John Z
Fred Div Sec
TAC No: MB7287 Roy Mendiola
Wanda Hopkins

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FROM:
Mike Mulligan

TO:

VLD

FOR SIGNATURE OF : ** YEL **

DESC:

Generic Safety concern with the MSSV x-750 seat and indications ofa safety culture problem

ROUTING:
Collins
Borchardt
Sheron
Case
NRR Mailroom

ASSIGNED TO: CONTACT:

DLPM Zwolinski

SPECIAL INSTRUCTIONS OR REMARKS:

From: "Mike Mulligan" <steamshovel@adelphia.net>
To: <vid@nrc.gov>
Date: Mon, Jan 20, 2003 3:27 PM
Subject: Generic safety concern with the MSSV x-750 seat and indications ofa safety culture problem.

I got another question. We might be looking at the greatest con of all. Wasn't one of Byron recent failed MSSV's an x-750 seat? It didn't happen after five years either -it happened after just one operational period. And it failed at the highest percentage. To me it's looking like a worst replacement than the 400 SS. Most worrisome, many PWR with similar MSSV deficiencies are basing the fix on the x-750, without any proof it will fix the problem. To me it's a huge problem if the industry is just guessing on the x-750. Where is the engineering proof that the x-750 will fix the rust gluing? I am very uncomfortable with that.

January 20, 2003

Anthony J. Mendiola, Chief, Section 2

Project Directorate III

Division of Licensing Project Management

Office of Nuclear Reactor Regulation

Dear Mr. Mendiola:

This letter is in response to your letter dated Jan. 9 2003, about the MSSV issues at Byron and Braidwood. I request it be entered into Adams.

The issues of failed MSSV'S are beginning to raise more large cultural safety problems again at Exelon and the NRC. Byron speaks of initially only testing according to code, with them initially picking four valves and then deciding to test nine valves. According to Byron, this testing percentage was because of their future self interested justification of needing to meet the 20% code criteria of every 5 years and not interfering with future plant operations. It had nothing to do with uncovering active faults. Doesn't anybody have any concerns about that? It is all keyed to keeping the plant on line?

Byron admits that they have a large historic problem with sticking relief valves. We know there are similar issues at other PWR'S. Exelon's initial safety instincts of just testing to code are very worrisome. With their historic record of problems with MSSV, I can't understand why Byron didn't initially schedule all of the valves to be tested and the failed valves to be fully disassembled and inspected by experts -with the results available before startup. They came around to testing all the valves eventually -but it didn't come from the available subjective analysis of the historic record. It is plane wrong to wait for component defects to show up in nuclear safety.

Does the ASME set a limit on how conservative Byron must be? Is that the real justification of the ASME codes? Does the code set limitation on how much conservatism and how much money you must spend; or does it set the floor on the quality of safety? Isn't there a recent information notice about not doing a full valve disassembly (SRV) inspection for twenty years and about nuts being loose? Isn't there a lesson from Davis Besse about setting your safety culture up to only meet the minimum code and procedural requirements?

I mean in the ASME, if Byron had ten cycles with 50% of the valves tested as broken - would the next cycle only demand 4 valves tested. I mean, if another good plant had no valve failures in a decade -would they have to test a similar percentage. You see how advantageous they made it for a poor performing plant.

In historic record with Byron's MSSV'S, you can make a prediction that more that one valve would be broken before the end of the last operational period. The question is, did you go out of your way to discover this "expected" non conformance throughout the operational cycle, or did you just depend of the inadequate requirements of the ASME codes. In other words, you tested on March 7, but on March 6, you should have been in a LCO statement (and potentially within a power restriction requirement) with three broken MSSV's. That is what the subjective reality is about -but I have got no objective proof of it?

This is what this sequential game of testing valves and the pretend game of never discovering more than one valve at a time being broken. The LER and agency speaks of multiple discovered failures reported by licensee, and for some reason, you don't what to admit they were broken simultaneously -at some distant past point. I wonder if your employees are playing other pretend games in other areas. What are you teaching your employees? The question is, when that inaccuratecy goes past the plus or minus 3% (1%), the component is supposed to be in the LCO status. In many plant situations, it unsafe to be operating at 100% power with multiple valve that are defined as being broken.

What this is about is, the testing at the end of the cycle captures the degradation retrospectively and the results of passing the 3% limit should have demanded an immediate potential power limitation in the LCO. We got a big pretend game going on here and you agency is hiding the game within code phrase of "it's within ASME codes".

