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## **Quality Department Audit Report**

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# **WNP-2 EMERGENCY PREPAREDNESS PROGRAM**

**Audit 297-005**

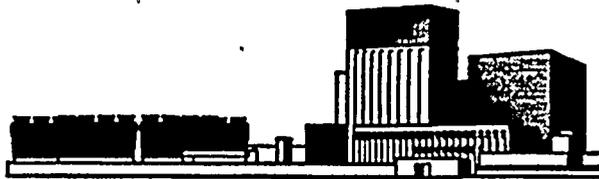
**March 31, 1997**

**Audit Dates:** February 24, 1997 - March 14, 1997  
**Entrance Meeting:** February 24, 1997  
**Exit Meeting:** March 17, 1997



**WASHINGTON PUBLIC POWER  
SUPPLY SYSTEM**

**Quality Department Audit Report**



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PROGRAM**

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**WASHINGTON PUBLIC POWER  
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**EXECUTIVE SUMMARY**

An independent audit of the WNP-2 Emergency Preparedness (EP) Program is performed at least once every twelve months as required by 10CFR 50.54(t). The audit team assessed specific areas as required by NUREG 0654. Additionally, effectiveness of previous corrective actions related to minimum staffing requirements and concerns with Post Accident Sampling System availability were reviewed. The results of the audit indicate that the WNP-2 Emergency Preparedness Program meets the applicable regulatory requirements within the areas assessed.

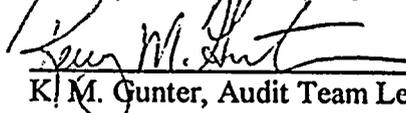
The Emergency Preparedness organization has continued to demonstrate a strong desire for self-improvement. This was illustrated by their performance of a self-assessment issued in February 1997 which identified several areas for enhancement. Quality agrees with the areas identified in the self-assessment and urges Emergency Preparedness to implement the recommendations.

The audit team observed the training drill performed by Team D on February 26, 1997, and noted several areas for improvement; primarily in the areas of drill control, communications, and personnel performance. One Problem Evaluation Request (PER) was issued due to observed difficulties in performing dose assessment in the Control Room.

Another area for improvement is the maintenance of Emergency Preparedness related facilities and equipment. The audit team determined there were inadequate controls in place to assure facilities and equipment are maintained as described in the Final Safety Analysis Report (FSAR). Two PERs were issued documenting less than adequate controls. One PER documents ineffective corrective actions taken to return an FSAR component to service. The second PER documents the lack of specific procedures/instructions for maintaining the license basis requirements for non-power block facilities.

Ten Quality Recommendations were issued as a result of this audit.

  
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J. J. Muth, Supervisor, Quality Services

  
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Audit Team

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## PURPOSE AND SCOPE

This annual audit of Emergency Preparedness is required by Title 10 of the Code of Federal Regulations, Part 50.54(t).

Audit activities demonstrated that the WNP-2 Emergency Preparedness Plan and implementing procedures included the requirements of 10CFR50, Appendix E and met the intent of NUREG 0654. The following areas required by NUREG 0654, Section II.P.9 and implemented in WNP-2 Emergency Plan, Section 8.3 were assessed:

- Emergency Plan and Implementing Procedures
- Emergency Response Organization Training
- Readiness Testing - Exercises and Drills
- Facilities and Equipment
- Interfaces with State and Local Governments and Agencies

Additionally, the effectiveness of corrective actions associated with minimum staffing issues and Emergency Preparedness Self-Assessments were evaluated. A review of the Post Accident Sampling System availability concerns was also performed.

## REPORT DETAILS

### SECTION 1.0 - Emergency Plan and Implementing Procedures

The process for reviewing and approving the Emergency Plan was evaluated. The Emergency Plan is reviewed, updated, and approved as required. There is a predefined work activity in PASSPORT, "E-Plan Review," that is used to schedule and track this review. Although each annual review has coincided with a revision to the Plan, provisions exist to review the plan annually and "certify" this review, if the Plan is not being revised. The manual control process is used to distribute the plans to controlled copy holders, including the offsite agencies and the Nuclear Regulatory Commission (NRC).

At the request of EP management, the audit team compared the WNP-2 Emergency Plan and implementing procedures to the criteria in NRC Temporary Instruction 2515/134, "On-shift Dose Assessment Capability." The NRC instruction criteria evaluates a commitment to performing on-shift dose assessment using real time effluent and meteorological data at all times. Section 2.2 of the Emergency Plan states that "On-shift staffing....includes adequate numbers of qualified personnel to perform....dose assessments within time requirements." Revision 18 of the Emergency Plan does not specify which on-shift position executes dose assessment duties, but an in-process draft revision identifies this responsibility.

Section 5.1 of the Emergency Plan outlines assessment activities during declared emergencies, but does not commit to performing assessment activities at either the Unusual Event or Alert level. Therefore, the Emergency Plan does not fulfill the guidance in the

NRC instruction since the Emergency Plan commits to the use of real-time data only at the Site Area or General Emergency, rather than at all times. The following recommendation is issued to address this concern:

**QUALITY RECOMMENDATION (AU297-005-A)**

*Revise the E-Plan to clearly commit to the performance of dose assessment by on-shift personnel utilizing real-time meteorological and radiological effluent data at all times.*

The NRC instruction criteria for implementing procedures for performing dose assessments specifies that procedures be in place to initiate dose assessment by on-shift personnel and that the procedures use real-time effluent and meteorological data. Implementing procedure Plant Procedure Manual (PPM) 13.10.1, "Control Room Operators and Shift Manager Duties," directs the performance of dose assessment and protective action recommendations by on-shift personnel upon detection of off-normal or abnormal radiological effluent releases. PPM 13.8.1, "Emergency Dose Projection System Operations," directs the use of the Quick Emergency Dose Projection System (QEDPS) in the Control Room for performing dose assessment. The procedure has a specific step (step 4.2.5) directing entry of meteorological data, but does not have a step directing entry of real-time radiological data. It appears that the step 4.2.3 allows entry of actual data, but if the procedure is followed verbatim, default data could be used instead of real-time data.

