CONFIDENTIAL

TO: [redacted]

FROM: [redacted]

SUBJECT: CONCERNS RELATED TO THE HANDLING OF THE MS-42 STEAM LEAK

DATE: October 16, 2002

Per your request, I have interviewed members of the Salem Operations organization regarding concerns they have over the handling of the MS-42 steam leak. In addition to the formal sit-down interviews, I received a number of other comments by phone and in unsolicited discussions with Operations personnel while in the plant. Some of the concerns do not relate to the MS-42 issue. I have captured those separately and listed them at the end of this document.

I entered into each of the exchanges by explaining my purpose. I told each person that although you had a number of comments, questions, and concerns from within the organization you wanted to do your best to avoid inadvertently glossing over or screening out any issues. Therefore, I was canvassing a select number of Operations personnel regarding their concerns over the MS-42 steam leak's handling to provide you a list for addressing and developing into a lessons learned opportunity. I further explained that although I would not be identifying who shared what, the nature of some of the concerns would make it difficult to conceal the individual's identity. I have listed the concerns of the individuals I spoke with in the table below.

1 Command and control was lost due to the [redacted] actions. After progressing down the path of shutting the plant down with applicable notifications to appropriate parties, the [redacted] interrupted a Control Room briefing to inform the [redacted] at he should continue with the briefing, but he was going to go out and close the valve. Soon thereafter, this caused the [redacted] with an indication of degrading conditions in the plant, to leave the Control Room. This is similar to the events of April 7, only with a seemingly better outcome.

2 The [redacted] lost ownership for the shift and control of his plant. The [redacted] lected to take an action, manipulating a valve previously deemed inaccessible in a safe fashion, without the full understanding of the [redacted]

3 Why did the [redacted] feel the need to take over the shift? He took the lead on the steam leak and made the decision on his own to close the valve.

4 An MEL addresses command and control in the Control Room. What are we doing about not complying with that MEL?

5 You could clearly read in the [redacted] eyes and body language that he understood he lost control of the plant to the [redacted] What are we doing to not place him or other [redacted] in such a position in the future and what has the [redacted] done to ensure to his [redacted] hat he will not do something in the future that would take that control from them again in a time of trouble or abnormal situation?

6 Does management agree that the actions surrounding the MS-42 steam leak were contrary to our priorities of safety being number one, command and control being maintained, and our standards of operation and conduct being consistently applied?

7 The [redacted] is the [redacted] boss. The [redacted] acted in a manner that undermined the responsibility of the [redacted] and the [redacted] allowed that action to occur.

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8 The AOM did not consider what position he was placing the [redacted] in by his actions.

9 The [redacted] reportedly said he would not ask an EO to do what he planned to do. Basically, the [redacted] was saying that this was unsafe, any argument to the contrary is purely semantical. He then proceeded, without involving the applicable parties (Site Protection, OS, Control Room) to deem the action safe enough for himself to take the risk. This is counter to our claims of safety being our number one priority.

10 The entire shift was set up to fail had the closing of the valve gone awry. We potentially could have lost our [redacted] and [redacted] because there was no planning or contingencies in place from a safety or staffing perspective.

11 The [redacted] actions were a substandard example of complying with our standards of communications, conservative decisions, and safety being our number one priority.

12 The actions of the [redacted] to keep the plant up, which significantly contributed to the other inappropriate actions betrayed our expectation of safety being our number one priority. Does anyone see this?

13 At our level, it appears that management is saying one thing and then doing something else. Safety is ok when there is time and it does not affect the budget.

14 What safety equipment did the [redacted] wear? Why was Site Protection not on standby for the closing of the valve? Why was there no input solicited from the shift? Why did the [redacted] not conduct a pre-job brief before going out to close the valve?

15 The [redacted] did not conduct a pre-job brief regarding his planned actions. The [redacted] directed the WCS to accompany him without explaining what he was going to do. It was not until the [redacted] began moving a ladder to access the MS-42 valve's hand wheel that the WCS understood what the [redacted] planned to do.

