

Examination Report No.: 50-397/OL-91-03

Facility Licensee: Washington Public Power Supply System Nuclear  
Reactor Facility, Unit 2 (WNP-2)

Facility Docket No.: 50-397

Facility License No.: NPF-21

Annual examination assessments were made on August 22, 1991 and September 9, 1991 at WNP-2, near Richland, Washington. Operational evaluations were conducted on September 9, 1991 and September 25, 1991.

Examiners: Thomas Meadows, RV, Chief Examiner  
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Approved by:

  
L. F. Miller, Jr., Chief  
Operations Section

10/10/91  
Date Signed

Summary:

During the period of August 22, 1991 through September 25, 1991, the NRC conducted an assessment of the licensee's operator requalification program, to ensure that the significant weaknesses identified through recent previous inspections and examinations had been corrected, and that the licensee was ready for restart. This included operational evaluations, conducted by the NRC on September 9, 1991, and September 25, 1991, to assess the abilities of the remaining operating crews, necessary for unit restart, to safely operate the WNP-2 facility. The NRC concluded that the licensee had sufficiently completed their corrective actions to warrant the resumption of power operations.

Results:

The NRC inspected the licensee's current requalification scenario examination bank, and annual examination testing materials. The NRC determined that the licensee's staff could develop sufficiently challenging examinations to objectively evaluate the safe performance of WNP-2 licensed operators.

On August 22, 1991, NRC examiners observed the licensee administer annual operator simulator examinations to crews C and E. Both of these crews passed their examinations. The crews exhibited some weaknesses in crew communications. The shift manager for crew E failed his annual individual examination.

On September 9, 1991, the NRC administered an operational evaluation to crew B, and an individual requalification retake examination to the crew E shift manager that had failed his annual examination two weeks previous. The

performance of this crew was satisfactory, as well as the individual performance of the crew E shift manager. Therefore, both crew B and the shift manager passed their reexamination.

NRC examiners then observed the licensee administer annual operator simulator examinations to crew D. The crew failed overall. Two senior reactor operators (SROs) and one reactor operator (RO) of this crew, also failed their individual annual examinations. Crews D's poor performance resulted in concerns that the licensee had not adequately evaluated the crew's readiness. The licensee was asked to submit a root cause analysis for their failure to accurately assess the readiness of this crew. When crew D's additional remediation was considered adequate, the NRC administered a third operational evaluation.

On September 25, 1991, NRC examiners administered an operational evaluation to a revised crew D. One of the two SROs that had failed the annual examination was removed from the crew. One RO, that had exhibited a weak performance on the annual examination, was replaced. The NRC approved this shift manning change. This crew passed overall. They had particularly improved their communications skills. The SRO and RO that failed their annual examination on September 9, 1991, passed their NRC individual reexaminations.

## REPORT DETAILS

### 1. Personnel

#### NRC Personnel:

- \*K. Perkins, RV
- \*L. Miller, RV
- \*J. Munro, NRR/LOLB
- \*T. Meadows, RV, Chief Examiner
- \*T. Sundsmo, RV
- \*T. Walker, RI
- D. Proulx, Resident Inspector

#### WNP-2 Personnel:

- \*D. Mazur, Managing Director
- \*A. L. Oxsen, Deputy Managing Director
- \*J. Baker, Plant Manager
- \*S. McKay, Operations Manager
- \*B. Barmettlor, Manager, Nuclear License Training
- \*D. Kobus, Manager, Technical Training
- \*D. Topley, Requalification Supervisor
  - A. Hosler, Manager, Licensing
  - G. Bouchey, Director, Assurance & Licensing
  - G. Richmond, Training Specialist
  - B. Darling, Training Specialist
  - M. Evosevich, Training Specialist
  - R. Nelson, Training Specialist
  - O. J. Brooks, Training Specialist
  - S. Hutchison, Training Specialist
  - H. Elliott, Training Specialist
  - S. Wright, Scenario Development (Contractor)

- \* Identifies personnel present at the September 25, 1991 exit meeting.

### 2. Examination Preparation

The following sequence of events were conducted with the facility staff members of the examination team who had signed security agreements.

On August 14, 1991, the licensee staff met with the NRC and presented the testing materials that they had developed for the crew C, E, and D annual examinations, and the NRC operational evaluation of crew B. These documents contained all of the scenarios, written examinations, and Job Performance Measures (JPMs) necessary to test these crews.

From August 14-22, 1991, the NRC examined the licensee's intended testing materials, and determined that the licensee's staff had developed adequate objective examinations. After the test administration, the NRC determined that the licensee had objectively graded the written and walkthrough examinations.

The licensee staff developed seven new scenarios for the NRC observed annual examinations, and the anticipated NRC operational evaluation of crew B.

Following the failure of crew D to pass their annual simulator examination on September 9, 1991, the NRC conducted an additional operational evaluation for this crew on September 25, 1991. Again, new scenarios were required. The NRC and facility examination teams worked in parallel to produce two new independent scenarios each. These were all validated and run on the simulator by the joint team on September 24, 1991. The NRC then selected two scenarios for the examination.

