U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/88-25

Docket No. 50-397

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: July 19-22, 1988

Inspector: G.M. Good, Emergency Preparedness Analyst — Date Signed: 8/25/88

Approved by: R. F. Fish, Chief, Emergency Preparedness Section — Date Signed: 8/26/88

Summary:

Inspection on July 19-22, 1988 (Report No. 50-397/88-25)

Areas Inspected: Unannounced, routine inspection in the area of Operational Status of the Emergency Preparedness Program (procedures, facilities, organization and management control, and training) and follow-up on four open items identified during previous emergency preparedness inspections. Inspection procedures 82701 and 92701 were used.

Results: No deficiencies or violations of NRC requirements were identified. This report documents concerns regarding the licensee's classification procedure (EPIP 13.1.1). Specific concerns include ambiguous wording, the lack of guidance in certain areas, the potential for inconsistent implementation and the adequacy of training on EPIP 13.1.1. These matters are addressed in Section 3 of this report.

DETAILS

1. Persons Contacted

C. J. Becker, Shift Manager
R. A. Chitwood, Manager, Emergency Planning and Environmental Programs
Y. E. Derrer, Principal Training Specialist
L. J. Garvin, Manager, Programs and Audits
N. L. Hancock, Shift Manager
M. G. Kappl, Shift Manager
A. F. Klauss, Senior Emergency Planner
D. H. Mannion, Senior Emergency Planner
T. C. Messersmith, Principal Training Specialist
R. D. Mogle, Senior Emergency Planner

2. Action on Previous Inspection Findings (Inspection Procedure 92701)

(Closed) Open Item (87-12-02): NRC Headquarters to decide on adequacy of EALS that are not consistent with NUREG-0654. In a memorandum to the Office of Nuclear Reactor Regulation (NRR), Emergency Preparedness Branch, dated June 30, 1987, Region V requested a headquarters level evaluation of the licensee's emergency classification and emergency action levels (EALS). NRR responded to the Region's request in a memorandum dated January 27, 1988. The response supported the Region's position that: 1) the licensee's fire EALS were not consistent with NUREG-0654; 2) the licensee's EAL for the unusual event (UE) relating to Technical Specifications was not consistent with NUREG-0654, and; 3) the licensee's entire EAL scheme was undermined by the use of the ambiguous criterion of "judgement" which would be applied by the decisionmaker after a technical assessment has been made. Emergency Plan Implementing Procedure (EPIP) 13.1.1, "Classifying the Emergency" was revised on May 23, 1988 to resolve the aforementioned concerns. This item is considered closed.

(Closed) Open Item (87-12-03): Loss of onsite AC power not incorporated into EPIP 13.1.1. Based on NRC comments made during a pre-licensing review of the licensee's emergency classifications and EALs, the licensee stated in an October 3, 1983 internal memorandum that an addition to EPIP 13.1.1 would be made to incorporate the loss of onsite AC power capability. This addition was included in Revision 5 to EPIP 13.1.1, dated May 23, 1988. This item is considered closed.

(Closed) Open Item (87-12-04): Two improvements to EPIP 13.1.1: Clarify when an EAL can be met without declaring an event; eliminate use of "consider." Revision 5 to EPIP 13.1.1, dated May 23, 1988, has provided specific examples when EALs can be met without declaring an event. For example, the licensee has included a partial list of shutdowns, due to exceeding Technical Specification limits, that may not require declaration of a UE. Also, several EALs now include the words "except for transient conditions consistent with expected plant operation (design)." There is still some potential for inconsistencies in classifications due to the ambiguous wording. The other part of this

item involved the discretionary aspects of the procedure, such as reference to "judgement" and statements that indicated that users only had to "consider" declaring events if EALs were met. All of these qualifying statements have been removed by Revision 5 of EPIP 13.1.1. This item is considered closed.

(Closed) Open Item (88-06-01): Reexamine the licensee's method for determining auditor qualifications. During a previous inspection that included the annual audit of the emergency preparedness program (10 CFR 50.54(t)), it was determined that the licensee's ability to evaluate health physics drills (environmental, Post Accident Sampling System (PASS), etc.) could be limited because none of the team members had expertise in health physics and chemistry. The licensee's method for determining auditor qualifications was reviewed during this inspection. Discussions with Quality Assurance (QA) personnel were held and QA Instruction (QAI) 18-2 was reviewed. QAI 18-2 was found to be consistent with Regulatory Guide 1.145, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants". Discussions with QA personnel disclosed that the auditor who had been previously interviewed actually had more health physics related experience than was indicated during the earlier inspection. The auditor stated that he did not evaluate the analysis portion of a PASS drill, because he did not have chemistry experience. QA personnel also stated that there are individuals who possess the specialized experience or training needed to evaluate health physics/chemistry, and environmental monitoring drills. As an aside, QA personnel indicated that they were attempting to get Emergency Preparedness personnel from another plant in Region V to participate in future 50.54(t) audits. This item is considered closed.

