the 50.59 adequately addresses the impact of the equipment to be installed in the plant. Mr. Pilmer stated the DG crosstie DCP is a unique case. He noted that based on the design falling into a gray area (i.e., a design change that requires a 10 CFR 50.54x declaration to activate and this has never been done before), NEDO should have considered this to be a potential unreviewed safety question, and sent it to the NRC for approval.
- 2) For TGIS set point calculations, Engineering input to Licensing (Ammonia limits) was not incorporated properly into TSIP. Issue originally identified by NOD. Mr. Rainsberry noted Licensing recognizes the discrepancy in the TS, and is working to identify the source of the TS number.

- 3) The number of CPRs generated against the TGIS DCP indicates an incomplete vendor interface. Mr. Johnson noted that NEDO generated the TGIS DCP before receiving the vendor equipment, which required some engineering backfitting.

D. Engineering/Operations/Maintenance support

- 1) Workload management - The AR process is generating more AR's than current resources are equipped to handle. Mr. Pilmer noted he discussed the AR backlog with the Engineering managers and they noted Engineering recognizes the trend of escalated generation of ARs. Mr. Pilmer noted the managers are considering new initiatives to address this concern. The Station is considering putting in better screening criteria upfront in the AR process, and in the back end, prior to AR closure.
- 2) A significant portion of low priority NEDOTrak items typically take more than 3 months past requested due date to complete. Mr. Wharton stated he didn't believe the time a NEDOTrak item was past due was a true indication of NEDO's workload management. Mr. Nunn stated that engineering should either determine that the issues are not worth addressing and close them out, or they should work the items in a timely manner. He noted he has had previous discussions with engineering on management of engineering work backlog.

E. Independent Review & Operational Experience

Actions assigned as a result of ISEG recommendations from Industry Experience Evaluations (IEE) are not scheduled and implemented in a timely manner. It was noted there were five examples of actions assigned without forecast dates or are past due. Mr. Ransey Clark indicated that NOD recognizes that ISEG should be tracking the IEE actions and will take steps to ensure they are properly tracked to completion.

F. System Engineering

Incomplete understanding of Maintenance Rule impact on Station Technical function (incomplete training). Mr. Breig agreed with the teams assessment in this area.

G. Station Management

No Significant Findings

H. Engineering Conclusions

Mr. Pilmer stated that the self-assessment is not yet complete. He stated that the team has requested Mr. Chong Chui to perform an independent assessment of system engineering staffing.

Mr. Nunn stated he believed the self-assessment team did a good job in reviewing the engineering processes and identified potential areas of engineering weaknesses. He noted although Engineering management does not agree with all the details of the teams findings, they should consider the issues raised. Mr. Nunn asked Compliance to evaluate the overall self-assessment process, as compared to an NRC inspection, and provide him with some feedback as to the benefits/drawbacks of the self-assessment process.

Mr. Wharton stated that although engineering has raised some questions

regarding some of the teams findings, he wanted to communicate that he believes the team did a good job overall in performing the self-assessment. He didn't want engineering's specific comments to detract from his positive opinion of the overall assessment.

III. FIRE PROTECTION SELF-ASSESSMENT SUMMARY

A. Assessment Summary

Mr. Pilmer stated that overall, the SONGS Fire Protection Program was found to be effective in its ability to prevent, detect and respond to a fire emergency. He noted that personnel associated with the Fire Protection Program demonstrated strong ownership in their program and good working relationships between departments.

B. Strengths

Mr. Pilmer noted the following items were found by the team to be strengths:

- 1) Awareness / Ownership demonstrated by personnel associated with the Fire Protection Program.
- 2) Positive trend of the material condition of the fire protection systems.
- 3) Fire Department readiness and response.
- 4) Industrial Safety practices of all personnel noted during this assessment.

C. Potential Weaknesses

Mr. Pilmer noted the following areas were found by the team to be weaknesses:

- 1) Flammable Material cabinets - Material condition and storage practices fail to meet procedural requirements.
- 2) Fire Extinguishers in the field were found not meeting procedural acceptance criteria subsequent to surveillances indicating otherwise. Mr. Nunn asked if the surveillance discrepancies represented personnel not physically performing the inspections, i.e., "radioing logs." Mr. Van Powers, a FP self-assessment team member, replied that this was a possibility, but the forms used to document the surveillances were not clear. It was not always clear on the forms when deficiencies were identified. Mr. Powers noted that the cause needs to be investigated further.

CC: ud1.internet3("NUC.GIBSONGT_at SMTP@ccgateout.song...

Mail Envelope Info: (324AB159.8A1 : 10 : 14497)
Subject: Exit minutes: Engineering/Fire Protection self-assessment
Creation Date: 9/26/96 12:30pm
From: G.L. PLUMLEE III <plumleg@songs.sce.com>
Created By: ud1.internet3:"plumleg@songs.sce.com"

Recipients

Post Office WCD1.WCP1
dfk (Dennis Kirsch)
dga (Dyle Acker)
wpa (William Ang)

Post Office ARD1.ARP1
cav (Chris Vandenburg)

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"NUC.NRC_at_AWS4@ccg"
"NUC.GIBSONGT_at_SMT"

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Date: Thu, 26 Sep 96 09:30:04 PST
From: "G.L. PLUMLEE III" <plumleg@songs.sce.com>
Message-Id: <9608268437.AA843755812@ccgateout.songs.sce.com>
To: DFK@nrc.gov, dga@nrc.gov,
NUC.NRC_at_AWS4@ccgateout.songs.sce.com,
CAV@nrc.gov, wpa@nrc.gov
Cc: NUC.GIBSONGT_at_SMTP@ccgateout.songs.sce.com
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