

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/86-26

Docket No. 50-397

License No. NPF-21

Licensee: Washington Public Power Supply System
P. O. Box 968
3000 George Washington Way
Richland, Washington 99352

Facility Name: Washington Nuclear Project No. 2 (WNP-2)

Inspection at: WNP-2 Site, Benton County, Washington

Inspection conducted: September 15-20, 1986

Inspectors: R. Fish for 11/19/86
G. M. Temple, Emergency Preparedness Analyst
Team Leader Date Signed

R. Fish for 11/19/86
K. M. Prendergast
Emergency Preparedness Analyst Date Signed

Team Members: R. A. Meck, Emergency Preparedness Specialist, NRC
D. H. Schultz, Comex Corporation
G. T. Lonergan, Private Consultant

Approved By: R. F. Fish 11/19/86
R. F. Fish, Chief
Emergency Preparedness Section Date Signed

Summary:

Inspection on September 15-20, 1986 (Report No. 50-397/86-26)

Areas Inspected: Announced inspection of the emergency preparedness exercise and associated critique, and follow-up on open items identified during previous inspections. Inspection Procedures 82301 and 92701 were covered.

Results: No significant deficiencies or violations of NRC requirements were identified.

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DETAILS

1. Persons Contacted

C. Becker, Shift Manager
D. Bennett, Chemist
G. Bouchey, Director, Support Services
T. Chapman, Senior Health Physicist
R. Chitwood, Manager, Emergency Planning and Environmental Programs
T. Chrisler, Senior Training and Development
Evaluation Specialist
Y. Derrer, Senior Training Specialist
D. Gano, Lead Shift Technical Advisor
M. Gant, Senior Systems Analyst
R. Gregory, Reactor Operator
F. Klauss, Senior Emergency Planner
J. Landon, Manager, Maintenance
D. Larson, Manager, Radiological Programs
M. Lyon, Principal Health Physicist
P. Macbeth, Systems Engineer
S. Manion, Sergeant, Security
D. Mannion, Senior Emergency Planner
R. Mazurkiewicz, Technical Manager, WNP-1
R. Mogle, Senior Emergency Planner
G. Oldfield, Principal Health Physicist
D. Ottley, Supervisor, Radiological Services
D. Pisarck, Senior Health Physicist
T. Powell, Shift Technical Advisor
R. Quay, Manager, Training
F. Quinn, Principal Scientist
H. Rockey, Supervisor, Control Room
W. Sawyer, Supervisor, Control Room
M. Schmitz, Senior Training Specialist
P. Taylor, Reactor Operator
R. Walton, Principal Engineer, Performance Evaluation
S. Washington, Assistant Shift Technical Advisor
D. Whitcomb, Technical Specialist, Engineering

2. Action on Previous Inspection Findings

(Closed) Open Item (86-08-01): The licensee should try to improve the notification times (for offshift personnel) during future drills or consider streamlining the system in order to come closer to meeting the 60 minute response goal. In order to facilitate timely recall of emergency response personnel, the licensee has added one additional security guard to staff the Communications Center during backshifts. It should be noted that the licensee has budgeted and is pursuing the acquisition of an automatic dialer system to enhance the notification of offshift personnel. The licensee held an unannounced, timed response drill on September 15, 1986. The drill was initiated at 8:00 p.m., with full notifications, and all NUREG-0654, Table B-1, 60 minute responders (a total of 32) were requested to report to their duty stations. The

results of the drill showed a considerable improvement over previous drills. This item is considered closed.

(Closed) Open Item (85-26-01): The NRC expressed concerns over the number of problems associated with the notification process noted during the September 1985 annual exercise. The problems included improper activation of alerting signals, improper offsite local agency notification, failure to properly follow the procedure when making public address (PA) announcements and failure to properly follow the procedure when making notification to NRC. This open item was addressed in Inspection Report Number 50-397/86-08, however, the item remained open pending demonstration of the licensee's ability to accomplish these actions during the next annual exercise. During this inspection it was noted that the licensee had removed the procedural requirement to complete the Event Notification Form and now requires a record of information transmitted to the NRC be kept in a logbook/notebook. The licensee satisfactorily demonstrated these actions during this year's exercise with the following qualification:

- (A) The Technical Support Center (TSC) staff did not have to make any offsite local agency notifications, therefore, this matter could not be specifically evaluated. However, the TSC staff demonstrated familiarity with the other Emergency Plan Implementing Procedures (EPIPs) associated with the functioning of the TSC.

This item is considered closed.

