ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-344
License No.:	NPF-1
Report No.:	50-344/99-02
Licensee:	Portland General Electric Company
Facility:	Trojan Nuclear Plant
Location:	21 S. W. Salmon Street, TB-17 Portland, Oregon
Dates:	March 29 through April 1, 1999
Inspector:	Dennis W. Schaefer, Physical Security Specialist Plant Support Branch
Approved By:	D. Blair Spitzberg, Ph. D., Chief Fuel Cycle and Decommissioning Branch
Attachment:	Supplemental Information

EXECUTIVE SUMMARY

Trojan Nuclear Plant
NRC Inspection Report 50-344/99-02

This was an announced inspection of the licensee's physical security program. The areas inspected included access authorization, alarm station and communications, access control of personnel and packages, testing and maintenance, protected area barriers and detection aids, assessment aids, compensatory measures, security system power supply, security program plans and procedures, security event log, personnel training and qualification, management support, staffing levels, and security program audit. During this inspection, the reactor was shut down and defueled.

Plant Support

- Overall, performance in the security program was very good. Effective alarm station and security radio communication systems were maintained. A thorough program for searching , rsonnel and packages entering the protected area was maintained. The testing and maintenance of security equipment were completed in a timely manner and were properly documented. A very good protected area barrier and detection system was in place that would provide delay and detection of individuals attempting unauthorized entry. Additionally, the protected area barrier and detection system effectively limited access to only authorized personnel. Assessment aids provided very good assessment and produced a clear image on monitors in the security alarm station. The compensatory measures program was effectively implemented. The security backup power supply system performed very well. A good lock and key control program was maintained and implemented. Security plan changes were submitted in accordance with NRC requirements, and the changes had not decreased the effectiveness of the plans. A properly maintained records and reports program was in place. The security staff was correctly reporting security events. Security training was conducted in accordance with the security training plan and procedures. Management support for the licensee's security p ogram was excellent. On-shift security staffing of armed security officers was properl, naintained. Audits of the security, fitness-for-duty, and access authorization progran ' ad been completed every 12 months. These audits were performance based, and the audits overall quality was excellent (Sections S1.2, S1.3, S2.1, S2.2, S2.3, S2.4, S2.5, S2.6, S3.1, S3.2, S5.1, S6.1, S6.2, and S7.1).

- Performance in the access authorization program was very good. An effective access authorization program was established to grant individuals unescorted access to the industrial and protected areas (Section S1.1).

- A very good fitness-for-duty program was in place (Section S8.1).

Report Details

IV. Plant Support

S1 Conduct of Security and Safeguards Activities

S1.1 Access Authorization

a. Inspection Scope (81700)

The access authorization program was inspected to determine compliance with the requirements of 10 CFR 73.56, the security plan, and Regulatory Guide 5.66. The areas inspected included the review of seven background investigation files for individuals presently granted unescorted access. The inspector reviewed records and conducted interviews to determine the adequacy of the program. The inspector also reviewed information concerning the licensee's verification of identity, employment history, educational history, credit history, criminal history, military service, and the character and reputation of the applicants before granting individuals unescorted access to the protected area.

b. Observations and Findings

Background investigation screening files were complete and thorough. Personnel administering the program performed their duties in an excellent manner. Through a review of the licensee's policies and procedures, the inspector determined that the access authorization program contained specific guidance necessary to implement the program.

c. Conclusions

Performance in the access authorization area was very good. An effective access authorization program was established to grant individuals unescorted access to the industrial and protected areas.