During the review of PPM 13.8.1, other areas for enhancement were also noted. Step 4.2.4 of PPM 13.8.1 requires the calculation of dose using a duration that incorporates releases that have already occurred. This may conflict with Emergency Plan guidance to make protective action recommendations based on the dose to be avoided by the action relative to the risk associated with implementing the action. Another enhancement would be to address the performance of dose assessment when unmonitored pathways are involved, i.e. steam line break with release through a blow-out panel.

To conform with the guidance in the NRC temporary instruction and to incorporate the above noted enhancements, the following recommendation is offered:

**QUALITY RECOMMENDATION (AU297-005-B)**

*Revise PPM 13.8.1 to:*

- *Require the use of real time radiological effluent data*
- *Account for releases that have already occurred*
- *Provide actions for unmonitored pathways*

**SECTION 2.0 - Emergency Response Organization Training**

The audit team evaluated the Emergency Response Organization (ERO) training program administration to determine if the guidance in the Emergency Plan was consistent with the implementing procedures. According to the Emergency Plan, essential personnel receive specialized initial training in the duties and responsibilities of the position and the

applicable procedures. Augmenting positions receive training as specified in the implementing procedures and the Emergency Preparedness Training Course Catalog. Position training requirements are identified in the Emergency Position Training Matrix included in the course catalog.

The Emergency Preparedness Course Catalog requires that Shift Technical Advisors (STAs) complete training on the Quick Emergency Dose Projection System (QEDPS), course code 82-EDP-0300-LP. Training records for 1996 were obtained for all active STAs. Two active STAs did not appear on the list as taking the QEDPS course. Discussions with Operations Training personnel revealed that these two STAs received dose projection training as part of the requalification program, course code LR-000-291X-XX. During the requalification cycle, the lesson plan used is the 82-EDP-0300-LP, but the method of tracking in PQD uses the requalification code. The course catalog should be updated to include the requalification course as meeting the requirements for dose projection training.

The audit team noted inconsistencies in the guidance for evaluation of training. The Emergency Plan, Section 8.6.1, identifies that initial specialized training for essential personnel will include written examinations. PPM 13.14.5, Emergency Response Organization and Training, Section 4.2.4.3 states that a written examination is normally required for initial training. Section 8.8 of the Emergency Plan describes the annual retraining program which identifies several options for training evaluation, which may include written examinations. PPM 13.14.5 does not discuss examinations for refresher training. There is no regulatory guidance requiring written examinations for training. It was noted that the lesson plan for the QEDPS training provides for approximately one hour of classroom instruction and one hour of hands-on training, which requires the completion of sign-off forms. Both lesson plans call for the use of a Job Performance Measure (JPM) as a means of evaluating performance rather than a written examination. The need for written examinations needs to be clarified in the Emergency Plan and consistently addressed in the implementing procedures.

Annual refresher training is required for all ERO personnel as described in PPM 13.14.5, Emergency Response Organization and Training, and is conducted either by classroom or mailout. The Emergency Position Training Matrix identifies which positions require classroom refresher training and which require mailout training. PPM 13.14.5 allows personnel identified as requiring mailout refresher training to receive credit for attending classroom refresher training.

Annual refresher training for ERO members assigned to the Joint Information Center (JIC) was evaluated to the above requirements. The Emergency Position Training Matrix identifies several JIC positions as requiring classroom training. However, the course description for ERO annual Refresher Training (82-ERO-0100-RT) does not identify JIC personnel as requiring this training. A review of the Plant Qualification Database (PQD), however, showed that JIC personnel were attending the ERO Annual Refresher Training. The course catalog should be updated to include JIC personnel in the ERO Annual Refresher Training course.

The Annual ERO Refresher Training is usually provided to team members on the day of their team drill. Quality observation of this training and the subsequent drill revealed that a method for critiquing training is not provided to those attending the refresher training nor does the drill After Action Report form identify training session comments. Based on the comments from participants in the training, an opportunity to improve training and strengthen team involvement is lost by not soliciting training critiques.

Three training lesson plans reviewed contained a statement that instructors of the course must meet the requirements of Technical Training Procedure (TTP) 6.1.1. The Emergency Response Organization and Training Procedure (PPM 13.14.5, Section 4.2.13.3) states that instructor qualification requirements identified in TTPs will be used as a guide for Emergency Preparedness Training Instructors. Exceptions to these requirements may be authorized by the Corporate EP/IS Officer. The primary onsite and offsite instructors are not qualified to TTP 6.1.1 requirements. According to the Corporate EP/IS Officer, the EP Training Program was removed from the Technical Training Manual approximately two years ago. Thus, the instructors are not required to fully qualify to TTP 6.1.1 requirements. This requirement is being removed from Lesson Plans as they are revised and should be completed by the end of 1997.

Finally, the audit team noted that access to emergency training examinations is not secured. The filing cabinet containing the original examination records remained unlocked throughout the audit.