3. Operational Status of the Emergency Preparedness Program (Inspection Procedure 82701)

A. Changes to the Emergency Preparedness Program

To determine if any changes to the emergency preparedness program had been made which could affect the overall state of emergency preparedness, the inspector addressed the following areas: 1) changes to EPIPs; 2) changes to emergency response facilities (ERFs); and, 3) organization and management control.

1) Procedures

The Region V Emergency Preparedness Section performs an annual review of some changes to the licensee's EPIPs. This review was accomplished in the office, prior to this inspection. The following procedures were reviewed:

13.1.1, Revision 5, "Classifying the Emergency"

13.1.2, Revision 6, "Plant Emergency Director Duties"

13.2.5, Revision 3, "Bomb Threats"

13.4.1, Revision 6, "Notifications"

The questions/comments which were generated as a result of the review of these procedures were discussed with licensee Emergency Planning personnel during this inspection. Although many of the comments/questions were editorial in nature, or involved internal inconsistencies, the following matters warranted additional attention or consideration.

a. EPIP 13.1.1, Attachment A, A.1.a - The licensee has changed its UE EAL of LoLo reactor vessel water level (-50 inches) to exclude those situations when level 2 is reached due to "momentary transients below the LoLo level that are consistent with expected plant design". NUREG-0654 states that "Emergency Core Cooling System (ECCS) initiated and discharge to vessel" is an example of a UE initiating condition. Since High Pressure Core Spray (HPCS) initiates when level 2 is reached, the licensee's procedure is not totally consistent with the guidance in NUREG-0654. The licensee added this qualifying statement to the EAL to account for a loss of feedwater trip. According to the licensee, when a Boiling Water Reactor (BWR) trips due to the loss of feedwater, the water in the reactor vessel shrinks and eventually the level drops to level 2, causing the HPCS to initiate and reactor vessel level is recovered in a matter of seconds. On the surface, the licensee's position appears to be reasonable; however, the following points need to be considered: 1) Can plant operators quickly determine if the transient is consistent with expected plant design? 2) Could momentary recovery of level mask a small break loss of coolant accident (LOCA), thereby delaying classification of a UE? 3) Do all Shift Managers (SMs) have the same understanding of "momentary" and "expected plant design"? The inspector discussed the EAL with several NRC representatives. Based on these discussions the licensee's proviso will receive additional review from several perspectives and the inspector will inform the licensee's Manager, Emergency Planning and Environmental Programs (EP&EP) of the results of our assessment. This matter will be tracked as Open Item 88-25-01.

b. EPIP 13.1.1, Attachment A, A.2.a - Reference to occasions where "the normal level of plant safety has degraded, or is imminent" will require judgement on the part of the plant operating staff and could lead to inconsistent classifications.

Response-Emergency Planning personnel agreed with this statement and indicated they would attempt to clarify this matter in a future procedure revision. Any changes would have to be approved by the Plant Operating Committee (POC).

c. EPIP 13.1.1, Attachment A,A.2.a.2 - Reference to situations "that have only long-term safety concerns or

that involve surveillance or operability requirements which result in no immediate safety threat" will require judgement and could lead to inconsistent classifications.

Response-Emergency Planning personnel agreed with this statement.

d. EPIP 13.1.1, Attachment A, C.2.c.3 - This EAL provides for a Site Area Emergency (SAE) for any natural or man-made events that "jeopardize the plant safety systems to the point of inadequate control of the plant." The phrase "inadequate control of the plant" connotes a more serious situation than might be indicated by an SAE declaration. This terminology was not used in NUREG-0654 and the licensee has not defined the phrase in EPIP 13.1.1. NUREG-0654 states that an SAE declaration is warranted for "Severe natural phenomena being experienced or projected with plant not in cold shutdown". NUREG-0654 provides for a General Emergency (GE) for "Any major internal or external events (e.g., fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems resulting in any of the above". The BWR sequences that precede this sentence in NUREG-0654 refer to core melt/degradation situations where the loss of containment integrity may be imminent. The inspector did not confirm whether the licensee's training program provided the decisionmakers with a clear understanding of "inadequate control of the plant" such that consistent implementation can be expected. The inspector will revisit this issue in a subsequent inspection to determine if licensee decisionmakers can classify this type of event consistent with NUREG-0654. This matter will be tracked as Open Item 88-25-02.

