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Subject: Safety Concern, large, Remotely Controlled Relief Valves

Mr. Dricks:

You should remember I've had long term concerns with the maintenance and leakage of the safety relief valves (BWR and PWR). In the past, generally only one of these types of valves leaked, or was allowed to leak at one time. Now you are getting a large magnitude increase in relief valve problems, with even two at one time at a BWR plant, with up to six at a PWR. How many SRV'S would you allow to leak at one time in an individual plant without calling it INOP? Was the Limerick II SRV two at a time leakage the first in the recent history of the industry? Just how prevalent is multiple SRV leakage at the plants? What is the national trends and are there standardized definitions of tail pipe leakage? If I remember right Limerick has had a series of SRV problems over time. The trend indicates a nationwide intensification of problems with SRV'S

I request that the NRC issue generic communications on relief valve problems with standardized definitions and operational justification when these components are indicating abnormal leakage. You should set engineering limits on the quality and accuracy of the data that the utility uses to justify continued plant operation. Just how widespread is the uncertainty and inaccuracy of the engineering evaluations at Limerick II (IR 2001-03), which incorrectly justified plant continued plant operation with leaking relief valves. These guys are purchasing engineering evaluations for the expressed reason of staying up at power without any factual justification or engineering evidence.

Leaking relief valves (SRV) at power are an increasing nationwide problem and the justifications of plant operations with degraded valves are on the upswing. If you are going to normalize plant operations with leaking relief valves-increasing allowing more degradation-then the components should be engineered and designed for a limited amount of leakage and detection.

There should be engineering controls and objective component proof that the degraded components would fail as predicted. The leakage detection instrumentation should be engineered to quantified the leakage rate and provide a margin of safety before the failure of the valve. Is there a legitimate reason why the potential failure evaluations and characterizations-both the utilities and the manufacture- were so inaccurate?

It should be noted that the run times of these plants have increased from 1year, into 18 months, then 24 months, with the maintenance scheduals of sometimes five years. Is that to long? We've been increasing the operational times and reducing the maintenance periods of the components without re-designing or re-engineering the components or system for this new operational burden. Does the three stages SRV'S really increase operational durability and actuation setpoint accuracy?

It seems many of the recent cures for the component leakage's and failures, are fixes of a sort that doesn't provide any meaningful reduction in future failures. What's the historical record on this? There are plenty of indications that the after a valve accuracy failure, the utility and manufacture in the LER talk of valve seat re-coatings and redesigns that will fix the problem, with no change in failure rate seen during the subsequent cycle Is this a con job? At some plants there will be two or three small changes over many years with no change in component failure rates. What's up with that?

Enclosure

As a way to begin a discussion, maybe you should double (or some % increase) the number of relief valves per plant, then add a blocking valve at the inlet of each relief valve. At some point after a relief valve leaks, we could decide that it is degraded, then shut the isolation valve. With the excessive capacity of relief valves, there would be no worry with pressure relieving capability during the remaindered of the scheduled operation. Another thought would consider piping the Main Steam outside the primary containment with the relief valves sitting in an area that they can be worked on at power like at the PWR'S. Of course we would need maintenance isolation valves.

I know these are simplistic solutions to the issues of degraded SRV'S. But current fleet of nuclear plants is using technologies that are 45 years old. We are better than that. I find it amazing that we are using a more liberal interpretation of "safety" to justify the declining performance of this old technology. I just find it hard to understand why we haven't been able to upgrade all the support components of these plants into the most current technology, and maintain that standard of excellence.

The sum and substance of the utility's interactions with the politicians and regulators for decades has been to stop technological innovations of the components that make up the plants. Maybe the past per-kilowatt cost of the plants were too high for the nuclear industries ability to keep up with technological innovations, and increasing safety reliability. Did the decades long cost containment strategy of the nuclear industry lock the plant's employees and facilities into antiquated technology? Many of the facilities have upgraded the furnishings, added computer monitors in the control rooms, but the workhorses (recirc pumps circuitry, main turbine control, RCIC and HPCI control, level control, turbine feedpump control) of the plant is1950 vintage technology and engineering. The question becomes; when does the nuclear proportion of our electrical capacity reach the peak of reliability, and what does the slope look like on the other side of the mountain? Will re-licensing, the prohibitive cost of decommissioning, with the lost of its capacity, and the current high per kilowatt cost of nuclear electricity relative to plant age lock us into these old facilities for decades to come, and inhibit the shift into innovative technologies. The per-kilowatt costs are just high enough to be competitive today and for the potential of the new nuc's, but low enough to inhibit technological innovations.

How the CEO's maximize their compensation and bonuses for the last two decades; has been to use their influence with the politicians to get a reductions of industry standards and regulations. Everyone makes more money, and gets reelected, by depending and locking into these technological dinosaurs, including the components that make up these plants and infrastructures.

Is it we don't believe technology can make our lives better, or is it we've lost faith in our ability to manage technology outside our ability to capture enormous individual self-interest from it? Is the sum of our lives about creating the conditions that elevate our material worth above the vast majority of our brothers and sisters, or is it about bringing the enormous bounties of our extraordinary future into every soul on this planet. We are all into this hyper self-interest mode of it. It is enslaving everyone with locking us into the old bones of a generation past? Is it blinding us from seeing all the different types of poverty in our neighborhoods (work), whether it's next door or on the other side of the world? The day when we predominantly decide to conceive, design, and construct, a comprehensive energy system that efficiently serves humanity instead of our individual interest, will be the day that our greatest individual potential comes within reach. It will be a sign of the next step in planetary evolutionary development.