The above examples indicate a need to strengthen the administrative controls for the ERO training program. As a result, the following recommendation is issued:

#### QUALITY RECOMMENDATION (AU297-005-C)

*Strengthen administrative controls of ERO training program. Specifically:*

- *Ensure the EP Training Course Catalog accurately reflects the associated lesson plans*
- *Ensure methods of training evaluation are consistent with E-Plan*
- *Include JIC members in the course description for the ERO Refresher training*
- *Provide critique opportunity for pre-drill training sessions*
- *Ensure lesson plans accurately indicate instructor qualification requirements*
- *Maintain examinations in locked storage*

### SECTION 3.0 - Readiness Testing

#### Section 3.1 - Exercises and Drills

The audit team observed performance of the Team D training drill conducted February 26, 1997. Audit members were stationed at the Emergency Offsite Facility, Technical Support Center, Operations Support Center, and the Control Room (simulator). The audit team also observed and participated in the post-drill player critique at each location.

The audit team identified areas for improvement categorized as concerns in drill control, communications, questioning attitude, and personnel performance. Specific concerns are outlined in Appendix B of this audit.

These concerns were presented to Emergency Preparedness staff and discussed in detail. The most significant concern appeared to be the difficulties displayed by the STA in performing dose assessments, since a similar incident was documented as an exercise weakness by the NRC during the last evaluated exercise. The Corporate EP/IS Officer immediately sent an E-mail to the Operations Training Department requesting they investigate the observation and determine its validity. Training personnel interviewed all of the individuals present in the simulator as well as the STA and found the general consensus indicated improvements were needed in obtaining data to perform dose assessments. A questionnaire was sent to the other STAs to determine if additional training was necessary for all STAs or just the individual observed. The response from the other STAs indicated that they were familiar with the data and did not need additional training. As a result of the observed performance, Quality initiated the following PER.

**PER 297-0183**

A weakness was identified with the performance of offsite dose assessment during Team D ERO training drill.

To facilitate overall improvement in personnel performance during training drills, the following Quality Recommendations are issued:

**QUALITY RECOMMENDATION (AU297-005-D)**

*Develop actions to address personnel performance problems identified during drills:*

- Provide a "Time Out" period in the middle of each drill to allow the ERO Team a real-time opportunity to be self-critical of individual performances and to provide the Controller/Evaluator additional opportunities to identify, coach, and correct areas of individual performance for the remainder of the drill.*
- Individual ERO performers who have repeat performance problems should be given the assignment of observing and interacting with a peer that performs their ERO position on another ERO Team in a follow-up drill.*

**QUALITY RECOMMENDATION (AU297-005-E)**

*Ensure training provided for controller/evaluator performance during drills clearly defines the expectation for performing on-the-spot corrections. Ensure drill players know the controllers/evaluators role.*

Other concerns identified by Quality, that are not addressed by a specific PER or Recommendation, are contained in the Drill Report 97-1 and will be tracked for corrective action by the Emergency Planning Activity Scheduling System (EPASS).

### Section 3.2 - Drill and Exercise Program

The 1996 Quarterly Training Drill 96-04 Drill Report for ERO Team A was reviewed relative to scope and objectives. The list of each objective for the drill contained a reference to the WNP-2 Six-Year Plan. The Plan incorporates all the objectives from the FEMA and NUREG-0654 six year plan.

The 1997 Quarterly Training Drill 97-01 Drill Report was reviewed and found to contain a list of Onsite Objectives that referenced objective numbers that correlated to the WNP-2 Six-Year Plan. Quality observations of Drill 97-01 were used to verify the referenced elements of the WNP-2 Six-Year Plan as listed in the Drill report.

All corrective actions identified from drill deficiencies are tracked for implementation by either the Plant Tracking Log (PTL) or by the Emergency Planning Activity Scheduling System (EPASS). The player training held prior to the Team D Drill on February 26, 1997 contained corrective actions from previously identified drill deficiencies.

Quarterly ERO team training and drills are used to assure individuals who miss their annual drill are rescheduled. An Emergency Preparedness staff member reviews the Training and Qualification Report monthly to determine which ERO members need to be scheduled for another drill to maintain their qualifications. No discrepancies were noted with this process.

### SECTION 4.0 - Facilities and Equipment

The audit team assessed whether emergency facilities and equipment identified by NUREG-0696 and described in the FSAR as supporting emergency response has been adequately provided and maintained. This assessment determined that sufficient equipment and facilities are in place to support emergency response, but maintenance of these items has not been adequate.

Drains for the Backup PASS chemistry laboratory and contamination shower at the Plant Support Facility (PSF) are directed to an underground, monitored lift station. The lift station contents are pumped to the sanitary waste treatment facility. Section 12.5.2.2.b of the FSAR requires radioactive liquid laboratory wastes discharged to the sanitary sewage treatment facility be in compliance with the requirements of 10 CFR 20.2003. A liquid waste radiation monitor at the PSF lift station functions to alert the PSF staff to disable lift station pumps if a discharge of radioactive liquids occurs. This monitor was taken out of service in April 1993 due to "spiking" problems. PER 296-0500 was initiated in June 1996 to document the inoperability of the monitor. Nine months after the initiation of the PER, the audit team discovered that the monitor has remained out of service. Although Corrective Action 1 of the PER initiated a Work Request to repair the monitor, no action has been taken. The PER was subsequently closed as being complete. As a result of ineffective corrective actions associated with PER 296-0500, the following PER was issued:

**PER 297-0198**

Corrective actions for the effluent monitor at the PSF lift station did not ensure the monitor was repaired.

