



Chairman Nils J. Sizemore

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Tom Gurdziel

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CHAIRMAN REC'D

From: Tom Gurdziel [tgurdzie@dreamscape.com]  
Sent: Friday, November 28, 2003 4:00 PM  
To: opa@nrc.gov; opa3@nrc.gov; Christine Lipa  
Cc: Richard W. Lamoreaux; Rep. Marcy Kaptur; Jim Mackinnon; J. Mangels; J. Funk; Ed Stronski; David Lochbaum  
Subject: FENOC Integrated Report to Support Restart of the Davis-Besse Nuclear Power Station

Good morning,

page 29 "Longer term, Davis-Besse plans to replace the current RPV head with a new head that uses a material that has less susceptibility to PWSCC." Is there a purchase order issued?

page 34 "holding for approximately seven days, and visually inspecting the bare metal IMI nozzle penetrations following this test with a crawler video camera using procedure EN-DP-01500, "Reactor Vessel Inspection Procedure." I thought that the inspection was to be done DURING the time the reactor was at approximately normal operating pressure, not afterwards. And, wasn't a video camera used to inspect the upper reactor head without success? I don't think this was a safety conscious way to look for leaks. Why wasn't the entire bottom of the reactor vessel examined? After all, it was the upper head itself that was the unexpected location of the main problem.

page 34 "Furthermore, the refueling canal leakage occurrence at Davis-Besse in early 2003.." Was this described in either an Event Report or an Inspection Report? Also, weren't changes made so that leakage would not occur?

page 34 "There were no "popcorn" deposits of boric acid at the IMI nozzles in the spring of 2003 (which would be expected if the nozzles were leaking)." Were there "popcorn" deposits on the upper reactor head where the nozzle was leaking?

page 35 "There was no indication of leakage from the IMI nozzles following the normal operating pressure test at Mode 3." With the inspection made after the pressure was removed, wouldn't you think a safety conscious organization would have done the "lithium" test?

page 35 "in conclusion, the inspections.....provide reasonable assurance that the rust/corrosion stains and boric acid residue ...did not result from leakage from the IMI nozzles." Here we have lost sight of our objective. The objective was to see if there is leakage, not to show what cause staining.

page 35 Conclusion It is not clear to me what modification(s) adds to safety margin, especially since not all corrective actions are closed. Is the rule that, as long as the number of corrective actions is less than five, you can claim safe operation? I would expect that those five would not only be complete, but be found to be effective.

page 39 Improvements in Corrective Actions I like the safety precedence sequence listed. It makes good sense to me.

page 41 "The organization has been changed so that Quality Control (QC) Inspectors report to the QA Manager." I like this.

page 45 "Institution of a more formal design input process to identify and document pertinent design information at the beginning of the design development." I like this.

page 46 Radiation Protection "These people have industry experience outside of FENOC." Very good.

page 55 "as a result of an initial evaluation of a change to accept as-is the emergency diesel generators' actual frequency and voltage transient values during the automatic loading sequence," I hope this is not a sign of low standards, a previously

identified Davis-Besse trait.

page 66 "Condition Report 02-03668 identified long-standing problems with RCP casing-to-cover joint leakage." Therefore, we have fixed (only) two of four of them in a 21 month long outage. This is the wrong decision. Additionally, do you see that this effort on two pumps actually only restores (or perhaps improves) the intended safety margin for them.

page 66 "FLUS, is being installed on the lower RPV head" Isn't this installation complete yet?

page 68 "Upgrade of Containment Cranes and Bridges" Do ALL indicating lights work now?

page 68 "Containment Air Cooler Modifications" To correct another design inadequacy, have sufficient relief valves been installed to protect the CAC expansion joints from overpressure?

page 69 "EDG Air Start System" Were the operators required to blow down the air receivers on a daily basis in the past?

~~page 69~~ Will the RCS Integrated Leakage Program be revised and accepted before restart?

page 71 If I subtract 7260 from 7400, I find that 140 restart corrective actions remain. As a result, I conclude that the organizations, programs, and SSCs are NOT YET ready to support safe and reliable operation of Davis-Besse.

page 75 Isn't Three Mile Island, Unit 2 missing?

page 78 "management has initiated modifications to add safety margins beyond those necessary" Wouldn't it be more accurate to change "add" to "recover"?

page 78 "an improved model, Electrical Transient Analysis Program (ETAP), is used.." Has the model been tested and accepted before use?

page 79 "during the NOP test in September 2003, plant evolutions were halted when issues arose during plant heat-up and cool-down, thereby demonstrating the proper safety focus." Were Fitness-for-Duty tests done both times? Simply paying people to not work is not a demonstration (to me) of proper safety focus.

page 82 Training on Completeness and Accuracy of Information "The FENOC Integrated Tracking System training database is tracking the individuals who have not completed this training." Note that this is more than 3 months: how long should this take for concerned employees?