S1.2 Alarm Station and Communications

a. Inspection Scope (81700)

The alarm station and the security communication capabilities were inspected to determine compliance with the requirements of the security plan. The areas inspected included the requirements and capabilities of the alarm station, protection of the alarm station, systems security, operability of the radio and the telephone systems, and the capability to effectively communicate with the local law enforcement agencies through both communication systems.

b. Observations and Findings

Through observations and interviews, the inspector determined that the central alarm station located in the Access Control Facility was equipped with appropriate alarm, surveillance, and communication capability. The alarm station was continually manned by an alarm station operator whose duties did not interfere with the execution of assessment and response functions. The inspector determined that the alarm station operators were alert, well trained, capable of maintaining continuous communication with each security officer on duty, and also capable of calling for assistance from the local law enforcement authority. The inspector verified that the licensee had effective radio and telephone systems capable of meeting communication requirements. The licensee maintained an adequate number of portable radios for use by members of the security organization. Communication checks with the local law enforcement authority were conducted at least once each 24 hours.

c. Conclusions

An effective alarm station and security radio communication system was maintained. Alarm station operators were alert and well trained. An adequate number of portable radios were available for members of the security organization.

S1.3 Protected Area Access Control of Personnel, Packages, and Vehicles

a. Inspection Scope (81700)

The access control program for personnel and packages was inspected to determine compliance with the requirements of the security plan. (Note: It is not possible for vehicles to enter the protected area.)

b. Observations and Findings

Through observations and interviews, the inspector determined that upon entering the industrial area, authorized persons inserted their security photo identification key card into a biometric (hand geometry) card reader system. Persons not authorized a key card were escorted within the industrial area.

Additionally, through observations, the inspector determined that personnel access to the protected area was effectively controlled by a separate security photo identification key card. Prior to entering the protected area, authorized personnel exchanged their industrial area key card for a protected area key card. The inspector verified that the licensee's search program for firearms, explosives, incendiary devices, and other unauthorized material met the requirements of the security plan. The fixed metal detector, explosive detector, and X-ray machine at the entrance to the fuel building operated in an effective manner. Further, the inspector verified that unescorted access was limited to authorized personnel.

In addition to the protected area at the spent fuel building, the licensee also controlled access into the control room. Authorized personnel utilized their industrial area security photo identification key card to access this area.

c. Conclusions

A thorough program for searching personnel and packages entering the protected area was maintained.

S2 Status of Security Facilities and Equipment

S2.1 Testing and Maintenance

a. Inspection Scope (81700)

The testing and maintenance program was reviewed to determine compliance with the requirements of the security plan.

b. Observations and Findings

Through interviews with security officers and supervisors, the inspector determined that repairs to security equipment were completed in a timely manner. Through review of testing records, the inspector verified that security equipment and tamper alarms were performance tested as required by the security plan. All equipment performed as designed.

c. Conclusions

The testing and maintenance of security equipment were completed in a timely manner and were properly documented.

S2.2 Protected Area Barrier and Detection Aids

S2.2 Protected Area Barrier and Detection Aids

a. Inspection Scope

The protected area physical barriers and detection aids were inspected to determine compliance with the physical security plan. The areas inspected included the features of the protected area barrier and the design and capabilities of the detection aids system. (Note: The licensee had no vital areas or vital equipment as defined in 10 CFR 73.2.)

b. Observations and Findings

Through observations, the inspector determined that doors in the protected area (the fuel storage building) barrier were locked and alarmed, and the doors were installed and maintained as described in the physical security plan. The inspector also determined

that the protected area barrier provided penetration resistance to both forced and surreptitious entry and was adequate to ensure delay of a potential adversary.

The inspector observed the licensee perform functional tests of locked and alarmed protected area doors. All attempts to intrude into the protected area were detected, and all alarms annunciated in a continuously manned alarm station. The inspector verified that the licensee's weekly tests of the protected area barrier were performance based to ensure that system failures were discovered and corrected.

c. Conclusion

A very good protected area barrier and detection system were in place that would provide delay and detection to individuals attempting unauthorized entry. Additionally, the protected area barrier and detection system effectively limited access to only authorized personnel.

S2.3 Assessment Aids

a. Inspection Scope (81700)

The assessment aids were inspected to determine compliance with the physical security plan. The areas inspected included the closed-circuit television monitors located in the alarm stations.

b. Observations and Findings

The inspector observed the assessment aids and determined that the system was effective. Through observations, the inspector verified that the closed-circuit television cameras were properly positioned and that each closed-circuit television camera produced a clear image on a monitor in the security alarm station. Through interviews, the inspector determined that prompt maintenance support was provided to ensure that system problems were corrected in a timely manner.

c. Conclusions

Assessment aids provided very good assessment and produced a clear image on monitors in the security alarm station.