While evaluating the status of the effluent monitor, the audit team became aware of prior modification work at the PSF that ultimately impacted the operation of the effluent monitor. While digging to remove a diesel storage tank in June 1996, underground conduit housing the electrical supply for the effluent monitor was disrupted which disconnected the electrical supply to the monitor. This was reported to the supervisor in charge of the tank removal. However, there was no attempt to determine if the wiring was functional or what equipment it supplied. The conduit was subsequently repaired without the electrical supply being restored to the lift station monitor. During the course of this audit, actions were taken to repair the wiring. The audit team evaluated the process used to control Facilities work activities. The Facilities Service Request (FSR) is used to perform maintenance or modification to facilities equipment. Facilities Maintenance Instructions (FMIs) are used describe how the FSR is used. Although the FSR form has check off blocks to indicate if a 10CFR50.59 is required; there is no guidance in the FMIs identifying when this block should be checked. PPM 1.3.43, "Licensing Basis Impact Determination," requires that a process be in place to evaluate the impact on the licensing basis from various activities associated with design and operation of the plant. This concern was discussed with the Facilities Manager who agreed that the current controls were inadequate. As a result of this activity, the following PER was issued:

**PER 297-0205**

Instructions/Procedures do not exist which maintain the licensee basis requirements for non-power block facilities.

PPM 13.14.4 (Emergency Equipment) describes inspection, inventory, and functional testing of emergency equipment and supplies which are maintained for emergency operations. Implementation of this procedure is supported by predefined PASSPORT work activities identifying the frequency of the task and the responsible organization. The predefined tasks outlined in PASSPORT provide reasonable assurance that equipment and facilities are functional at the frequency checked. However, a potential weakness was identified in this area. Some equipment such as faxes, copiers, status boards, telephones, etc. is shared with other facilities and departments. Although equipment can be verified available and operational by PPM 13.14.4, the same piece of equipment used during routine business activities can fail. Organizations supporting the repair do not have a method in place to ensure EP is notified of the equipment status. An example was noted during the audit where a power outage was scheduled which affected the Operations Support Center (OSC). The only way EP was notified was through the Telecommunications personnel who had been notified. To enhance Emergency Preparedness controls of their facilities and equipment, the following recommendation is offered:

QUALITY RECOMMENDATION AU297-005-F

*Implement a method to notify EP when shared equipment fails or requires maintenance.*

The audit team also reviewed installed and portable radiological monitoring equipment associated with the EOF ventilation and determined that there is sufficient radiological protection for EOF personnel in accordance with NUREG-0696, Section 4.5.

**SECTION 5.0 - Interfaces with State and Local Governments and Agencies**

The audit team reviewed the 1996 Department of Health audit and the 1996 FEMA major exercise report. The Department of Health audit performed June 28, 1996, contained a recommendation for training. "Emphasis should be placed on training MUDAC and EOF management to be more aware of the needs of State and local agencies..." A review of the Plant Tracking Log indicated that this recommendation was not entered into the database until February 1997 with a scheduled completion date of March 31, 1997. The FEMA 1996 major report identified three Areas Requiring Corrective Actions (ARCAs) that identify training to be provided by the Supply System. All ARCAs are tracked by Emergency Preparedness personnel using their internal tracking system, but they did not recognize the three ARCAs that required Supply System action. In addition, the ARCAs were not discussed or included in the material provided in the pre-drill annual refresher training. These delays in addressing recommendations provided by outside agencies led to lost opportunities to incorporate recommendations in training prior to several drills and one major exercise. As a result, the following recommendation is issued:

QUALITY RECOMMENDATION (AU297-005-G)

*Use PTL to track FEMA recommendations impacting the Supply System and ensure timely implementation of recommendations provided by outside agencies*

Interfaces with outside agencies are described either in a contract with the Supply System, an Agreement Letter, or the agency's own Emergency Plan. Supporting plans and contracts with outside agencies are identified in Appendix 1 of the Emergency Plan. Agreement letters which formalize commitments between the Supply System and outside agencies are identified in Appendix 4 of the Emergency Plan. An annual review of each plan, contract, or agreement letter is required. The process for this review is described in PPM 13.14.9, Maintaining Emergency Preparedness. Item 5 of Attachment 6.1 to PPM 13.14.9 identifies the review of Letters of Agreement to be accomplished when the Emergency Plan is revised or certified. This item does not specifically address the review of plans and/or contracts. However, there are PASSPORT tasks requiring an annual review of each of the documents identified in Appendix 1 or Appendix 4 of the Emergency Plan. The audit team verified that the annual reviews were performed as required using the PASSPORT task. However, PPM 13.14.9 should be revised to include the annual review of plans and contracts in addition to the agreement letter review.

PPM 13.14.9 also requires that the State, County, and Department of Energy be contacted annually to solicit their review of the WNP-2 Emergency Plan. This review should be

documented according to the procedure. There is no regulatory basis or Emergency Plan requirement to solicit outside agency review; however, it is good business practice. The audit team could not find any documentation of this review. As a result of inconsistencies identified in PPM 13.14.9, the following recommendation is issued:

**QUALITY RECOMMENDATION (AU297-005-H)**

*Revise PPM 13.14.9 to clarify annual reviews:*

- *Include the annual review of plans and contracts in addition to agreement letters*
- *Evaluate the need to document outside agency review of WNP-2 Emergency Plan*

The public education and information program was evaluated to the Emergency Plan requirements. The Emergency Information calendar that is distributed annually was reviewed and found to contain the information specified in Section 9.1.1 of the Emergency Plan.