~~page 83~~ Performance Indicators "The indicators are displayed in several locations on site." I like this.

page 84 Project Review Committee "to ensure that safety significant modifications receive appropriate resources.." I like this.

page 84 Results of Additional Actions "is patterned after and expands upon the model provided in International Atomic Energy Agency (IAEA) Safety Series INSAG-4." This is impressive.

page 86 "Drive for Excellence" "The restart schedule, however, includes activities to work these numbers down to the White or Green level." I am in favor of this as long as the White or Green level number is zero operator workarounds.

page 95 There is an awful lot of red color on this chart.

page 96 Two numbers not supplied for Pillar 4 red sections of bar chart.

page 99 As worded" an inadvertent opening of a core flood valve in August, and a

reactor trip in September," fails to show me a sufficient sense of responsibility, considering that, in the first case, the NRC identified that the operators failed to follow the procedure steps in correct order and, in the second case, the operators (and their reviewers, I would imagine), failed to adequately control reactor pressure.

page 102 "Provided initial training to reinforce technical standards and problem solving skills of the technical staff." I like this.

page 102 "and Davis-Besse has augmented its Engineering staff with outside personnel" I like this.

page 102 "(3) Operations maintains ownership of equipment deficiencies,.." Excellent.

page 105 "the Quality Control Inspectors now come under the authority of the QA Manager." This is very good.

page 106 "and to ensure items required for safe and reliable operations are not deferred." I like this.

page 107 "and NQA plans to continue to use non-Davis-Besse personnel in its assessments, as appropriate." This is a very good move. It should be considered for at least the next two or so years.

page 109 "Apparent Cause evaluators will receive initial and continued training, and will be required to meet proficiency requirements." Excellent

page 110 "On a semiannual basis, an evaluation is performed using human performance evaluation system (HPES) techniques to determine the causes of procedure noncompliance and develop actions to improve performance." I sure hope that one action would be to terminate for cause. I'll bet that would quickly improve your 87% (100-13) rate of employees following procedures.

page 111 "During the NOP test, several events occurred when Operators proceeded to implement procedures that were ambiguous or lacked details. Maintenance personnel engaged in similar conduct in the summer of 2003." Was the level of skill/experience of employees using these procedures lower than the skill/experience of employees in the past? Perhaps it would be easier to obtain some of the necessary improvement by increasing "skills of the trade" of current individuals instead of increasing the size of current procedures.

page 113 Management Observations and Coaching "This diminished their opportunities to observe potential problems in activities that precede successful operation in the Control Room." Excellent

page 114 Knowledge Base "A potential weakness in the knowledge base of some individuals was noted in the area of design and configuration control." What is being said here?

page 115 Strengthening Operating Crews "Assessment and adjustment of operating crews is complete.." Very good. This should probably be done every year.

page 115 Strengthening Independent Oversight of Operations "NQA will also use non-Davis-Besse QA personnel" This is good; non-FENOC QA personnel would be much better.

page 115 "Additionally, Operator training needs will be evaluated with respect to Operator tasks that have not been performed or trained upon over the past few years.." Very good

#### Report Summary

I am disappointed that the 0350 committee decided to allow the type of bottom head area inspection that it did. But I cannot find proper words to describe my assessment of the oversight of the 0350 committee both by NRC Region III and NRC Headquarters.

We are trying to assure a safe reactor so we don't have an accident. Do we do tests to detect failing material in the reactor vessel? No, we don't. We use a strategy that

requires a hole continuously through the reactor coolant pressure boundary, leaking enough to see during pressurization? No again. We wait until the pressure is off. Then, (get this part), we use method that was unable to identify leakage when used on the old upper head. But wait, there is more. Since we could not anticipate the area where major failure occurred, (the material of the upper head itself), we only look at the nozzles on the lower head.

Maybe I was trying to read too fast, but did you see mention, anywhere, of any Fitness For Duty Program review or implementation? Isn't this required anymore?

This is e-mail #2. I may have comments on Appendix A, B, C, D, and E. I don't need a reply.

Thank you,

Tom Gurdziel