

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9110250063      DOC.DATE: 91/09/20      NOTARIZED: NO      DOCKET #  
FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe      05000397  
AUTH.NAME      AUTHOR AFFILIATION  
OXSEN, A.L.      Washington Public Power Supply System  
RECIP.NAME      RECIPIENT AFFILIATION  
MARTIN, J.D.      Region 5 (Post 820201)

SUBJECT: Provides critical evaluation re failures of Crew D during  
annual regualification exam administered on 910909.  
Contributing factors included, insufficient performance  
overlap amongst crew members & training evaluation process.

DISTRIBUTION CODE: IE42D      COPIES RECEIVED: LTR 1 ENCL 1      SIZE: 8  
TITLE: Operator Licensing Examination Reports

### NOTES:

	RECIPIENT ID CODE/NAME PD5 PD	COPIES LTTR ENCL 1 1	RECIPIENT ID CODE/NAME ENG, P.L.	COPIES LTTR ENCL 1 1
INTERNAL:	ACRS	2 2	NRR SHANKMAN, S	1 1
	NRR/DLPQ/LHFB11	1 1	NRR/DLPQ/LOLB10	1 1
	REG FILE 02	1 1	RGN5 FILE 01	1 1
EXTERNAL:	NRC PDR	1 1	NSIC	1 1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,  
ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 11 ENCL 11

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

September 20, 1991  
G02-91-171

Docket No. 50-397

J. D. Martin, Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region V  
1450 Maria Lane, Suite 210  
Walnut Creek, CA 94596

RECEIVED  
NRC  
REGION V  
1991 SEP 23 AM 10:38

Dear Mr. Martin:

Subject: **NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21  
MANAGEMENT EVALUATION OF THE SEPTEMBER 9, 1991  
CREW D EXAM FAILURE**

On September 9, 1991, the Supply System administered an annual requalification exam to Crew D. The results were that three individuals failed and that the crew failed. This letter is to provide our critical evaluation of why the failures occurred and to describe what the Supply System is doing to correct the identified weaknesses. This evaluation was conducted by Mr. Jack Baker (WNP-2 Plant Manager) and Mr. Dave Kobus (Technical Training Manager) with an independent validation by a designated Root Cause Team from our Licensing and Assurance directorate. These issues were verbally discussed with Region V and NRR during a telephone conference call on September 18, 1991.

The causal factors for the Crew D failure along with a corrective action plan/schedule are included in Attachment 1. There are three major themes that emerge from our evaluation of why the failure occurred. The first factor was that there was insufficient performance overlap amongst the crew members i.e., Shift Manager, Control Room Supervisor, Shift Technical Advisor and the Reactor Operators. An operating condition was identified by the Reactor Operators which required a response by our Emergency Operating Procedures. This action was not immediately identified by our Control Room Supervisor nor was it identified in the next 9.5 minutes by the rest of the Control Room staff. Our program of defense-in-depth did not occur during this scenario. The second factor deals with our training evaluation process. We found that our evaluation process did a reasonable job in identifying performance weakness data. This evaluation process was used to identify "general" strengths and weaknesses of the individuals and the crew. What was lacking was the identification of the "specific" weaknesses of the individuals and the crew such that specific training could be targeted to improve performance

9110250063 910920  
PDR ADOCK 05000397  
V PDR

11/31

J. B. Martin  
September 20, 1991  
Page Two

**MANAGEMENT EVALUATION OF THE SEPTEMBER 9, 1991  
CREW D EXAM FAILURE**

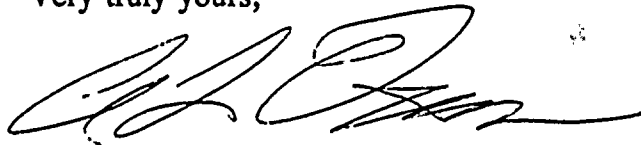
or to obtain consistent performance. The third factor was our management decision process in assessing crew readiness for the exam and plant operation. We did not sufficiently focus on the specific evaluation details but instead relied on a more general qualitative assessment. These three factors directly led to our underestimation of the individual/crew readiness for examination and subsequent operation. We have modified our training/evaluation process, crew structure for Crew D and management decision making process in light of these concerns. (See Attachment 2 for our revised crew staffing.) In addition, we have determined that no additional changes to Crews B, C, E or F are required to address the "crew overlap" concern.