**SECTION 6.0 - Effectiveness of Previous Corrective Actions**

**Section 6.1 - On-Shift Staffing**

The audit team reviewed PERs 296-0633, 297-0110, and Quality Surveillance Report 296-054 for elements of ineffective corrective actions. All of these documents are related to Emergency Preparedness Health Physics staffing requirements.

Quality Surveillance 296-054 was conducted June 4 through July 1, 1996, and addressed a procedural discrepancy with PPM 1.3.1, "Conduct of Operations," and Health Physics (HP) technician staffing requirements. The Emergency Plan and NUREG-0654 both establish the required number of on-shift HP technicians as one for in-plant surveys and two for protective actions (three total). According to the WNP-2 Emergency Plan and NUREG-0654, the two HP positions required for protective actions may be filled by other shift personnel. PPM 1.3.1 and PPM 13.14.5 incorrectly allowed all the on-shift HP positions to be filled by other shift personnel. This discrepancy was communicated to management in Radiation Protection and Emergency Preparedness Departments who took corrective action to revise PPM 1.3.1 and PPM 13.14.5 on June 25, 1996.

PER 296-0633 was written by Emergency Preparedness on August 13, 1996, when staffing problems with HP technicians surfaced during an unannounced drill. Of the fourteen HP technicians contacted by the automatic notification system, none appeared to have responded to the drill. Eight HP technicians are required to fill Essential Emergency Response positions.

After writing the PER, Emergency Preparedness personnel discovered that two HP technicians were enroute to the site for their normal shift at the time of the notification drill and could not respond to the auto-dialer queries. Another HP technician received the notification and initially responded incorrectly, but recognized the error and called the site to offer his availability. Three HP technicians were on site and three other HP technicians had correctly responded to the telephone notification. In total, nine HP technicians were available to fill the eight essential positions. However, a potential problem did exist due to planned reductions in force which could impact the ability to staff the essential positions. Corrective actions were added to the

PER to identify qualified individuals to assume the HP technician responsibilities during emergencies, provide additional training for the position, and place the qualified people in the ERO HP Technician manpower pool. At the time of this audit, the additional training had not been completed for the identified HP Technician ERO responders. The placement of the individuals on the ERO responder list without providing the initial training is the subject of a potential Notice of Violation from the NRC.

PER 297-0110, which was written on February 2, 1997, as a result of the Emergency Preparedness Self-Assessment, was a repeat problem related to PPM 1.3.1 staffing requirements. The staffing requirements of PPM 1.3.1 only listed the two HP technician positions required for protective actions. The HP technician required for surveys had been incorrectly omitted in the June 25, 1996 revision of PPM 1.3.1.

The audit team investigated how this oversight occurred during the revision of PPM 1.3.1. The June 1996 revision to PPM 1.3.1 was written by an Operations procedure writer and reviewed by a reviewer who was not completely familiar with the problem and who did not provide a copy of the proposed procedure revision to Emergency Preparedness for review. Emergency Preparedness is not routinely required to review PPM 1.3.1 revisions and in this case, did not. Another consideration to the cause of this problem was found in Surveillance Report 296-054 where it was mentioned that the Radiation Department planned to reduce the number of HP technicians on-shift to two following the June 30, 1996, reduction in force. It appears the resulting procedure revision to PPM 1.3.1 was an attempt to institute this plan.

On the surface, PER 297-0110 seemed to provide an example of ineffective Emergency Preparedness corrective action. However, it is important to note that this PER was discovered and written by Emergency Preparedness as a result of their internal self-assessment process. The self-discovery of the error in revising PPM 1.3.1 and the proposed corrective action options for PER 297-0110 indicate an adequate performance by Emergency Preparedness in problem identification and resolution. Quality is assigned to evaluate the disposition of PER 297-0110 and will continue to monitor the PER through implementation.

#### **Section 6.2 - Self-Assessment Program**

Emergency Preparedness Self-Assessment reports dated February 29, 1996, and February 21, 1997, and the Emergency Preparedness Instruction EPI-04, "Self-Assessment Program" were reviewed.

Personnel from South Texas Project and Trojan Nuclear Plant were utilized in the 1996 Emergency Preparedness Self-Assessment. Personnel from Grand Gulf Nuclear Station, San Onofre Nuclear Generating Station, Washington State Department Of Health and Emergency Management, and Franklin County Emergency Management were utilized for the 1997 Emergency Preparedness Self-Assessment. The guidance of EPI-04 was used in performing the self-assessments. It was also noted that there are no requirements in EPI-04 to use industry peers or Federal, State, or County Emergency Planning personnel in the WNP-2 annual Emergency Preparedness Self-Assessments. Therefore, Quality views the use of utility/agency peers on the Self-Assessments as a strength that should be continued.

A total of 31 detailed recommendations (no PERs) were issued from the 1996 Emergency Preparedness Self-Assessment covering a broad area of topics from each of the areas of focus. A total of 29 detailed recommendations and three PERs resulted from the 1997 Emergency Preparedness Self-Assessment. The use of outside agency Emergency Planners and the depth and detail of the recommendations from the self-assessments indicate an attitude and desire on the part of the WNP-2 Emergency Preparedness organization for improvement through the self-assessment process.