### 3. Examination Administration and Results

On August 22, 1991, NRC examiners observed the licensee administer annual operator simulator examinations to crews C and E. The facility examination team members' scenarios were thorough, and their observations and judgment substantially agreed with the NRC examination team. Both of these crews passed their examinations, but both continued to exhibit weaknesses in crew communications. The shift manager for crew E failed his annual individual examination. In one scenario he misdiagnosed an emergency event. This was an ISCT failure. This individual also demonstrated some weakness in managing his crew's use of procedures. The ISCT failure and the low ratings this individual received in some competencies resulted in his overall failure. The NRC reexamined him with crew B as part of the NRC operational crew evaluation on September 9, 1991.

The performance of crew B during this operational evaluation was satisfactory. The performance of the shift manager that had previously failed his August 22, 1991 annual examination was also satisfactory.

On September 9, 1991, the NRC examiners also observed the licensee evaluators administering annual operator simulator examinations to crew D. The NRC commented that three instances of non-objective evaluation had occurred. The licensee agreed with these observations and remediated the evaluators concerned.

Again, the facility examination team members' efforts were thorough, and their observations and judgment appeared in substantial agreement with the NRC. However, the crew failed overall. Furthermore, two senior reactor operators (SROs) and one reactor operator (RO), of this crew, also failed their individual examinations. The NRC also recommended that one board operator be remediated in the competency of, "Understanding of Plant/Systems Response, and Crew Interactions," due to his weak performances in controlling reactor level and pressure in one scenario. The crew demonstrated inadequate ability to interact, respond to plant/systems conditions expeditiously, and recognize off normal trends/status, such that emergency conditions were not

satisfactorily mitigated. The crew and the two individual failures missed ISCTs. The crew also failed on overall competencies. In one scenario, the crew failed to recognize containment conditions requiring expeditious entry into "level/power" reactivity control emergency procedures. In another scenario, the crew failed to recognize plant conditions that required timely entry into RPV flooding emergency procedures. Both individual failures were involved with these examples. Since the licensee's program was unsatisfactory at this time, the licensee could not return this crew to operation until the NRC reexamined the failures.

The NRC expressed concerns that the licensee management had not objectively evaluated crew readiness. The licensee submitted a root cause analysis for this crew's failure. This included certification that the crew was prepared for a NRC operational reexamination. This document was received by the NRC on September 20, 1991, and the licensee's actions were judged adequate. Subsequently, the NRC returned for another operational evaluation on September 25, 1991.

On September 25, 1991, NRC examiners administered an operational evaluation to a revised crew D. One of the two SROs that had failed the annual examination was removed from the crew. One RO that had exhibited weak performance on that annual examination was replaced. The NRC approved this shift manning change. NRC concluded that this crew passed overall. They had particularly improved their communications skills. The remaining SRO and RO that required an NRC reexamination also passed their individual examinations. However, the crew was weak in the competency of, "Understanding of Plant/Systems Response." In one scenario, the crew made errors in instrument interpretation, in that they continued to believe that containment hydrogen/oxygen concentration [H<sub>2</sub>/O<sub>2</sub>] readings were valid, under emergency conditions with a station black-out of electrical power (SBO). [H<sub>2</sub>/O<sub>2</sub>] information is essential to use the primary containment control emergency procedure, which was required in this scenario. The crew apparently did not understand the system's response to a SBO (namely, the sampling systems were not available). The crew made no attempt to restore the [H<sub>2</sub>/O<sub>2</sub>] sampling systems, or validate the faulty [H<sub>2</sub>/O<sub>2</sub>] readings. The licensee acknowledged the low rating in this competency, and committed to additional training for the crew in this area.

The revised Crew D was the final crew considered necessary to reconstitute and qualify five crews prior to plant restart, per the Confirmatory Action Letter (CAL) V-91-01.

#### 4. Final Assessment and Conclusions

Operator performance in the use of EOPs and crew communications were significantly improved over previous examination results.

Facility evaluator objectivity and perceptiveness was good. The facility examination team was thorough. Their observations and judgment appeared in substantial agreement with the NRC. However, the NRC cautioned that the facility team was somewhat dependent on the leadership, objectivity and professionalism demonstrated by their lead evaluator.

The NRC determined that the licensee's staff could develop, administer, and grade sufficiently challenging examinations to objectively evaluate the safe performance of their licensed operators. This included simulator scenarios, written examinations, and Job Performance Measures (JPMs).

5. Exit Meeting

An exit meeting was held by the NRC with representatives of the licensee's staff on September 25, 1991 to discuss the NRC examination results and program assessments, identified above.

The licensee acknowledged the NRC results and conclusions.

Soon after this meeting, NRC management concluded that, regarding the matters discussed in Confirmatory Action Letter (CAL) V-91-01, the licensee's corrective actions to resolve those matters were sufficiently complete to warrant resumption of power operations at WNP-2.

ENCLOSURE 2

SIMULATION FACILITY REPORT

50-397/OL-91-03

SIMULATION FACILITY REPORT

Facility Licensee: WNP-2

Facility Docket No.: 50-397

Operational Evaluations Administered on: 9/9/91 and 9/25/91

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

The examiners noted an improvement in the simulator's ability to support in-depth EOP scenarios. However, the effort necessary for the simulator operator to input the required malfunctions and device override changes, still remained a concern.