Response-Emergency Planning personnel stated they would propose a procedure revision to POC to correct this matter.

e. EPIP 13.4.1, "Notifications" - This procedure does not reflect the requirements of 50.72(c)(1). This regulation states in part that an immediate, follow-up notification (to the NRC) is required for "any change from one emergency class to another". The licensee's EPIP makes no distinction between initial classification and reclassification notifications. Pending the procedure revisions and subsequent training of appropriate emergency response personnel, this matter will be tracked as Open Item 88-25-03.

Response-Emergency Planning personnel proposed revising the applicable procedure.

The other comments/questions which were discussed with the Emergency Planning staff but not resolved during the inspection

were of a lower level of importance and will be monitored through the normal inspection process. Due to the significance of the changes made to EPIP 13.1.1, the Region intends to increase its scrutiny of the licensee's implementation of this procedure.

2) Facilities

No significant changes have been made to the licensee's ERFs since the last inspection of this area (May 1987).

3) Organization and Management Control

Since this area was last inspected, two notable changes have occurred which affect management control and the emergency response organization. As of April 1988, the position of Director, Support Services has been vacant, due to a reassignment. As a result, the Manager, EP&EP has been reporting directly to the Assistant Managing Director for Operations who was appointed to the position in August 1987.

The Assistant Managing Director for Operations has completed all of the required Emergency Plan (EP) training and is now considered to be the primary individual to fill the position of Recovery Manager (RM) in the emergency response organization. Formerly, the Director, Support Services functioned as the primary RM. These changes are not expected to have an affect on the overall state of emergency preparedness.

B) Training

The inspector discussed changes to the EP training program, verified that training was being conducted and interviewed a small sample of selected individuals to determine whether they had been properly trained and understood their emergency responsibilities. The recent changes to EPIP 13.1.1 were emphasized during this part of the inspection.

The following changes have been made to the EP training program:

1) A specific lesson plan has been developed for General Radiation Orientation for the offsite agencies. State participation has increased.

2) A lesson plan for Hospital Support (given to local hospital personnel) has been developed.

3) A detailed lesson plan for exercise controllers and evaluators has been developed.

4) Licensed operator requalification training cycles have been changed from six weeks to five weeks. This has a slight impact on EP training in that the affected individuals receive EP training during the sixth training week. This should not have a long-range affect; however, during the transition from six

weeks to five weeks, a week of training was lost. This means that EP training for all shifts had to be postponed on one occasion. This is significant because it means that the SMs, who initially function as the Plant Emergency Director (PED) during an emergency, had not received any specific EP training on the revised EPIP 13.1.1, outside of the required reading portion of the licensed operator training. It should be noted that a memorandum from the Plant Manager had been distributed along with the revised procedure to call attention to some of the changes (elimination of the discretionary aspects and the Technical Specification shutdown UEs).

To determine the scope of the EPIP 13.1.1 training provided during the requalification training, the inspector had a discussion with one licensed operator instructor and reviewed the required reading book. The required reading book contained the memorandum from the Plant Manager, a marked-up copy of the new procedure and the old procedure. The marked-up copy indicated where changes had been made and noted the reason for the change. During the review of the new EPIP 13.1.1, the inspector noted that the portion of the procedure that covered Technical Specification shutdown UEs stated that the change amounted to "simpler words". The inspector pursued this matter because this was in fact a significant change to the procedure. Based on the discussion with the licensed operator instructor, the inspector concluded that the instructor did not understand the meaning of this significant change. This matter will be further addressed below.

The inspector reviewed the records maintained by the EP training instructor to verify that training was being conducted. This review showed that training was essentially 100 percent up-to-date.

To test the effectiveness of part of the licensee's EP training program, the inspector interviewed three SMs. SMs were chosen because in the early stages of an emergency, they are responsible for event declaration, protective action recommendations (PARs), etc., until relieved by the PED. In addition to being asked general questions about their emergency responsibilities as PED, each SM was asked to classify four different (unrelated) emergency events and provide PARs for onsite personnel and the general public. The results of the interviews were as follows:

- 2 of 3 of the SMs were not aware of the Technical Specification shutdown UE change in EPIP 13.1.1
- all of the SMs were aware that the discretionary aspects had been removed from EPIP 13.1.1
- none of the SMs were aware that the fire related EALs had been changed

- none of the SMs were aware of the notification requirements of 50.72(c)(1) (all were familiar with the notification procedure) (see Open Item 88-25-03 in details Section 3, A 1)e above)

- all of the SMs displayed less confidence when asked questions related to dose projections as they relate to PARs (affected sections, source terms, minimum data parameters required to compute) - answers were considered passable

- regarding definition of significant failed fuel, 2 SMs stated that significant meant 20%, 1 said any amount is significant

  (Note: According to the Manager, EP&EP, Plant Procedures Manual (PPM) 9.3.22, Core Damage Evaluation, defines significant as 2%. PPM 9.3.22 is referenced in EPIP 13.1.1. Subsequent to the inspection, the inspector was informed that PPM 9.3.22 has not been formally issued; therefore, specific guidance in this area has not been provided to SMs/PEDs.)