Other elements of the Emergency Preparedness Self-Assessment Program as outlined by EPI-04 were examined. Trending guidance given in EPI-04 indicates that ongoing day to day self-assessment activities will be trended to verify program implementation is being successfully accomplished. Facility Walkdown Checklists (Attachment 4 of EPI-04) from the months of January and February 1997 were reviewed and indicated weekly walkdowns and equipment checks for ERO facilities were being performed. Additionally, a current Emergency Planning Activity Scheduling System (EPASS) print out was examined and verified to contain significant drill player comments. Although the indications were that Emergency Preparedness management effectively monitored performance to the existing requirements of EPI-04, no formal trending, as indicated by the EPI-04 section titled "Trending Guidance," is being performed. As a result, the following Recommendation is offered for improvement:

**QUALITY RECOMMENDATION (AU297-005-I)**

*A formal trending process should be implemented utilizing the elements listed in EPI-04 "Trending Guidance," or this section of the instruction should be revised to reflect the current methods of monitoring performance in the listed areas.*

**SECTION 7.0 - Post Accident Sampling System Availability**

At the request of the Emergency Preparedness supervision, the audit team reviewed the availability of the Post Accident Sampling System. PER 297-0060 was initiated on January 21, 1997, to document the system was inoperable. The audit team discussed PASS availability with the System Engineer and the System Engineering Supervisor. Data for 1995, 1996, and 1997 (to date) for PASS out-of-service time was reviewed. The total out-of-service time for that period was 45 days, which included 25 days in 1995 and no outage time in 1996. The remaining out of service time in 1997 is associated with PER 297-0060 repair. Waiting for the replacement parts accounted for the majority of the time in 1997.

The issue of work prioritization for PASS work orders was considered an important factor in minimizing the out-of-service time. Discussions between System Engineering, Planning and Scheduling, and Maintenance resulted in increased commitment to support the current objective of PPM 1.11.6, which is to ensure PASS is available when needed.

The availability of the backup PASS laboratory was also evaluated. Although the facility is equipped to function in the event the in-plant PASS system becomes unavailable, there are no specific procedures describing what supplies and equipment are required to be

maintained in the laboratory, nor how often the equipment should be checked, calibrated, or otherwise maintained. As a result, the following recommendation is issued:

**QUALITY RECOMMENDATION (AU297-005-J)**

*Establish criteria to maintain the backup PASS laboratory in a state of readiness.*

APPENDIX A - PERSONNEL CONTACTED DURING THE AUDIT

R.M. Abdella, Lead, Training  
B.M. Adami, System Engineer (ERO Team D)  
T.W. Albert, Supervisor, Planning+  
A.L. Alexander, Chemistry Technical Specialist (ERO Team D)  
J.J. Ames, Administrative Assistant (ERO Team D)  
D.K. Atkinson, Manager, Quality++  
P.T. Bagan, Training Specialist  
L.W. Ball, Emergency Planner+  
R.J. Barbee, Manager, System Engineering+  
W.H. Barley (ERO Team D)  
D.L. Beecher, Chemistry Technician  
D. A. Bennett, Supervisor, Chemistry Operations  
M.B. Blake, Procedure Writer (ERO Team D)  
E.F. Boler III, I&C Trainer (ERO Team D)  
I.M. Borland, Supervisor, Radioactive Material Control (RMC) (ERO Team D)  
O.J. Brooks, Training Specialist  
D.W. Culver, Manager, Facilities++  
W.S. Davison, Work Week Leader (ERO Team D)  
G.V. Dockter, Technical Specialist (ERO Team D)  
A.J. Fahenstock, Supervisor, Training  
L.C. Fernandez, Manager, Licensing++  
J.M. Frisco, Work Week Leader  
S.F. Ghbein, Engineer (ERO Team D)  
J.A. Gloyn, Supervisor Fitness for Duty (FFD) (ERO Team D)  
S.P. Grundhauser, Supervisor, Administrative Services (ERO Team D)  
P.W. Harness, Engineering Supervisor (ERO Team D)  
R.W. Hayden, Training Specialist  
D.B. Holmes, Emergency Planner  
P.J. Inserra, Lead, Improved Technical Specifications  
J. P. Ittner, Emergency Planner+ ++  
D.K. Kaopuiki, Hot License Coordinator (ERO Team D)  
D.A. Kerlee, Quality Programs (ERO Team D)  
S.S. Kim, Quality Services  
D.L. King, Training Specialist  
A.F. Klauss, Emergency Planner+  
G.J. Kucera, Vice President Administration/Chief Financial Officer++  
D.E. Larson, Training  
L.A. Leingang, Supervisor, Facilities Planning  
R. W. Libra, Supervisor, System Engineering  
T.S. Love, WNP-2 Plant Support Services Manager+  
J.K. Lovejoy, Leader, Outage (ERO Team D)  
T.L. Meade, Manager, Engineering Programs (ERO Team D)  
T.C. Messersmith, Supervisor, Maintenance, Training (ERO Team D)

