

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

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Licensee: Washington Public Power Supply System  
Facility: Washington Nuclear Project-2  
Location: 3000 George Washington Way  
Richland, Washington  
Dates: February 1-4, and March 3-5, 1999  
Inspector: Thomas W. Dexter, Senior Physical Security Specialist  
Plant Support Branch  
Approved By: Gail M. Good, Chief, Plant Support Branch  
Division Reactor Safety  
Attachment: Supplemental Information

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## EXECUTIVE SUMMARY

Washington Nuclear Project-2  
NRC Inspection Report 50-397/99-01

This routine, announced inspection focused on specific areas of the licensee's physical security program. These areas included review of access control of personnel, packages, and vehicles; compensatory measures; locks, keys, and combinations; plans and procedures; security event logs; security training and qualification; management effectiveness; staffing levels; and audits.

### Plant Support

- Security program implementation continued to be highly effective in most areas. An effective program for searching personnel, packages, and vehicles was maintained. The compensatory measures program was effectively implemented. A highly effective lock and key control program was maintained and implemented. Changes to security programs and plans were reported to the NRC within the required time frame. Overall, implementing procedures met the performance requirements in the physical security plan. The security staff correctly reported security events; event records were accurate and neat. An excellent training program was implemented. Security program management was effective (Sections S1.1, S2.1, S2.2, S3.1, S3.2, S5.1, and S6.1).
- The annual audit of the Fitness-for-Duty Program was excellent. The audit was intrusive and performance based (Section S7.1).
- On-shift staffing of security armed response personnel was in accordance with the minimum requirements of the physical security plan. However, an inspection followup item was identified involving the following concerns: (1) the practice of relocating armed response personnel may have invalidated response time to plant equipment target sets and weapons deployment and (2) the difference between the number of armed responders committed to in the physical security plan and the number of armed response personnel used during the September 1998 Operational Safeguards Response Evaluation (OSRE). During the OSRE, the licensee successfully demonstrated its ability to defend against the design basis threat (Section S6.2).

**Report Details**

**IV. Plant Support**

**S1 Conduct of Security and Safeguards Activities**

**S1.1 Protected Area Access Control of Personnel, Packages, and Vehicles**

a. Inspection Scope (81700)

The access control program for personnel packages and vehicles was inspected to determine compliance with the requirements of the security plan.

b. Observations and Findings

Through observations at the primary access facility and vehicle sallyport, the inspector determined that the licensee properly controlled personnel, packages, and vehicle access to the protected area. The protected area access control equipment was inspected and found to be functional and well maintained. The inspector also observed X-ray machine use and package and material searches at the main access facility. The operators were efficient and well trained.

c. Conclusions

An effective program for searching personnel, packages, and vehicles was maintained.

**S2 Status of Security Facilities and Equipment**

**S2.1 Compensatory Measures**

a. Inspection Scope (81700)

The inspector reviewed the licensee's compensatory measures program to determine compliance with the requirements of the physical security plan. The areas inspected included deployment of compensatory measures and the effectiveness of those measures.

b. Observations and Findings

The inspector confirmed through a review of Physical Security Plan Implementing Procedure SEC-18, "Safeguards Compensatory Measures," Revision 0, dated February 19, 1998, that the licensee deployed compensatory measures in a manner consistent with the requirements in the physical security plan. Through interviews, the inspector determined that the security personnel available for assignment to compensatory security posts were properly trained for those duties.

c. Conclusions

The compensatory measures program was effectively implemented. The security procedure for compensatory measures met the requirements in the physical security plan. Security personnel were well trained on program requirements.

S2.2 Locks, Keys, and Combinations

a. Inspection Scope (81700)

The locks, keys, and combinations program was inspected to determine the licensee's compliance with the requirements of 10 CFR 73.55(d)(8) and the requirements of the physical security plan.

b. Observations and Findings

The inspector reviewed lock and key procedures and determined that inventories were completed as required. In addition, the locks and keys were rotated or changed when employees who had access to security locks and keys were terminated. Security of the additional sets of lock cores and keys was effective in preventing compromise. Records of keys, locks, core sets, and all changes were accurately maintained. The locksmith was professional and appropriately answered all of the inspector's questions.

c. Conclusion

A highly effective lock and key control program was maintained and implemented.

**S3 Security and Safeguards Procedures and Documentation**

S3.1 Security Program Plans and Procedures

a. Inspection Scope (81700)

The physical security plan and the implementing procedures were inspected to determine compliance with the requirements of 10 CFR 50.54(p) and the physical security plan.

b. Observations and Findings

The inspector determined that previous plan changes were reported to the NRC within the required time frame, and changes submitted did not reduce the effectiveness of the plan. The inspector reviewed implementing procedures for adequacy, ensured that the licensee maintained an effective management system for the development and administration of procedures, and verified that changes to the procedures did not reduce the effectiveness of the licensee's security program.

c. Conclusions

Changes to security programs and plans were reported to the NRC within the required time frame. Overall, implementing procedures met the performance requirements in the physical security plan.