(Closed) Open Item (85-26-02): The NRC expressed concern about the apparent lack of familiarity with the EPIPs, on the part of the TSC staff, during the September 1985 exercise. This item was addressed in Inspection Report Number 50-397/86-08, however, the item remained open pending the licensee's ability to satisfy these concerns during the next annual exercise. Although the TSC staff was not required to issue any Protective Action Recommendations (PARs) during this exercise, they expressed familiarity with the PARs being made by the Emergency Operations Facility (EOF) staff at the site area emergency (SAE) and general emergency (GE) classifications. Since the TSC staff demonstrated familiarity with the EPIPs they were required to use, this item is considered closed.

3. Emergency Preparedness Exercise Planning

The licensee's Emergency Planning and Environmental Programs (EP&EP) group has the overall responsibility for developing, conducting and evaluating the emergency preparedness exercise. The EP&EP group developed the scenario package with the assistance of licensee staff possessing appropriate expertise (e.g., reactor operations, health physics (HP)). Approximately fifteen people were involved. Persons involved in the scenario development were not participants in the exercise. The Manager, EP&EP was designated as the Drill (Exercise) Director.

The EP&EP group, in concert with the offsite agencies, established the exercise objectives. NRC Region V and the Federal Emergency Management

Agency (FEMA), Region X were provided with an opportunity to comment on the proposed objectives. The exercise document, generated in accordance with EPIP 13.14.8, Revision 3, "Drills/Exercises", included the objectives and exercise limitations, player information (guidelines), exercise scenario, messages used during the exercise, initial and subsequent plant parameters, meteorological and radiological data, controller/evaluator instructions and the critique worksheets. The exercise document was tightly controlled before the exercise. Advance copies of the scenario package were provided to the NRC evaluators and other persons having a specific need. The players did not have access to the exercise document or information on the scenario events. The exercise was intended to meet the requirements of IV.F.3 of Appendix E to 10 CFR Part 50.

Licensee controllers were stationed at each of the Emergency Response Facilities (ERFs) (e.g., Control Room (CR) Simulator, TSC, Operations Support Center (OSC) and EOF) to provide messages/data where appropriate. Controllers were also dispatched with every repair/monitoring team. A final briefing of the controllers was conducted on September 17, 1986. The contents of the exercise document were discussed in detail at the briefing. All of the NRC evaluators were present for this controllers' briefing.

4. Exercise Scenario

The exercise scenario started with an event classified as an unusual event (UE) and ultimately escalated to a GE condition. The initiating event was based on high winds (greater than 80 miles per hour (mph)). Later, an alert (A) was declared based on the loss of the Standby Service Water system (loss of ultimate heat sink cooling capability). The SAE was based on "significant" fuel failure as determined by a reactor coolant sample (RCS). A GE was declared later after a large jet engine dislodged from an airplane, penetrated the steel siding of the reactor building and skimmed the top of the spent fuel pool, splashing water from the pool. This resulted in a "puff", unmonitored release. It should be noted that the licensee was requested by the NRC to develop a scenario which allowed for 2 hours at the SAE level and 3 hours at the GE level. The purpose of the time restrictions was to provide adequate time for the NRC to exercise its base, site and headquarters emergency teams. Some peripheral events were included during the NRC requested periods of time to keep the players involved.

5. Federal Evaluators

Five NRC inspectors evaluated the licensee's response. Inspectors were stationed in the CR/Simulator, TSC, OSC, EOF and in the Meteorological and Unified Dose Assessment Center (MUDAC). The NRC inspector who was assigned to the OSC accompanied repair/monitoring teams in order to evaluate their performance.

FEMA, RX evaluators were also present during the exercise. The FEMA team of evaluators (approximately 30 individuals) were evaluating those portions of the exercise that involved State and local agencies, as well as the interface occurring at the EOF. The results of FEMA's evaluation

of the State and local participation will be described in a separate report issued by FEMA.

6. Control Room/Simulator

The following aspects of CR operations were observed during the exercise: detection and classification of emergency events, mitigation, notification and PARs. The following are NRC observations of the CR activities. The "open" item is of sufficient importance to warrant NRC examination during a future inspection. The other observations, as appropriate, are intended to be suggestions for improving the program.

