

*A. Blough*  
From: [REDACTED] *nc*  
To: <ARB@nrc.gov>  
Date: 10/13/04 4:47PM  
Subject: Nuclear Safety Concerns at Salem/Hope Creek

Randy,

A number of workers at Salem/HC no longer believe the plant is being operated safely. One man was in tears today realizing the extent of the nuclear safety issues.

One employee has stepped out and written the attached notification, a Nuclear Safety Concern. He does so fearing for his own career, but realizing his responsibility is greater to speak out about such an important matter.

I encourage you to immediately have someone interview this person (off site, without company lawyers present) so you can understand the full extent of his concerns. His words in the notification were carefully chosen and much is written between the lines. He cares deeply and fears his caring will be misunderstood and/or minimized.

Please understand the gravity of the situation at the site.

Kymn

CC: <jill.lipoti@dep.state.nj.us>

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Act, exemptions 7C  
FOIA- 2025-194

*T-223*

**Nuclear Safety Concern surrounding events at Hope Creek and Salem from October 9, 2004 through October 13, 2004.**

Notifications that were reviewed are in SAP. Specific notifications relative to my concern for the time period are listed in Table 1.

**A. Nuclear Safety Issue**

A sequence of events for the reactor trip and post-trip response should be captured in the Significance Level 1 root cause report for the applicable notification (20206631). However, the root cause will most likely limit the perspective to the particular events in the trip and specific plant and operator responses. The root cause evaluation may miss significant organizational and programmatic issues and opportunities for improvement.

The sequence of events for the organization can be traced back many months, with indications of weakness identified by WANO in the 2002 report. Specifically, our

Organization

During the last year, we have continued reorganization efforts with ineffective change management. Work supervisors are continually challenged to produce results while administrative workloads are increased. Some supervisors routinely provide oversight of up to 20 employees or more, far exceeding the capability of even the best trained and equipped supervisors to be effective. During the August – October period, several key management positions have been vacated due to resignations or training assignments, as well as establishing rotational positions with Exelon management. The gaps left in the organization during the changes causes ineffective communications, lack of trust between management and the workforce, lack of consistency in expectations, and an unsafe work environment.

While training Leadership Effectiveness and Safety Conscious Work Environment are two very important keys to future success, these are not the only choices, nor are they the solution to all problems. Many soft skills training programs have been provided at the site in the past, each with the potential to provide long-term positive effects. The training merely provides the tools. The effectiveness of the programs must come with senior management reinforcement to middle management that the time and effort will be taken to use the tools. Middle management must observe and reinforce tool usage with superintendents and supervisors. The Leadership Effectiveness and SCWE training provides the tools, but our plans appear to fall short in the actual implementation by senior management and middle management to reinforce and support use of the tools with the supervision.

Crisis Management

As the station responded to the Hope Creek transient, workers could almost “hear” the sigh of relief from management. Management responded to the crisis in the typical fashion, putting other plans to the side and establishing a plan to respond. Managers and

workers were pulled from their plans and the station staffed to respond. An effective Central Outage Group would have contingencies in place with specific names of people to staff specific positions in support of a forced outage. The forced outage work plan would dictate the work being done, with additional work based on the plant transient.

Our station response has been one of crisis management. Rather than approach this forced outage in a methodical and systematic manner, it "appears" that we are scurrying to restart the plant to stay ahead of the outage. Yet, we are not sure what we want equipment we want to work, nor if we really want to start up the unit. Station management must step away from task management and manage the staff with a "big picture" approach, making appropriate decisions that ensure nuclear safety, radiological safety, and industrial safety.

#### Significant Issue

Due to task management and a narrow focus, we are unable to see the "big picture."

As a result, we are unable to recognize significant issues. When workers try to bring issues to our attention (as a management team), we tend to minimize the significance of the concern or avoid the worker's concern. During this forced outage, do the workers feel like they can walk into any manager's office and express a concern without repercussions? The question has been asked. Workers are not feeling a difference.

#### Nuclear Safety Reverence

The various issues arising during the trip and post-trip events indicate a potential nuclear safety issue. Considering the notifications and the content within the notifications, safety equipment did not work per design. HPCI, RCIC, RWCU, PCIG, and SRVs did not respond in a manner to support safe plant operations. Numerous notifications have been written about the various systems and they are listed in Table 1.