**APPENDIX A - PERSONNEL CONTACTED DURING THE AUDIT (continued)**

L.A. Mix, Administrative Assistant (ERO Team D)  
M.M. Monopoli, WNP-2 Operations Manager+  
R.A. Morris, Supervisor, Electrical Maintenance (ERO Team D)  
G.A. Moyer, Craft Supervisor (ERO Team D)  
J. J. Muth, Supervisor, Quality Services  
H.L. Nielson, Supervisor, Chemistry  
J.A. Pankoke, Technical Support Specialist (ERO Team D)  
M.G. Pratt, Procedures Lead  
L.A. Pritchard, Senior Health Physicist (ERO Team D)  
L.A. Rathbun, Principal Health Physicist (ERO Team D)  
G.J. Reed, Corporate Emergency Preparedness/Industrial Safety, Health Officer+ ++  
S.J. Rejniak, Training Specialist (ERO Team D)  
R.J. Reynolds, H.P. Technician  
T. A. Rychlyk, Staff Engineer  
G.D. Sanford, WNP-2 Maintenance Manager+ ++  
K.E. Shoemaker, Supervisor, Maintenance Services  
G.O. Smith, WNP-2 Plant General Manager+  
L.F. Studer, H.P. Technician  
D.A. Swank, Manager, Regulatory Affairs  
J.D. Teachman, Principal Engineer (ERO Team D)  
S.L. Washington, Business Planner (ERO Team D)  
G. Weimer, Licensing Requalification Coordinator  
R.C. Winslow, Supervisor, H.P. Operations  
S. Wormington Jr., Business Representative (ERO Team D)  
J.E. Wyrick, Assistant to the WNP-2 Plant General Manager++  
C.E. Young Jr., Technical Specialist (ERO Team D)

+ Attended Entrance Meeting

++ Attended Exit Meeting

## APPENDIX B - DRILL OBSERVATIONS

### Control of Drill Concerns:

- Drill Messages 1 and 2, establishing initial conditions, were not provided to key players in all centers resulting in later confusion over equipment/system status.
- Problems with the scenario program caused an event that was supposed to transpire over 40 minutes to be compressed to 40 seconds. This resulted in conflicting data being provided to the emergency centers and confusion as to what data should be used for emergency classifications and dose assessments.
- The audit team noted very little coaching provided by the controllers to drill players. Some players interviewed expressed concern that they were not coached even when experiencing difficulties and felt an opportunity to improve their skill was lost. Others were not clear on when they could ask for help and who was their interface.
- Confusion was observed in many of the centers over what positions were being staffed and what positions were simulated.
- Problems with the Automated Notification System resulted in at least three craft workers responding from home.

### Communications Concerns:

- Briefings in the EOF were not timely, did not have adequate content, and did not assure all personnel were attentive.
- Three way communications were not used and status boards were not maintained in the EOF and TSC.
- The information coordinator in the Simulator went offline several times to gather additional information.
- Transfer of the control of the Equipment Operators from the Control Room to the OSC was not clearly communicated.

### Questioning Attitude

- Some data and equipment status was not questioned in the EOF and TSC even when staff members felt the information was inaccurate.
- Responsibility for dose assessment was not clearly understood by Simulator and EOF staffs.
- Data discrepancies between the Field Team data, Simulator data, and EOF readings were never clearly explored.

**APPENDIX B - DRILL OBSERVATIONS (continued)**

Personnel Performance

- The STA exhibited difficulties in performing dose assessment activities. Due to functions (i.e. core damage assessment).
- The details of operating the FAX machine were not well known by Simulator (STA) and OSC (Team Tracker) personnel.
- A sense of urgency was not demonstrated by EOF and TSC staffs. Effective command and control was not demonstrated in the EOF or Simulator and the TSC command and control could have been more assertive.
- OSC repair team dispatch times did not meet the goal of less than 10 minutes.
- The OSC Manager declared the OSC activated when it was not fully manned.
- Problems were encountered with the notification process: the upgrade to an Alert status was not timely such that responders received an UE message not to respond.

**APPENDIX C - REFERENCES**

10CFR50.47, Emergency Plans  
10CFR50.54, Conditions of Licenses  
10CFR50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities  
NUREG 0654, FEMA REP-1, Rev. 1; Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants  
WNP-2 Emergency Preparedness Plan, Rev 18  
WNP-2 Emergency Preparedness Program Six Year Plan  
NRC Inspection Procedure 82301, "Evaluation of Exercises for Power Reactors"  
NRC Inspection Procedure 82206, "Knowledge and Performance of Duties"  
NRC Temporary Instruction 2515/134, "Licensee On-Shift Dose Assessment Capabilities"  
Emergency Dose Assessment System Users Manual  
Drill and Exercise Manual for WNP-2, Rev 2  
Volume 13 series of Emergency Plan Implementing Procedures  
PASSPORT Predefined Database  
Problem Evaluation Requests (PERs):  
PER 296-0500  
PER 296-0633  
PER 297-0060  
PER 297-0110  
EPI-04, Self-Assessment Program (Rev. 5/15/96)  
Emergency Preparedness Self-Assessment report dated 2/29/96  
Emergency Preparedness Self-Assessment report dated 2/21/97  
Quality Surveillance 296-054, "Health Physics Technical Emergency Planning Staff"  
Emergency Planning Instruction EPI-02, "Emergency Planning Activity Scheduling System"  
Emergency Preparedness Training Course Catalog, Revision 2  
Lesson Plan 82-EJI-P100-RT  
Lesson Plan 82-EOS-C100-RT  
Lesson Plan 82-EEO-0200-LP  
Lesson Plan 82-EOS-P104-LP  
Lesson Plan 82-EJI-P100-LP  
Lesson Plan 82-EDP-0300-LP  
Lesson Plan 82-EFA-0100-LP  
INPO Good Practice, EP-801  
INPO 90-015, Section EP-8  
1996 WNP-2 Performance Self-Assessment, Appendix B  
1995 Performance Enhancement Strategy, Section 5.3B  
FEMA - 1996 Major Exercise Report  
Washington State Department of Health Audit, dated 6/28/96  
PPM 1.11.6, Post Accident Sample System Program (Rev 7)  
Health Physics Instruction (HPI) 7.48, Calibration and Operation of Liquid Monitor, Rev 5  
Health Physics Instruction (HPI) 7.45, Eberline Model RMS II Calibration, Rev 4  
Facilities Maintenance Instructions Manual

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005  
**RECOMMENDATION NUMBER:** AU297-005-A  
**DATE:** March 28, 1997  
**ORGANIZATION:** Emergency Preparedness  
**PERSON CONTACTED:** G. J. Reed  
**RESPONSE DUE DATE:** May 27, 1997  
**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Revise the Emergency Plan to clearly commit to the performance of dose assessment by on-shift personnel utilizing real-time meteorological and radiological effluent data at all times.