S3.2 Security Event Logs

a. Inspection Scope (81700)

The inspector reviewed safeguards event logs and security incident reports to determine compliance with the requirements of 10 CFR 73.21(b) and (c), 10 CFR 26.73, and the physical security plan. The inspector reviewed the safeguards event logs from July 9 through December 31, 1998.

b. Observations and Findings

The inspector determined that the records were maintained for the time required by regulations and conformed to the regulatory requirements regarding the reporting of security events. The logs and supporting reports were accurate, neat, and contained sufficient detail for the reviewer to determine reportability and implemented corrective actions.

c. Conclusions

The security staff correctly reported security events; event records were accurate and neat.

**S5 Security and Safeguards Staff Training and Qualification**

S5.1 Security Training and Qualification

a. Inspection Scope (81700)

The inspector reviewed a portion of the licensee's security training and qualification program to determine adequacy and compliance with the requirements of the Security, Training and Qualification Plan and the Contingency Plan.

b. Observations and Findings

The inspector verified that the security organization conducted security training in accordance with its approved security, training, and contingency plans. By reviewing security shift records, the inspector confirmed that on-shift contingency drills were conducted periodically. Documentation of the shift drills was appropriately maintained.

The inspector also observed security officers during the performance of their duties. Observed security officers demonstrated excellent knowledge of the procedural requirements for the task they were performing.

c. Conclusions

An excellent training program was implemented. Documentation of training activities by the security shifts and training section was very good.

**S6 Security Organization and Administration**

S6.1 Management Effectiveness

a. Inspection Scope (81700)

The effectiveness and adequacy of security program management were evaluated.

b. Discussion

The security program was managed by a well trained and highly qualified security staff. The quality of the facilities and equipment demonstrated management support of the security program.

c. Conclusion

Security program management was effective.

S6.2 Staffing Levels

a. Inspection Scope (81700)

The staffing level of the security organization was evaluated to determine compliance with the requirements of the physical security plan. Additionally, the inspector reviewed the Operational Safeguards Response Evaluation (OSRE) report dated December 9, 1998.

b. Observations and Findings

Based on discussions with security supervisors and reviews of security shift personnel rosters, the inspector determined that the minimum number of on-duty armed security response personnel met the requirements of the physical security plan. However, concerns were identified involving the frequent relocation of armed response personnel and their contingency weapons inside the protected area, and the difference between the number of armed responders committed to in the physical security plan and the number of armed response personnel used during the September 1998 OSRE.

The following regulations apply to these concerns:

- 10 CFR 73.55(a) requires, in part, that licensee physical protection systems shall be designed to protect against the design basis threat of radiological sabotage as stated in 10 CFR 73.1(a).

- Part I of the licensee's physical security plan stated, in part, that the physical security plan meets the requirements of 10 CFR 73.55(a).

Section 3.4.7.1 of the licensee's physical security plan, Revision 38, stated, in part, that armed response personnel are available for response in the event of a security contingency.

To meet the 10 CFR Part 73 design basis threat, Section 10.2 of the licensee's physical security plan stated, in part, that X armed security (response) officers (specific number is safeguards information) were selected and trained to respond to security contingencies and were available at all times, in addition to those security officers who manned the central and secondary alarm stations.

From September 21-24, 1998, the NRC's Office of Nuclear Reactor Regulation (NRR) performed an Operational Safeguards Response Evaluation (OSRE) at the Washington Nuclear Project-2 reactor facility (Inspection Report 50-397/98-201 dated December 9, 1998). The primary purpose of the OSRE was to assess the licensee's ability to respond to the "external threat" portion of the design basis threat as required by 10 CFR 73.55(a). During the OSRE, the NRC observed four licensee contingency exercises. In all four exercises, security personnel, armed with contingency weapons, responded to interdict the adversaries from what was described by the licensee as normal duty posts. During the OSRE, the licensee elected to utilize five additional (X+5) armed security response personnel per shift. This was five more armed response personnel than required by the physical security plan. The licensee's overall protective strategy was based on its total number of armed response personnel (X+5) positioned at specific locations inside the protected area.