While equipment reliability during a transient is an issue, it is compounded by an apparent knowledge deficiency on the part of the control room staff. Reactor vessel water level was difficult to maintain with the equipment that was available. Design basis and technical specification knowledge and application did not appear adequate during the post-trip response based on notifications.

Generically, there are numerous notifications in 2004 that indicate a general inability to apply technical specification requirements by most Salem and Hope Creek Operations Licensed Operators and Supervisors. Further investigation is warranted to determine the full extent and cause of this apparent Operator deficiency.

### **B. Work Management Issue**

#### Long Standing Issues

Even with numerous communications and the expectations to bring forward problems, notification 20206783 was written as a "long standing issue that complicates operator interface." It appears that operators are willing to work around long standing safety

system issues that affect equipment reliability.

Considering the notifications written during and after the trip on October 10<sup>th</sup>, numerous issues have been raised concerning HPCI and RCIC. Reliability of these safety systems is of paramount importance to ensuring nuclear safety. Yet, we have numerous notifications and an apparent lack of understanding of system design by Operations staff, based on notifications. An additional note is a generic weakness relative to HPCI identified during recent Licensed Operator Requal Annual Exams.

Additionally, what effect did the recent setpoint paper-only modification have on actual HPCI System performance during the post-trip response? The data should be available and evaluated to ensure that the right decision was made in pursuing the change that occurred.

#### Operations Leadership

Several notifications from both stations, along with other notifications, indicate a general weakness in consistent crew performance. An essential ingredient of nuclear safety is having a predictable operating crew. Operating crew performance is becoming more unpredictable, with wide variations in their exhibited abilities to accomplish work, as well as make conservative decisions. Several factors affect this, including Operations Managers resigning (the last two at Salem, one at Hope Creek). Need to evaluate the impact to Operations staff and the effectiveness of our change management plans. As well, there are few SRO licensed individuals in responsible management positions as a rotation from Operations. This has a negative effect on the organization, leaving operations knowledge in the control room and creating additional communication and trust barriers.

#### Other Issues

October is the culmination of many activities, some taking place over the entire year. SCWE training is mandatory for all personnel. Leadership Effectiveness training is mandatory for all supervisors and above. Work Management and CAP training will start soon as mandatory training. Accredited Training is ongoing, with LOR Annual Exams for Salem and Hope Creek, Maintenance Accreditation preparations, initial training for chemistry and engineering, and ongoing maintenance training. Extensive outage training is ongoing for a planned supplemental workforce of 1200. The sheer volume of training makes it difficult to identify who is available for work in the plant. Add vacations (approaching end of the year) and flu season to absences. Are we effectively managing our resources to accomplish the work we planned? We are adding additional work to an already stressed staff, just looking at the training burden.

Senior and Middle Management changed extensively over the last year. The reorganization last year reduced supervisors in the very place we may need them most, working with the fixing equipment. Supervisors of bargaining unit workers end up supervising 5 to 30 people during a routine shift. We put additional administrative burden to ensure other things get done. Yet, we give them no administrative assistance.

We have supervisors and journeyman doing administrative work. A better way to work would be provide maintenance supervisors with administrative assistance to help with some administrative functions, allowing more supervision time. Changes in middle management and senior management have caused a "wait and see" attitude across the organization. Many people are reticent to point out issues because of concern for "back-door" politics taking reprisals. While we are quick to train with industry experts, we are not as ready to listen to workers who are saying, "I can't feel any difference."

Our approach to managing relationships and encouraging trust has been heartfelt by some leadership, yet has not permeated the management ranks. Many managers are continuing business as usual. The subculture persists where it is still do it the way I say do it (because I said so). An effective organization takes the time to listen to employees, then takes action. The action may be "no", but the employee is still given feedback.

In order to effect change and create a nuclear safety culture, management must listen to employees. Rather than mandating actions, we must cooperate with workers and find the most effective and efficient solutions. Workers know how to do the jobs, we must remove barriers and give them the tools to do the work safer and better.