On an enormous stage we are all been normalizing how bureaucracies, and ourselves, selectively collect, document, and analyze "the situation of out times" for our individual self-interest. A large sign of our cultural regression is our backsliding into a third world energy production and infrastructure system. For decades we have been positively analyzing this decline into this energy "Banana State" and retro progression, as progress. We been all thinking, well my little cubicle has been increasing its wealth, or in fear, we've been saying, I've held on with by my nails to our current standard of living, but we forget to look what been happening on the grand picture. This strategy has allowed a massive transfer of wealth to the elite's, along with a drastic reduction in our investment to our country's infrastructure.

The elite's could make more money by obscuring the decline of our energy infrastructure, yank a larger proportion of the money stream from the energy users and public, while essentially watching our country outrun its ability to produce and transport energy; even obscuring the building infrastructure degradation. It's about how our big electric users, along with the politicians and the utility CEO's with their disproportional interest with salary compensation, have sabotaged our national energy future. They

have no care at all about how their selfishness have hurt the poor. It's just profits and moving my family into the house on top of the hill.

The more you think about it, many things around us; transportation, our schools, health care, politics, the military, our police, are in a similar crisis. Why a nuclear plant malfunctions and creates an accident is a lot more complex than identifying a failed component or a local management failure. It just may become the weak link in our society of the past.

Commission Merrifield just spoke of his views of his three fundamental threats to a plant's safety culture: "an ineffective corrective action program, complacency, and insularity". We had decades of deficiencies with the large relief valves. A healthy nuclear national safety culture would have recognized the seriousness of this widespread deviance. The culture would have redesigned the valves so that there would have been very few incidences of out of tolerances and valve failures. It would have been a matter of pride instead of capacity factor and bonuses. With the recent limerick SRV failure, this valve had another incident in 1995, which the fix being that they would go to a three stage valve from a two stage. Many plant's today are justifying plant operation based on the deviance will be fixed by going to the three stage valve, which failed at this plant. They just make some marginal change in the valve in their panic that justifies the next cycle, without any proof that the change will be fix the deviance.

There should be real independent equipment experimentation and evaluations on how these SRV'S leak and fail, and when they will open. You shouldn't depend on the manufacture to perform these studies. We should also an absolute safety margin on when these valves will fail open. Limits on how many SRV'S (one) can leak at one time. I request the NRC investigate the contractor who is doing the failure investigation on the valves. Are they falsifying the failure mechanism so they can justify the continued use of these (conflict of interest) valves, or doing the utility a favor by making the failure fault look like it was only just a week.

Just why was the NRC not providing guidance and engineering evaluations on this very off normal event at Limerick? Does the NRC, when an indication like this becomes apparent to the agency, just closes their eyes, trusting the utility to do the right think? Just how many NRC interactions occurred during this prolonged incident? Does the NRC have an internal policy on down playing failures like this until a plant incident or outage, whatever comes first? Is it a strategy to increase national capacity factor?

The idea that you can have two active component failures (SRV'S) that leads to a plant shutdown, and a event unnecessarily challenging vessel integrity (cooldown rate), plus the bolting problems of the SRV flanges that has the possibility to bypass the torus is very troublesome. Don't you get it; you had one failure that uncovered a multitude of other safety problems. In the next accident, how many other unexpected problems will show up? Talk about a high cold down rate and vessel transient, what would have happed if the flange failed. Do you have that modeled in the PRA, this bolting problem? Wonder what drywell temperature and vessel level detector flashing would have done. What a mess that would have been. You've got problems down there that you risk inspection process is ignoring.

The LER is pathetic in the way they explain the risk, with no increase risk because of the shutdown. You should be worried when a utility feels that it's permissible to bend safety rationales. Limerick goes on to tell us there is no increase in risk with the SRV maintenance that caused a shutdown, with the component

catastrophically failing open, which calls for an immediate protective scram; because the components were leaking and a shutdown was "on going" to repair the SRV's prior to the unintended opening-which had been leaking for many months. The catastrophic failure didn't increase risk because they were going to shutdown anyway. Lets see, if ten of the SRV's were leaking and as long as it took just one shutdown... The question should be asked, what would have happened in DBA with the valve failing open, and the flange leaking into the drywell.

Maybe we should have an LER's on the component failure and valve opening; the other one on the leakage would pick-up the increase risk to the public because the utility failed to manage this component reliability, which caused the premature shutdown. Then of course the second SRV that was leaking! We haven't even begun talking about these management failures that caused both units to be shutdown for repairs. I'm confused even more, but many utilities justify in NOED's that shutting downing a nuclear reactor is more risk-full than talking adequate precautions prior to a diesel generator maintenance screw-up.

Most appalling of all is how the inspection report covered-up the serious control room command and control deficiencies during both shutdowns. Both shutdowns had a enormous amount of operational and technical failures, let alone the maintenance failures which led up to it. Didn't this inspection report also detect problems in the simulator with the emergency dill? It is no surprise that these control room and facility management operational problems are kept off the SDP and documented so the public can't see them.

Of course you might get a public response if the NRC disclosed that the Limerick control rooms were having a difficult time handling simple plant transients. Is the ROP bias so that the control room errors and confusion become filtered away from the public, and you are short circuiting the publics ability to provide meaningful feedback into how these plants maintain safety for their communities. Cam-Corder's that record an incidence like this, and is shown to the public would revolutionize the operation of these facilities.

The big question is: how will they handle the next set of plant accidents and will they be preventable? Is there a historic trail problems with handling plant accidents and or more important preventing them?

Thanks,

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