- a. Evaluation of equipment failures and status to determine Limiting Conditions for Operations (LCOs) described in the Technical Specifications was prompt and thorough by the CR crew.
- b. Recognition and evaluation of plant conditions which led to elevated classifications were prompt and in accordance with EPIP 13.1.1, Revision 3, "Classifying the Emergency".
- c. The Shift Manager (SM) periodically (approximately every 30 minutes) conducted crew briefings to ascertain current plant status and determine courses of actions. It should be noted that the lack of briefings caused some information flow delays during the 1985 exercise.
- d. The following observations may be associated with using the simulator as the control room.
 - i. Troubleshooting of the fire main system was initiated promptly using the proper Abnormal Condition Procedure and Fire Main Diagram. However, the Fire Main Diagram in use in the simulator was not a "Controlled Copy" diagram and could be in error.
 - ii. The Startup Testing and Reporting (STAR) system (a sub-system of the Transient Data Acquisition System (TDAS)) has a program error in that the point description for the Primary Containment Loss of Coolant Accident (LOCA) Monitors A&B really applies to Monitors E&F. This problem may not be confined to just the simulator. The Region intends to track the resolution of this matter as "open" item (86-26-01).
- e. The following information flow problems were noted during the exercise:
 - i. The SM who was acting as the Plant Emergency Director (PED) was never informed of the loss of contact with Patrol Number 3 at 0753 and that the security organization had entered a security alert condition at 0755.
 - ii. Communication of plant status between the OSC, TSC and CR staffs was occasionally poor. For example, Train B of the Service Water system was restored by maintenance activity at

0905. This plant status was not reported to CR personnel until 0955. This caused a delay in the commencement of plant cooldown. (It should be noted that the TSC was given this information by a controller at 0952, because the OSC had not reported back with the status. Numerous instances of direct radio communication between the CR and inplant repair teams occurred due to the lack of adequate communication (information flow) via the normal channel of OSC, to TSC, to CR.

- f. The PED did not authorize the release of information on the Fixed Nuclear Facility (FNF) Emergency Notification Form that had been completed by the Shift Technical Advisor (STA). Additionally, the PED did not "verbally transmit the information on the FNF Emergency Notification Form" as required by EPIP 13.4.1 (Revision 4), "Notifications." EPIP 13.1.2 (Revision 3), "Plant Emergency Director Duties," does not include this "authority to notify" responsibility in the section (13.1.2.1) where the nondelegable responsibilities are addressed. Planning Standard B.4 in NUREG-0654 states that the decision to notify offsite agencies is a nondelegable responsibility of the PED/Emergency Coordinator. The intent of this standard is to establish one person who is in control of the information being disseminated to the offsite agencies. With the current (licensee) system, erroneous information could be recorded on the FNF Form and transmitted to the offsite agencies, without the knowledge or approval of the PED. Section 4 of NRC Inspection Report No. 50-397/85-13 also discusses this matter.
- g. The STA prepared an Event Notification Form, Part 1, (an NRC notification form) from a superceded revision of EPIP 13.10.2, "STA Duties". This form was used as an information source from which an informal notification to NRC was made. The inspector noted that Attachment E to EPIP 13.4.1 is the desired NRC notification format, but the STA found it to be illegible, and thus chose not to use it.

As noted in Section 2. above, the use of this form is no longer required by EPIP 13.4.1. However, based on the observations made in the CR and TSC during this exercise, the method used to document the information being provided to the NRC is not consistent. The licensee should evaluate whether it would be prudent to develop a method for documenting the information being transmitted to the NRC in a more consistent and formal manner (e.g., have everyone use the same form or use one log book that is passed from the CR to the TSC).

- h. Use of procedures was casual. On some occasions not all procedures, nor all steps of procedures, were referred to and used to assure that all functions were performed. For example, the Abnormal Condition Procedure for Abnormal Radioactivity Release (PPM 4.12.1.1) was not referred to at all on receiving the elevated stack radioactivity release indication at 0940 and the PED's checklist (attachment B to EPIP 13.1.2) was not used.

7. Technical Support Center

The following aspects of TSC operations were observed: activation, accident assessment/classification, dose assessment, notifications, PARs and CR support. The following are NRC observations of the TSC activities. The observations, as appropriate, are intended to be suggestions for improving the program.

- a. The TSC was managed very well. For example, activation of the TSC was not hampered in spite of the fact that they were missing a key person (TSC Director). The appropriate steps were taken to replace this individual with someone qualified to fill the position, without leaving a vacancy in another required position.
- b. Transfer of responsibilities between the CR, TSC and EOF were systematic and effective.
- c. Refer to Section 2. for observations related to notifications and PARs in the TSC.
- d. Scenario irregularities resulted in the TSC staff having to be defaulted into the SAE. However, the TSC staff was also delayed in the classification because of some specific wording used in EPIP 13.1.1, "Classifying the Emergency". It is suggested that the word "significant", as it applies to failed fuel, be defined in order to allow for consistent classifications in a timely manner.

8. Operations Support Center

The following OSC operations were observed: activation of the facility, functional capabilities and disposition of the various implant/monitoring teams. The following are NRC observations of the OSC activities. The "open" item is of sufficient importance to warrant NRC examination during a future inspection.