16 The [redacted] took action in a way that the [redacted] would not have allowed or found acceptable for any member of his staff/crew to take.

17 In making his decision to close the MS-42 valve, the [redacted] did not consider input from EO's or the Control Room. Furthermore, he did not adequately communicate what his intentions were, his plan of action, or what contingencies he had in place.

18 There was confusion among not only our department, but also among other departments as to what the pan was. At one point we were shutting down and then the steam leak is isolated. Maybe this was the right thing to do, but without the right communication, input, and planning how can we even begin to look the other way when something this risky occurs? Is it simply because it ended good?

19 Why is there a double standard? If it were an EO or even a supervisor who took action in the same manner as the [redacted] this issue would already be handled without explanations justifying why such actions took place in the first place. Explain the thought process, recognize and admit it was not correct, then explain what would be done differently in the future. Continuing to justify the action in any form flies in the face of what Operations is supposed to stand for and the example we are to lead by.

20 The [redacted] response that it's easy to do nothing when someone challenged him on his actions was inappropriate and should be addressed. No one wanted to do nothing, but running off half cocked without communicating and planning compromise individuals' safety and potentially the safe operation of the plant. What do we do to ensure this does not happen again?

21 The [redacted] made the decision to close the valve with the understanding and presence of the [redacted]

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22 Many of us feel that the [redacted] actions were done behind the [redacted] backs. Once done, it would be easier to justify those actions since there was a good result. Was the good result a culmination of planning and discussing with contingencies in place for the plant and the involved personnel, or was it luck. We cannot allow the end to justify the means or our standards will never improve and eventually the luck will run out. I certainly hope we learn from this so that the standards are adhered to and we do not depend on luck.

23 With the steam leak as bad as it was, the worst anyone can recall in the last fifteen years, the decision to stay at 42% for an extended period while assessing whether the leak was repairable was not the correct thing to do. This decision and the actions of the [redacted] takes us back to the early nineties mentality of do whatever it takes to keep the plant up.

24 Had the [redacted] not been here, the decision on how to proceed would have been different. It would not have resulted in the plant staying up, but it would have been different and safety not compromised.

25 Initially things were going well. We were evaluating equipment, the plant was stable, we were gathering resources, and we were developing a plan. As soon as things began to deteriorate, we reverted to old behaviors that focused only on keeping the plant up.

26 There was so much time and effort put into figuring out how not to take the plant off line that the steam leak was allowed to get significantly worse. It was the worst seen here in sixteen to eighteen years and because it was allowed to get worse caused further complications and challenges to the plant complicating a shutdown and making the unsafe act of shutting the valve maybe even less dangerous than trying to shut down the plant. All because we were trying to justify keeping it on-line.

27 Conservative decision-making would have called for taking the plant off line when what most consider the worst steam leak they have seen here. Had the [redacted] not been here, the decision to come off line wouldhave been made much sooner and the steam leak not further degraded the condition of the plant to where a shut down would have become more complicated. Are performance indicators, capacity factor, and thermal consciousness now dictating what conservative decisions is?

28 Why has it taken so long for someone to address the [redacted] actions with regard to the MS-42 steam leak? If the outcome had been adverse (injury, further complications to plant operations, damage to equipment) instead of keeping the plant up, would there have been a more timely and higher level of scrutiny?

29 Has anyone looked at this from the perspective of how our regulators would view this? How do we think they would view the actions relative to the MS-42? Has anyone told the regulators what happened?

30 Did we just get away with something because the outcome was good?

31 Why are we subjected to explanations justifying the [redacted] actions instead of someone coming out and saying, despite the outcome (keeping the plant on line) we did not meet our own expectations in how we handled the issue?

32 Do the [redacted] and the [redacted] believe that the way things happened was wrong, but just happened to work out?

33 I want to hear the [redacted] say that his actions were inappropriate because he did not engage the right parties, ensure there was proper communications, have contingencies in place, and put safety first. I just want to hear him say this was wrong despite the outcome.