S2.4 Compensatory Measures

a. Inspection Scope (81700)

The compensatory measures were inspected 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

Through interviews and a review of the licensee's quick reaction lists, the inspector confirmed 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. Security personnel were well trained on program requirements.

S2.5 Security System Power Supply

a. Inspection Scope (81700)

The security system power supply was inspected to determine compliance with the physical security plan.

b. Observations and Findings

The security plan requires that sufficient backup power for a specific period of time be provided to the security computer, alarm system, and the radio communications system. The licensee has provided this backup power through multiple uninterruptible power supply (UPS) systems. During the inspection, the licensee conducted load testing of several of its UPS systems. These systems performed as designed.

c. Conclusions

The security backup power supply system performed very well.

S2.6 Security Locks, Keys and Combinations

a. Inspection Scope (81700)

The licensee's locks, keys, and combinations were inspected to determine compliance with the physical security plan.

b. Observations and Findings

Through a review of lock and key procedures and records, the inspector determined that inventories were completed as required. The records indicated that the locks and keys were rotated annually, 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 being maintained.

c. Conclusion

A good 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 licensee's physical security plan for long-term defueled condition, amendment 51, dated November 10, 1998, and implementing procedures were inspected to determine compliance with the requirements of 10 CFR 50.54(p), 10 CFR 50.90, and 10 CFR 73.55(b)(3).

b. Observations and Findings

The inspector determined from a review of security plans and procedures and interviews with licensee security personnel that changes to the licensee's NRC-approved security, contingency, and training and qualification plans did not decrease the effectiveness of the respective plans. Plan changes were submitted in accordance with NRC requirements. The inspector determined 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

Security plan changes were submitted in accordance with NRC requirements, and the changes had not decreased the effectiveness of the plans. Security procedures were consistent with the security plans.

S3.2 Security Event Logs

a. Inspection Scope (81700)

The safeguards event logs and security incident reports were inspected to determine compliance with the requirements of 10 CFR 73.71(b) and (c), and the physical security plan. The inspector reviewed the safeguards event logs from March 1998 to March 5, 1999.

b. Observations and Findings

The inspector determined that the licensee conformed to the regulatory requirements regarding the reporting of security events. The necessary records were available for review and were maintained for the time required by regulations.

c. Conclusions

A properly maintained records and reports program was in place. The security staff was correctly reporting security events.

S5 Security and Safeguards Staff Training and Qualification

S5.1 Personnel Training and Qualification

a. Inspection Scope (81700)

The licensee's security training and qualification program was inspected to determine compliance with the requirements of the training and qualification plan.

b. Observations and Findings

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

The security organization conducted all required training in accordance with its approved security, training, and contingency plans. The inspector confirmed, by a review of the composite security training records, that the required training was conducted every 12 months. The inspector also reviewed security officers' medical records and determined that the medical evaluations were conducted every 12 months as required by the training and qualification plan.

c. Conclusions

Security training was conducted in accordance with the security training plan and procedures. Security officers demonstrated good knowledge of the procedural requirements for the task they were performing. Medical evaluations were current.

S6 Security Organization and Administration

S6.1 Management Support

a. Inspection Scope (81700)

The effectiveness and adequacy of management support for the physical security program were inspected.

b. Observations and Findings

The inspector interviewed security officers on shifts and determined from their comments that licensee management of the security organization was very good. The inspector determined that the security program was implemented by a trained and qualified

security staff. All members of the security organization had a clear understanding of their duties and responsibilities.

c. Conclusions

Management support for the licensee's security program was excellent.

S6.2 Staffing Levels

a. Inspection Scope (81700)

Staffing levels of the security shifts was inspected to determine compliance with the physical security plan.

b. Observations and Findings

The inspector determined from discussions with security supervisors and reviewing the security shift personnel rosters that there was an adequate number of security officers always available to meet the number specified in the physical security plan.

c. Conclusion

On-shift security staffing of armed security officers was properly maintained.