- a. OSC personnel demonstrated a positive aggressive attitude and professionalism in their approach to the situations presented by the scenario and in seeking solutions to assigned tasks.
- b. The effectiveness of the OSC was hampered due to poor team briefings and debriefings. Briefings were rushed and unstructured. Team briefing forms were completed after the briefings with information obtained from team members, rather than the information being provided to them. The team briefing forms were not thoroughly completed. With respect to the debriefings, the lack of a structured debriefing resulted in a failure to provide the OSC managers with complete information in a timely manner for transmission to those individuals in the CR and TSC. The resolution of this matter will be tracked as "open" item (86-26-02).

9. Emergency Operations Facility

The following EOF operations were observed: activation of the facility, functional capabilities, offsite dose assessment and interface with

offsite officials. The following are NRC observations of the EOF activities. The "open" items are of sufficient importance to warrant NRC examination during a future inspection. The other observations are intended to be suggestions for improving the program.

- a. On two occasions, the FNF form used for making notifications to the offsite agencies was not accurately or thoroughly completed. This led to the transmission of erroneous information. For example, at the Unusual Event (UE) classification, the type of incident and the basis for the classification were omitted. At the alert classification, an erroneous basis for the classification was listed. The licensee needs to examine their notification procedure and determine the appropriateness of adding a step which would require verification/approval of the information, prior to transmission from the EOF Communication Center. This matter will be tracked as "open" item (86-26-03).
- b. The first aid response was hampered because personnel responding to the first aid room were unfamiliar with the location of the first aid supplies and the location of the key to the room. It should be noted that some significant alterations have recently been made to the first aid room. This facility has been altered so that it can also be used as a drug testing center. It is suggested that the licensee address these matters during training.
- c. With respect to the operation of the Meteorological and Unified Dose Assessment Center (MUDAC), subsequent to the exercise, the licensee determined that MUDAC had experienced some problems coping with the unmonitored release presented in the scenario. It should be noted that the Federal Emergency Management Agency has identified a problem related to MUDAC operations. Region V intends to track the resolution of this issue as "open" item (86-26-04).
- d. Noise levels in MUDAC had a negative effect on communication flow. Public address announcements could not be heard and briefings were not interactive.

10. Critiques

Immediately following the exercise, critiques were held in each of the ERFs. Players completed critique sheets and submitted them to the lead controller at the facility. The EP&EP Manager and his staff summarized these findings for the NRC observer team during a September 19, 1986 meeting. The Director, Support Services was also present for this meeting. The licensee agreed to forward a copy of their final exercise evaluation report to the Region, upon its completion.

The following represent some of the licensee's exercise findings as presented to the NRC observer team during the September 19 meeting.

- a. The dose assessment team in MUDAC did not know that protective actions had been implemented by the offsite agencies.

- b. Personnel responding to the "man down" did not initially call for assistance as prescribed by procedure.
- c. The Radiological Emergency Manager (REM) was tied up with the telephone to the extent that it affected his ability to support the Recovery Manager (RM).
- d. The MUDAC did not change the decay time to accommodate the 42 day decay of the most recently irradiated fuel.
- e. Team debriefings at the OSC were not adequate.

11. Exercise Summary

FEMA held a briefing on Saturday, September 20, 1986, to present a general summary of their exercise findings to the offsite participants. This briefing was held at 8:00 a.m. at the Federal Building in Richland, Washington. The NRC Team Leader was present for this briefing. A public briefing was conducted at 10:00 a.m. at the same location. The purpose of this latter briefing was to present a summary of the exercise findings, specifically for members of the public and media. FEMA, NRC, the State of Washington, and representatives from Benton and Franklin counties and the licensee summarized the exercise results from their standpoint.

12. Exit Interview

An exit interview to discuss the preliminary NRC findings was held on September 19, 1986. The attachment to this report identifies some of the personnel who were present at the meeting. The NRC was represented by the five evaluator team members and G. Cook, Region V Public Affairs Officer. The licensee was informed that no significant deficiencies or violations of NRC requirements were identified during the inspection. The findings/observations presented in Detail Sections 2, 6, 7, 8 and 9 were mentioned except for 9c. The specific category of all observations (i.e., improvement item, open item) was not provided during the exit interview. The licensee was informed that the previously identified "open" items (Section 2 above) would be closed.

ATTACHMENTEXIT INTERVIEW ATTENDEESA. Licensee Personnel

J. Baker, Assistant Plant Manager
G. Bouchey, Director, Support Services
R. Chitwood, Manager, Emergency Planning and Environmental Programs
K. Cowan, Manager, Plant Technical
R. Graybeal, Manager, Health Physics/Chemistry
D. Larson, Manager, Radiological Programs
J. Martin, Assistant Managing Director, Operations
C. Powers, Plant Manager
G. Sorensen, Manager, Regulatory Programs

B. Other Personnel

W. Fitch, Executive Secretary, Washington State Energy Facility Site
Evaluation Council
D. Williams, Bonneville Power Authority