We asked ourselves if we rushed the training/evaluation process of Crew D. The answer is definitely no. We provided Crew D with what we believed to be adequate training/evaluation to ensure that all individuals and the crew would pass their evaluation. Because of identified weaknesses, two delays in the exam schedule occurred to provide more training time. Crew personnel adjustments were also made. In hindsight, we should have done better in identifying the crew's needs and refocused our training to correct these needs. Instead, we continued with the belief that additional scenarios would bring the crew to an acceptable state of readiness.

Crew D is currently scheduled for their next exam on September 25, 1991. To date, their progress is good. Their ability to perform individually and as a crew is improving. We will notify you by noon on September 23, 1991, if we are confident in sponsoring Crew D for an exam and subsequent operation.

If you have any questions regarding the information provided in this letter, please contact me directly.

Very truly yours,



A. L. Oxsen  
Deputy Managing Director

JWB/bk  
Attachments

cc: Document Control Desk - NRC  
P. L. Eng - NRC  
D. L. Williams/BPA - 399  
NRC Site Inspector - 901A

## ATTACHMENT 1

### CAUSAL FACTORS FOR CREW "D" FAILURE

#### MANAGEMENT ISSUES:

1. Receptivity of the crew to critical review and commitment to accept and perform to specified standards of performance were less than adequate.

Impact: Critical feedback was not always applied to improve crew performance. Crew performance was inconsistent and the management of the crew was not effective in setting standards and holding the crew members accountable for acceptable performance.

#### Corrective Action Plan

- Operations Manager to meet with Crew D to discuss this issue. Ensure that performance standard weaknesses identified through the evaluation process are understood and corrected by crew management and other members of the crew. Actions are in progress for Crew D and ongoing for other crews as issues are identified.
2. The management of the crew was not expecting the Reactor Operators (ROs) to take the initiative to utilize their diagnostic abilities as part of the team.

Impact: The responsibility for ensuring the proper actions of the crew was vested in the Senior Reactor Operators (SROs). Any weaknesses would not be corrected by the actions of the other members of the team, such as the ROs, as was the case in the failed scenario. The lack of a positive influence from a strong RO was a contributing factor. Management policy must clearly identify the expectation of the ROs.

#### Corrective Action Plan

Operations Manager to provide verbal guidance to Crew D immediately followed by a written policy by October 15, 1991, which clarifies the performance expectations of the ROs. Training will provide training and evaluation to ensure the diagnostic input from ROs is occurring to the proper degree prior to the upcoming exam.

3. The Shift Technical Advisor (STA) missed an opportunity to advise crew management on the priority concern of power reduction.

Impact: One key element of the STA position is to advise the crew of priority actions relating to the core. Actions to clarify the role of the STA were in progress since the initial failure but not completed in time to effectively

influence this position as part of the team. In the scenario which was failed on September 9, 1991, the STA failed to deduce the priority concern and advise the Control Room Supervisor of the correct actions.

#### Corrective Action Plan

Plant Manager to issue a policy letter clarifying the performance expectations of the STA by September 23, 1991. Training to develop and implement evaluation criteria by November 1, 1991. Training and evaluation will be conducted prior to the upcoming exam to ensure proper STA role is being applied.

4. Management decided to present this crew for examination without adequate knowledge of the specific details. Although areas of weakness were noted, crew performance was improving but not consistent.

Impact: The crew failed 3 of their final 14 scenarios. Crew D was presented for examination without management understanding the specific weaknesses in individual and crew performance.

#### Corrective Action Plan

A readiness review meeting, consisting of at least the Operation Training Review Board members, will be held prior to presenting this crew for the upcoming exam. This review will focus on why the crew is ready to be put up for examination instead of a process that seeks why they are not ready. This review will evaluate individual/crew scenario performance data, including trends, in detail.

5. Management involvement was not fully effective at influencing crew and evaluator performance in the identified weakness areas.

Impact: The contributing weakness areas in this summary should have been corrected during the conduct of training.

#### Corrective Action Plan

Management involved with the determination of Crew D readiness will use the lessons learned from this report in determining Crew D readiness for the upcoming crew exam.

#### TRAINING ISSUES:

1. This crew had several failures in ATWS scenarios in previous training which indicates less than effective training on this particular category of events.