34 Why has the [redacted] justified his actions? Yes, in this instance his actions had a good outcome, the plant stayed on-line. However, his actions have had far reaching implications regarding their message of where safety is in the priority listing and is the [redacted] authority on the shift. I want to hear someone come out and say whether or not the [redacted] actions were appropriate or inappropriate so that I know what the expectations are. This is not about the [redacted] or looking for him to receive discipline, that is not my call. I just want to know what the expectation is and if his actions were not appropriate, what we plan to do in the future to ensure our standards are met.

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35 This was pure and simply an act of heroism on the part of the [redacted]. I am not making the [redacted] heroism out to be a positive. Without the input and involve of the right parties (e.g. OS, EOs, CR, Fire Department) he not only jeopardized his own safety, but potentially the safety of others, the integrity of the plant, and public perception of our company if things had gone bad. With the proper inputs and preparation the decision to shut the valve may have been the correct decision, it just was not arrived at in the right way. We can not have cowboys, it is not the standard we are supposed to have.

36 I am concerned that we are slipping back into early nineties behaviors. This is just another example of that and I want to know what we are doing to stop the back slide.

37 The emphasis on capacity factor and performance indicators lead to management, the [redacted] to act irresponsibly and take unacceptable risk by not factoring in the perspectives of Site Protection, EOs, the Control Room, and the [redacted]

38 The [redacted] created a problem in what he did regarding the MS-42, not the least of which was violating our standards of operation, safety, and shift protocol, but he was only doing what is now being pounded down on him and our management. That is do what you need keep the plant up, which is going back to a mentality we thought we left behind.

39 Given that the actions of the [redacted] were inappropriate, this is not an [redacted] issue. This issue goes much higher because his management expected him to keep the plant up. He was simply the willing tool that met the expectations of those even higher than our Manager.

40 What measures do we need to have in place that does not reward "heroism" in keeping the plant up. This appears to be a case of allowing the end (keeping the plant on line) justifying the means.

41 The OM has the impression that the leak repair was discussed after isolation. In reality, we took a long time to make that determination which allowed things to get progressively and significantly worse. Who is feeding him the information and why was it not accurate?

22MS42 LESSONS LEARNED

What Happened?

What Happened?	Comment/Improvement Opportunity
On the evening of 9/21/02, Plant Load was being reduced to 47% for Turbine Valve Testing. After the load reduction was completed, the OS was touring the turbine building and noted a body to bonnet flange leak from 22MS42 (~2255PM). The [redacted] went to get the [redacted] Shift from his office and by the time they returned, the leak had become much worse. The leak was thought to be unisolable from the Main Steam Header and the 100' elevation of the Turbine Building was filling with steam. The turbine building was evacuated with FP assistance.	
The [redacted] and Maintenance discussed the possibility of Leak Repair. They were unsure if it was possible and knew that it would be many hours before the repair could occur.	It is ok and my expectation that we evaluate possible equipment repairs to prevent an unnecessary plant transient. If plant conditions are degrading this assessment must be expeditious.
AB Steam was entered (2318). AOM/OS decided that a Plant Shutdown and MSIV closure was required. [redacted] called Ops Manager to inform him of Plant Shutdown.	There was complete alignment from the OS – AOM – OM – OD – VP-Ops – CNO – that a plant shutdown was the safest and most prudent course of action and that is the direction we were headed in. There was some discussion about closing MSIVs and staying in Mode 3 with the MS-10s or to cool down, however that did not impact the any decision to shutdown.
During preparations for the Shutdown brief, several OHA were received indicating possible degradation of the non-vital busses and the possibility of the busses not swapping to the Start-up transformer. (0005 – OHA J-45 "Turb Bldg 460-230 hot spot", 0035 – OHA A-17 "OHA ground", 0035 - OHA J-39 "4kv bus group XFER fail") This had the potential to complicate the shutdown, however, the plant is designed to handle this type of malfunction.	

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