You people strictly define the component safety functionality by the pressure testing accuracy criteria of plus or minus 3%. That is the component safety barrier you have established. You didn't define it as plus or minus 3% for the component and if you meet the system design criteria of having 110% -and with any combination of failures -and this restriction is only applicable "discovered during testing" in the last 24 hours at the end of the cycle. I could make a case that testing should be done at the end of refueling and in the initial stages of plant startups. There are many events out there where deficient valves were reinstalled and ran for 5 years until testing discoveries. It is what poor QA buys.

I have to admit that Byron and Braidwood have been proactive in some areas. We see you have a tech spec change already submitted for the loosening of requirements if a MSSV is discovered broken. You know, I think I would fall off my chair if I ever seen a license amendment change that tightened requirements when components are showing signs of degradations. We think this is just another example where your industry is wasting precious engineering and agency resources; with coming up with angles on reducing the safety burdens in licensing amendment request and when components have indications of safety degradations.

I could make a case that a plant who has indications of system and component deficiencies, and then in reflexive manner submits licenses amendments in the hopes of reducing requirements (keep it up at power) in face of this operational crisis: This is clear precursor indication to a declining plant and NRC safety culture. Didn't Davis Besse ask for license amendment changes that loosened operational requirements; with many hundreds of pounds of boric acid destroying their vessel head and the rust particles clogging their air filters (recent commissioners

meeting on DB).

It is absolute wrong to go hunting for a reduction of the margin of safety in plant design; as a tool to keep the plant on the line as a result of discovering component deficiency. It is pure hypocrisy to have three simultaneous INOP MSSV'S -that you spend enormous credibility resources in denying and now you are trying to get a change to maximize plant power once you get back into just such a situation. We even hear rumors that the industry thinks less maintenance on the valve will solve the inaccuracies. I don't care if you find an excessive margin of safety in a deficient situation -it is unethical to request a reduction of standards to keep a plant on the line and with a component that is actively compromised. The thing should be fixed quickly.

The reason is, when you get into operational crisis, you will have an intense self motive to discover additional reductions in safety margins and you will not ever have an equivalent self motive to discover smaller errors in your current design margins of safety. Matter of fact, if any of your employees go hunting for a justification for reducing operational flexibility; they would be shooting themselves in the foot and might end up out the door. What you got is a horrendous mismatch in motives and self benefits and it is aligned against being safe. Do you guys know what a check valve is?

Least we not forget about the NRC. Why isn't the NRC asking provocative and thought provoking questions as these in the public arena? Why didn't they ask any provocative question to Davis Besse? I bet you the politicians have got their hands around the agency's throat.

I have got a question. I don't know how you pressure test these valves. If during the test, you bring up pressure slowly until the valve lifts, this raises questions with me. In the worst case accident pressure spike (a much faster rate of increase), I am wondering if the inaccuracies would be much higher. In other words, are the rusting, sticking and freezing characteristics; such that on a quick pressure spike, would the lift set point be much more higher than the slowly increasing pressure test. I mean, have you got any detailed engineering studies and testing about the valve accuracy characteristics with this oxide bonding and other issues. I'll bet its propriety.

I got another question. We might be looking at the greatest con of all. Wasn't one of Byron recent failed MSSV's an x-750 seat? It didn't happen after five years either -it happened after just one operational period. And it failed at the highest percentage. To me it's looking like a worst replacement than the 400 SS. Most worrisome, many PWR with similar MSSV deficiencies are basing the fix on the x-750, without any proof it will

fix the problem. To me it's a huge problem if the industry is just guessing on the x-750. Where is the engineering proof that the x-750 will fix the rust gluing? I am very uncomfortable with that.

I am going to do some guessing here. You have a long term design defect with the MSSV's. You people know that you could cycle these valves every quarter or half cycle -to tamp down the valve lifting inaccuracies. My bet is that this cycling would cause early broken valve failure, pronounced future valve leakage and force subsequent shutdowns. These valves aren't durable enough for their intended service -hence always testing at the end of a cycle.

I will give you the bottom line. You have a couple of design defects that are active in the valve and they are coming into conflict with the safety aspects of the component. You are afraid it will impact the ability of the plant to stay up at power. You additionally have got a national nuclear safety culture in disarray. To keep the puzzle together, you are forcing your employees to lie for you and down playing the public risks. And that is my largest safety concern -it's in the heads of your employees. We recognize this has large generic implications.

Thinking about a 2.206?

I'd like to see the 20 year trend with pie and bar charts -with all the detailed parameters of failures with plant and individual MSSV'S and SRV's -if there is a Santa

Thanks,

mike mulligan

Hinsdale, NH