Based on a review of security posting records and security personnel interviews, the inspector determined that following the OSRE, the licensee relocated some of the (X+5) armed response personnel to compensatory posts or other security posts that were not part of the licensee's original response time evaluation. This practice was more prevalent on the back shift. These posts were not utilized during the OSRE and were not in close proximity to the OSRE normal duty posts. The "relocated" response personnel were normally armed with only a sidearm and were not armed with a contingency weapon. The licensee could not assure that these "relocated" response personnel could adequately respond to an attack threat in time to defend vital target sets. During the OSRE, these vital target sets were identified by the licensee as necessary for the safe shut down of the reactor. The licensee's practice of relocating armed response personnel may have invalidated their response times to both the contingency weapons and to plant equipment target sets.

Based on the results of the OSRE, the licensee demonstrated that it could respond to a design basis threat with X+5 armed response personnel. However, since the physical security plan only required X armed response personnel, the licensee could reduce its numbers and still remain in compliance, even though the ability to respond to a design basis threat with X armed response personnel has not been verified. It is important to note that following the OSRE, the licensee has continued to maintain an on-duty shift strength of X+5 armed response personnel.

During the inspection, the licensee stated that its Denial Plan Guideline, Revision 1, dated September 21, 1998, remained in effect and that this plan would be implemented when the NRC, or another agency, notified the site of a potential threat. Upon implementation, this plan provides, in part, for an immediate increase in the number of armed response personnel inside the protected area.

On March 3-5, 1999, Ms. G. Good, Chief, Plant Support Branch, telephonically notified Messrs. J. McDonald, Manager, Plant Production, and D. Coleman, Manager, Regulatory Affairs, that the NRC was concerned with:

- (1) The practice of relocating armed response personnel. This practice may have invalidated the licensee's response time to both the contingency weapons and to plant equipment target sets.
- (2) Differences between physical security plan staffing and actual staffing. During the September 1998 OSRE, the licensee utilized X+5 armed response personnel to successfully defend against the design basis threat. However, Paragraph 10.2 of the licensee's physical security plan required the licensee to provide only X armed response personnel to meet this requirement. The licensee could reduce its numbers and still remain in compliance, even though the capability to respond to a design basis threat with X armed response personnel has not been verified.

These two concerns will be reviewed during a subsequent security inspection (IFI 50-397/9901-01).

For background purposes, in June 1998, NRR recommended, and the NRR Executive Council agreed, that the OSRE program be eliminated by the end of Fiscal Year 1998. The staff responded to numerous inquiries from the media and Congress, and briefed the Chairman and certain Commissioners on the OSRE program. These briefings included a discussion of possible alternatives to the OSRE program to support NRC's future validation of licensees' tactical response capabilities. In October 1998, the NRC formed a Safeguards Performance Assessment (SPA) Task Force to study the lessons learned from the NRC OSRE program and to develop recommendations for tactical response evaluations in the future. The Chairman instructed the task force to review safeguards performance issues and report its findings and recommendations back to the Commission by the end of calendar year 1998. This task has been accomplished with four specific recommendations that involve changes to regulations (to require target set identification, development of protective strategies, and periodic exercises), the development of a regulatory guide, changes in the existing inspection program, and changes to security inspector training modules.

c. Conclusions

On-shift staffing of security armed response personnel was in accordance with the minimum requirements of the physical security plan. However, an inspection followup item was identified involving the following concerns: (1) the licensee's practice of relocating armed response personnel may have invalidated response time to plant equipment target sets and weapons deployment and (2) the difference between the



number of armed responders committed to in the physical security plan and the number of armed response personnel used during the September 1998 OSRE. During the OSRE, the licensee successfully demonstrated its ability to defend against the design basis threat.

## **S7 Quality Assurance in Security and Safeguards Activities**

### **S7.1 Security Program Audits**

#### **a. Inspection Scope (81700)**

Security program audits were reviewed to determine compliance with the requirements of 10 CFR 50.54(p) and the physical security plan. The inspector reviewed the fitness-for-duty audit listed in the attachment.

#### **b. Observations and Findings**

The inspector verified that an audit of the fitness-for-duty program was conducted at least every 12 months and that audit personnel were independent of plant security management and plant security management supervision. The audit scope covered required program areas and accurately focused on program effectiveness. The audit team included four subject matter experts from other utilities. The audit was both compliance and performance based. The techniques employed to accomplish the audit included personnel interviews, document reviews, and performance observations. The document reviews included an evaluation of implementing procedure and regulatory requirements. Observations were performed to evaluate the effectiveness of program implementation. The audit identified two strengths, one finding, and eight recommendations. The finding was corrected prior to the end of the audit.

#### **c. Conclusions**

The annual audit of the fitness-for-duty program was excellent. The audit was intrusive and performance based.