**RESPONSE: \***

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005

**RECOMMENDATION NUMBER:** AU297-005-B

**DATE:** March 28, 1997

**ORGANIZATION:** Emergency Preparedness

**PERSON CONTACTED:** G. J. Reed

**RESPONSE DUE DATE:** May 27, 1997

**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Revise PPM 13.8.1 to:

- Require the use of real time radiological effluent data
- Account for releases that have already occurred
- Provide actions for unmonitored pathways

RESPONSE: \*

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005  
**RECOMMENDATION NUMBER:** AU297-005-C  
**DATE:** March 28, 1997  
**ORGANIZATION:** Emergency Preparedness  
**PERSON CONTACTED:** G. J. Reed  
**RESPONSE DUE DATE:** May 27, 1997  
**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Strengthen administrative controls of ERO training program. Specifically:

- Ensure the EP Training Course Catalog accurately reflects the associated lesson plans
- Ensure methods of training evaluation are consistent with E-Plan
- Include JIC members in the course description for the ERO Refresher training
- Provide critique opportunity for pre-drill training sessions
- Ensure lesson plans accurately indicate instructor qualification requirements
- Maintain examinations in locked storage

**RESPONSE: \***

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005

**RECOMMENDATION NUMBER:** AU297-005-D

**DATE:** March 28, 1997

**ORGANIZATION:** Emergency Preparedness

**PERSON CONTACTED:** G. J. Reed

**RESPONSE DUE DATE:** May 27, 1997

**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Develop actions to address personnel performance problems identified during drills:

- Provide a "Time Out" period in the middle of each drill to allow the ERO Team a real-time opportunity to be self-critical of individual performances and to provide the Controller/Evaluator additional opportunities to identify, coach, and correct areas of individual performance for the remainder of the drill.
- Individual ERO performs who have repeat performance problems should be given the assignment of observing and interacting with a peer that performs their ERO position on another ERO Team in a follow-up drill.

RESPONSE: \*

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

QUALITY DEPARTMENT RECOMMENDATION

EVALUATION NUMBER: AU297-005  
RECOMMENDATION NUMBER: AU297-005-E  
DATE: March 28, 1997  
ORGANIZATION: Emergency Preparedness  
PERSON CONTACTED: G. J. Reed  
RESPONSE DUE DATE: May 27, 1997  
AUTHOR: K. M. Gunter

Quality Recommendation

Ensure training provided for controller/evaluator performance during drills clearly defines the expectation for performing on-the-spot corrections. Ensure drill players know the controllers/evaluators role.

RESPONSE: \*

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-055  
**RECOMMENDATION NUMBER:** AU297-055-F  
**DATE:** March 28, 1997  
**ORGANIZATION:** Emergency Preparedness  
**PERSON CONTACTED:** G. J. Reed  
**RESPONSE DUE DATE:** May 27, 1997  
**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Develop a method to notify EP when shared equipment fails or requires maintenance.

**RESPONSE: \***

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005  
**RECOMMENDATION NUMBER:** AU297-005-G  
**DATE:** March 28, 1997  
**ORGANIZATION:** Emergency Preparedness  
**PERSON CONTACTED:** G. J. Reed  
**RESPONSE DUE DATE:** May 27, 1997  
**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Use PTL to track FEMA recommendations impacting the Supply System and ensure timely implementation of recommendations provided by outside agencies.

RESPONSE: \*

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005

**RECOMMENDATION NUMBER:** AU297-005-H

**DATE:** March 28, 1997

**ORGANIZATION:** Emergency Preparedness

**PERSON CONTACTED:** G. J. Reed

**RESPONSE DUE DATE:** May 27, 1997

**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Revise PPM 13.14.9 to clarify annual reviews:

- Include the annual review of plans and contracts in addition to agreement letters
- Evaluate the need to document outside agency review of WNP-2 Emergency Plan

RESPONSE: \*

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005  
**RECOMMENDATION NUMBER:** AU297-005-I  
**DATE:** March 28, 1997  
**ORGANIZATION:** Emergency Preparedness  
**PERSON CONTACTED:** G. J. Reed  
**RESPONSE DUE DATE:** May 27, 1997  
**AUTHOR:** K. M. Gunter

**Quality Recommendation**

A formal trending process should be implemented utilizing the elements listed in EPI-04 "Trending Guidance," or this section of the instruction should be revised to reflect the current methods of monitoring performance in the listed areas.

RESPONSE: \*

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.

**QUALITY DEPARTMENT RECOMMENDATION**

**EVALUATION NUMBER:** AU297-005  
**RECOMMENDATION NUMBER:** AU297-005-J  
**DATE:** March 28, 1997  
**ORGANIZATION:** Chemistry  
**PERSON CONTACTED:** D. A. Bennett  
**RESPONSE DUE DATE:** May 27, 1997  
**AUTHOR:** K. M. Gunter

**Quality Recommendation**

Establish criteria to maintain the backup PASS laboratory in a state of readiness.

**RESPONSE: \***

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\*The response should address action to be taken and proposed completion date. If no action is deemed necessary, the logic for this conclusion should be presented.