Table 1:

10/9/04 Saturday

20206551 Rod Block Monitor Alarms SL3
20206561 Fire in HC Substation #4 SL2
20206582 52-50034 Bkr Tripped on ground fault SL3
20206562 13.8 kV disc for HC Substation #8 failed -- unable to restore power to TB2 SL3

10/10/04 Sunday

20206626 Piping rupture between at condenser penetration SL1
20206604 HPCI Vacuum Pump overloads trip 72-251021 SL3
20206596 Switch Station No. 2 Circuit Termination SL3

10/11/04 Monday

20206631 Rx Scram due to steam leak SL1
20206632 Automatic SCRAM following Manual SCRAM SL3
20206569 NAP-5 hour limits exceeded by 3 RP techs SL3
20206783 RCIC operation at low flow SL3

20206634 HPCI Vacuum Pump repeated trips SL3
20206633 HPCI not operating properly SL3
20206665 BJ-HV-F008 did not open in press control SL3
20206587 PPC / CMS Problems on SCRAM SL3
20206635 RPT breakers failed to trip SL3
20206763 Evolution plan required during SO-BC-002 SL3
20206726 Barricades-barriers-safety tape – near miss SL3 (Salem)
20206549 Schedule pressure exerted by Ctrl Rm supervision to install CW fish gates during high winds SL3 (Salem)

## 10/12/04 Tuesday

20206808 Checkpoint delays SL3
20206863 QA missed 2 yr periodicity of attribute SL3
20206902 Safety violations in Work Gang Box SL3
20206606 LCO challenges with both RHR Loops inoperable SL3
20206669 Valve found out of position SL3
20206811 Condensate Transfer Design deficiency SL3
20206848 Tech Spec 3.4.9.1 and 3.4.9.2 compliance issue SL3
20206849 Tech Spec 4.6.4.1 compliance issue SL3
20206766 Possible faulty RWCU flow controller SL3
20206953 Minor Maintenance w/o WCS Authorization SL2 (Salem)
20206905 Hose Control Program Non-Compliance SL3
20206668 RMCS Lockup SL3

## 10/13/04 Wednesday

20206772 Torus Level 188-19" out of band high SL3
20206926 1 & 2 A,B,C Htr trip during Rx Scram – response unexpected SL3

20206946 Repeat Pump Motor  
Trip on Thermal Overload SL3

Table 1 - SAP Notification Report 10/13/04

<i>10/9/04 Saturday</i>	<i>10/10/04 Sunday</i>	<i>10/11/04 Monday</i>	<i>10/12/04 Tuesday</i>	<i>10/13/04 Wednesday</i>
20206551 Rod Block Monitor Alarms SL3	20206626 Piping rupture between at condenser penetration SL1	20206631 Rx Scram due to steam leak SL1	20206808 Checkpoint delays SL3	20206772 Torus Level 188-19" out of band high SL3
20206561 Fire in HC Substation #4 SL2	20206604 HPCI Vacuum Pump overloads trip 72-251021 SL3	20206632 Automatic SCRAM following Manual SCRAM SL3	20206863 QA missed 2 yr periodicity of attribute SL3	20206926 1 & 2 A,B,C Htr trip during Rx Scram – response unexpected SL3
20206582 52-50034 Bkr Tripped on ground fault SL3	20206596 Switch Station No. 2 Circuit Termination SL3	20206569 NAP-5 hour limits exceeded by 3 RP techs SL3	20206902 Safety violations in Work Gang Box SL3	20206946 Repeat Pump Motor Trip on Thermal Overload SL3
20206562 13.8 kV disc for HC Substation #8 failed – unable to restore power to TB2 SL3		20206783 RCIC operation at low flow SL3	20206606 LCO challenges with both RHR Loops inoperable SL3	
		20206634 HPCI Vacuum Pump repeated trips SL3	20206669 Valve found out of position SL3	
		20206633 HPCI not operating properly SL3	20206811 Condensate Transfer Design deficiency SL3	
		20206665 BJ-HV-F008 did not open in press control SL3	20206848 Tech Spec 3.4.9.1 and 3.4.9.2 compliance issue SL3	
		20206587 PPC / CMS Problems on SCRAM SL3	20206849 Tech Spec 4.6.4.1 compliance issue SL3	
		20206635 RPT breakers failed to trip SL3	20206766 Possible faulty RWCU flow controller SL3	
		20206763 Evolution plan required during SO-BC-002 SL3	20206953 Minor Maintenance w/o WCS Authorization SL2 (Salem)	
		20206726 Barricades-barriers-safety tape – near miss SL3 (Salem)	20206905 Hose Control Program Non-Compliance SL3	
		20206549 Schedule pressure exerted by Ctrl Rm supervision to install CW fish gates during high winds SL3 (Salem)	20206668 RMCS Lockup SL3	