## **S8 Miscellaneous Security and Safeguards Issues (Onsite Review of Event Reports)**

### **S8.1 Licensee Event Report 98-S01: Contract Employee Foreman (Supervisor) Adulterated Urine Sample**

On October 6, 1998, an individual was drug and alcohol tested as a part of the licensee's random test program. The on-site Enzyme Multiplied Immunoassay Technique (EMIT) laboratory conducted an integrity check on the specimen, and it tested positive for nitrite contamination.

On October 7, 1998, the Fitness-for Duty Supervisor authorized "for-cause/reasonable testing" as a result of the EMIT test. The individual provided a second urine specimen. Due to attempts at adulteration, the Medical Review Officer (MRO) requested the Health and Human Services certified laboratory to perform "special processing."

On October 14-27, 1998, the MRO ordered additional testing by the laboratory of the random and for-cause specimens. Both specimens were negative for drugs.

On October 19, 1998, the MRO met with the foreman for a clinical interview and discussion of the nitrite contamination. The foreman was informed that both tests were negative for drugs, but the laboratory report showed the random test was nitrite positive and not consistent with normal physiological nitrite concentrations in the urine. The foreman mentioned a medical condition, and the MRO agreed to continue investigation of the cause of the nitrites.

On October 27, 1998, the MRO again met with the foreman and informed him of the results of the investigation and also informed the Supply System Fitness-for-Duty section of the results. The MRO's final determination was that the nitrite adulteration was positive, since the level in the urine specimen was not consistent with human life.

The licensee's actions were correct and in accordance with regulations. The licensee immediately suspended the individual's unescorted plant access. Following an investigation by the licensee, the individual's unescorted access was revoked for a period of 3 years, and the individual's name was entered into the Personnel Access Data System (PADS) that is used by plants nationwide.

#### V. Management Meetings

#### **X1 Exit Meeting Summary**

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on February 4, 1999. The licensee acknowledged the findings presented. On March 3-5, 1999, the Chief, Plant Support Branch, Region IV, telephonically notified Messrs. J. McDonald, Manager, Plant Production, and D. Coleman, Manager, Regulatory Affairs, of the two concerns discussed in Paragraph S6.2 above. These concerns were identified by the NRC as an inspection followup item.

#### ATTACHMENT

#### **SUPPLEMENTAL INFORMATION**

#### **PARTIAL LIST OF PERSONS CONTACTED**

##### Licensee

A. Barber, Acting Quality Manager  
D. Coleman, Manager, Regulatory Affairs  
A. Conner, Security Operations Lead  
F. Dehart, Supervisor, Safeguards and Investigations  
R. Givira, Security Force Supervisor  
J. Gloyn, Security Supervisor, Training  
V. Harris, Assistant Maintenance Manager  
M. Jewell, Security Sergeant

D. Martin, Manager, Security Programs  
J. McDonald, Manager, Plant Production  
V. Parrish, Chief, Executive Officer  
R. Webring, Vice President, Operations Support  
C. Whitcomb, Assistant, to Vice President, General/Plant General Manager  
A. Witt, Fitness-for-Duty Lead  
O. Yonts, Security Training Specialist  
B. Yule, Security Lieutenant

NRC

L. Smith, Acting Chief, Branch E, Division Reactor Projects, Region IV  
J. Spets, Resident Inspector

**INSPECTION PROCEDURES USED**

IP 81700      Physical Security Program for Power Reactors  
IP 92704      Followup - Plant Support

**ITEMS OPENED, CLOSED AND DISCUSSED**

Opened

50-397/99-01      IFI      Relocation of Armed Response Personnel

Closed

None

Discussed

50-397/98-S01      LER      Adulteration of Urine Specimen

**LIST OF LICENSEE DOCUMENTS REVIEWED**

WNP-2 Physical Security Plan, Revision 38.

Security Plan Implementing Procedure SEC-18, "Safeguards Compensatory Measures,"  
Revision 0, February 19, 1998

Security Force Compensatory Measures Guideline No 1, "Unplanned CPU, Power or MUX  
Failure," Revision 2, August 4, 1997

Security Force Compensatory Measures Guideline No 4, "Loss of CCTV Due to Adverse  
Environmental Factors," Revision 2, August 4, 1997

Security Program Implementing Procedure, Vehicle Escort Officer, Vehicle Search Officer, and Protected Areas Perimeter Gates, Revision 1, May 12, 1998

Site-Wide Procedure SEC-05, "Contingency Events, Response and Reporting," Revision 0, February 19, 1998

Response Force Drill records from October 1998 through January 1999.

Security Program Implementing Procedure Intrusion Detection System Alarms, Annunciators, Operability Test, Inspection and Maintenance Records, Revision 1, March 2, 1998.

Site Wide Procedure, Access Key Control, Revision 0, May 12, 1997

Security Program Implementing Procedure, Key and Lock Control, Revision 0, February 19, 1998