- all of the SMs stated that they would make the required telephone notifications to upper plant management and the NRC, rather than delegating these tasks

- none of the SMs had recently participated in an emergency response drill or exercise (drill/exercise participation ranged from 2 to 5 years ago)

- 2 of 3 SMs correctly classified all four events

  (Note: The event that was misclassified by the SM involved a scenario that resulted in loss of all of the Control Room annunciators. According to NUREG-0654, this event should be classified as an Alert; however, because EPIP 13.1.1 does not directly address this situation, one SM declared a UE. The inspector became aware that the second and third SMs had discussed this event situation with the first one, prior to their interview. Discussions with one of these two disclosed that he would have declared a UE if he had not been prompted.)

Based on the information obtained during the training portion of this inspection, the inspector concluded the following:

i. There is a need for additional effort to ensure that all licensed operator instructors have a thorough understanding of EPIP 13.1.1.

ii. The inspection raised questions regarding the current level of training provided to PEDs/SMs and whether it is sufficient. Emphasis should be placed on drill

participation (i.e., opportunities for practice) and training provided subsequent to major procedural revisions.

iii. There is a need to ensure that all PEDs/SMs are aware that the required notifications (offsite agencies, NRC, etc.) do not have to be made by the PED/SM exclusively. If the PED/SM determines that current plant status/Control Room operations requires his/her attention, this duty should be delegated.

iv. EPIP 13.1.1 needs to be reexamined to see whether it provides enough guidance for PEDs/SMs to allow for an Alert declaration in the event of loss of most or all Control Room annunciators. This matter will be tracked by the Region as Open Item 88-25-04.

v. Guidance regarding the meaning of "significant failed fuel" needs to be made available to the appropriate staff. Resolution of this matter will be tracked as Open Item 88-25-05.

4. Exit Interview

An exit interview was held on July 22, 1988, to discuss the preliminary findings of the inspection. The attachment to this report identifies the licensee personnel who were present at the meeting. In addition to the inspector, the NRC was represented by Mr. C. Bosted, Senior Resident Inspector. During the exit interview, the licensee was informed that it appeared there were no violations of NRC requirements identified. The inspector summarized the findings identified in Sections 2 and 3; however, some of the open items were not specifically identified as such.

During the exit interview, the inspector also discussed the exception that had been added to the licensee's symptomatic EAL of "LoLo reactor vessel water level (-50 inches)" in EPIP 13.1.1. The EAL provides for a UE declaration whenever this level is reached, "except for momentary transients below the LoLo level that are consistent with expected plant design". The inspector stated she was aware that an NRC Task Force to reevaluate the NUREG-0654 EAL guidance was being established and that she would attempt to find out whether ECCS initiation and injection would remain an example initiating condition for a UE declaration. The inspector stated that in her opinion the change made to the procedure was not appropriate because it would allow for a loss of feedwater trip with HPCS injection, without declaring a UE; a situation that places the licensee in a position of not being consistent with NUREG-0654.

Subsequent to the inspection, the inspector was informed that the EAL guidance was being designed for Headquarters Operations Center personnel use only. This information was relayed to the licensee during a telephone conversation.

ATTACHMENT

EXIT INTERVIEW ATTENDEES

J. W. Baker, Assistant Plant Manager, WNP-2
G. D. Bouchey, Director, Licensing and Assurance
R. A. Chitwood, Manager, Emergency Planning and Environmental Programs
Y. E. Derrer, Principal Training Specialist
J. D. Houchins, Emergency Planner
A. F. Klauss, Senior Emergency Planner
D. H. Mannion, Senior Emergency Planner
T. C. Messersmith, Principal Training Specialist
R. D. Mogle, Senior Emergency Planner
C. M. Powers, Plant Manager, WNP-2
R. B. Quay, Manager, General and Technical Support Training
G. O. Ray, Emergency Planner
R. R. Stickney, Manager, Technical Training
D. M. Werlau, Supervisor, Health Physics/Chemistry and General Employee Training