Impact: The opportunity to correct any weaknesses in this category of events was available, but not identified as a need.

Corrective Action Plan

Assurance that practice on all critical EOP transition points must be designed into our training program. Training staff to identify individual and Crew D weaknesses and provide training and evaluation to ensure the weaknesses are corrected prior to the upcoming exam. By November 15, 1991, develop a process to incorporate this methodology into the training process.

2. The crew focused more on the suspected event than on the symptoms.

Impact: The action of the crew was focused on pressure control to facilitate maintaining feedwater from the condensate system at the expense of actions to reduce reactor power. This type of performance is intended to be avoided and inconsistent with our symptom based EOPs. Training must emphasize the hazards of event based preoccupation.

Corrective Action Plan

Training staff to identify individual and Crew D weaknesses and provide training and evaluation to ensure the weaknesses are corrected prior to the upcoming exam. By November 15, 1991, develop a process to incorporate this methodology into the training process.

3. The teamwork of the crew was ineffective in the failed scenario.

Impact: The defense-in-depth concept requires effective teamwork. In the failed scenario, other members of the crew had an opportunity to correct the error committed by the Control Room Supervisor. Role clarification and principles of effective teamwork must be emphasized to obtain consistent performance.

Corrective Action Plan

Training staff to identify individual and Crew D weaknesses and provide training and evaluation to ensure the weaknesses are corrected prior to the upcoming exam. By November 15, 1991, develop a process to incorporate this methodology into the training process.

## EVALUATION PROCESS ISSUES

1. The evaluation process was not as effective as needed to identify and strengthen improper performance.

Impact: The evaluation process should be focusing and providing feedback on all key operational practices of each scenario to reinforce the significant correct actions as well as the incorrect. The response to this corrective action after the initial failure was not as effective as desired. Training scenario coaching also was not as effective as desired.

### Corrective Action Plan

Training staff to identify individual and Crew D weaknesses and provide training and evaluation to ensure the weaknesses are corrected prior to the upcoming exam. Any weaknesses identified during our current evaluation scenarios are remediated immediately. In addition, the ability to pick out root weaknesses will be bolstered in our evaluation of scenario performance results. By November 15, 1991, develop a process to incorporate this methodology into the training process.

2. Evaluation details were not adequately scrutinized to detect patterns of weak individual and team performance.

Impact: The evaluation of performance was conducted on a scenario by scenario basis by the evaluators. Competency results were numerically tracked; however, specific individual weaknesses were not portrayed in a fashion in which specific needs could be identified. This area was a missed opportunity to focus on these needs to improve the effectiveness of remediation activities.

### Corrective Action Plan

Training staff to identify individual and Crew D weaknesses and provide training and evaluation to ensure the weaknesses are corrected prior to the upcoming exam. By November 15, 1991, develop a process to incorporate this methodology into the training process.

3. Post scenario questioning techniques are not always adequate to solicit the necessary responses to substantiate weaknesses. Detailed weakness documentation is essential to formulating individually focused remediation.

Impact: Improper techniques can erroneously identify weakness or fail to identify weakness as well.

Corrective Action Plan

By November 15, 1991, the Technical Training Manager will develop and execute a training program for trainers/evaluators to address this issue.

PROCEDURE ISSUES

1. The override box on the flowchart was not utilized as intended. The table containing the direction to go to the other leg of the ATWS chart was not noticed when needed.

Impact: The override structure of the current flowcharts has been identified as a weakness and is targeted for correction in the phase II EOP upgrade effort.

Corrective Action Plan

Training will emphasize the crews awareness of non-conventional overrides prior to the upcoming exams. The Operations Manager will determine the necessity to take similar actions for the other crews. This override structure will be corrected in the phase II EOP upgrade program.



ATTACHMENT 2

CREW A	CREW B	CREW C	CREW D	CREW E	CREW F
Becker	Estes	Mann	Langdon	Zimmerman	Kozlik
Rockey	Gallagher	Henderson	Baird	Strote	Taylor
Rambo	TBD	Hendrick	TBD	TBD	Prescott
Moore	Woods	Lambel	Gregory	Nelson	Herrington
Zlatnik	Green	Hughes	Westergard	Ramos	Villarruel
Powers	Kleven	Weaver	Hlavaty	Berglund	Dixon