S7 Quality Assurance in Security and Safeguards Activities

S7.1 Security Program Audit

a. Inspection Scope (81700)

The annual audits of the physical security, fitness-for-duty, and access authorization programs were inspected to determine compliance with the requirements of 10 CFR 26.80, 10 CFR 50.54(p), 10 CFR 73.55(g), 10 CFR 73.56, and the security plan.

b. Observations and Findings

The inspector reviewed the 1998 security and fitness-for-duty Audit Report No. AP-743, dated May 12, 1998. The inspector confirmed that members of the audit team were independent of plant security management. It was determined that audit team personnel were well qualified, and the audits were performance based. The security department promptly resolved all identified deficiencies/findings. This audit was comprehensive and of excellent quality.

The inspector also reviewed Audit Report No. 98-09, dated December 7, 1998. This report determined that the licensee's pathology laboratory had properly screened and provided confirmatory testing of all urine specimens for required drugs. Further, the inspector reviewed Audit Report No. 98-06, dated June 15, 1998. This report

determined that the licensee's access authorization program had been properly conducted. Both of these audits were comprehensive and of excellent quality.

c. Conclusions

Audits of the security, fitness-for-duty, and access authorization programs had been completed every 12 months. These audits were performance based, and their overall quality was excellent.

S8 **Miscellaneous Security and Safeguards Issues (81502 and 92904)**

S8.1 Fitness-for-Duty (81502)

a. Inspection Scope

A partial review of the licensee's fitness-for-duty program was conducted to determine compliance with 10 CFR Part 26.

b. Observations and Findings

The inspector reviewed the fitness-for-duty testing facility and interviewed the individual on-duty at the facility. The inspector determined that the licensee's collection facility was being operated in accordance with 10 CFR Part 26 and that precautions had been taken to insure that all individuals tested could not circumvent the test with false specimens and that all testing was properly conducted and monitored. The licensee's program was very good.

c. Conclusions

A very good fitness-for-duty program was in place.

S8.2 Information Notice 98-35: Threat Assessments and Consideration of Heightened Physical Protection Measures

Information Notice 98-35, dated September 4, 1998, was issued to inform licensees of factors considered by the NRC when assessing threats and disseminating that information to the licensees. Additionally, the notice advised licensees about additional physical protection measures that should be considered for specific threat conditions. The notice discussed threat levels and appropriate response levels in an effort to avoid any misunderstandings concerning NRC threat advisories and to facilitate an appropriate and comparable level of physical protection response throughout the nuclear industry.

During this inspection, the licensee stated they had recently received the notice and were reviewing it for applicability.

S8.3 Year-2000 Compliance Testing

During this inspection, the licensee stated that on March 26, 1999, Matrix Systems, Inc. had completed their Y2K (Year-200) testing of the following types of security system equipment installed at the Trojan Nuclear Plant:

- RMS Host Computer
- XWindows Computer
- Controlled Access Test Readers (MX 540, MS 570, MS 125 Input/Output Reader, and the Biometrics Hand Reader)

As a result of testing, Matrix Systems, Inc., determined that all equipment, except the LAN Workplace 5.0 for Windows, was Y2K compliant. Matrix Systems Inc., provided the licensee a Y2K update disk for this LAN Workplace. The licensee's installation of this disk will make the LAN Workplace 5.0 compliant with Y2K concerns. The licensee intends to install this disk prior to July 1999.

S8.3 Information Notice 99-08: Urine Specimen Adulteration

Information Notice 99-08: "Urine Specimen Adulteration," dated March 26, 1999, was issued to remind licensees of a recent attempt by an employee at a nuclear power plant to circumvent fitness-for-duty (FFD) testing. During pre-access FFD testing, a contract employee unsuccessfully attempted to adulterate his urine specimen with a commercially available substance containing pyridium chlorochromate. This licensee now requires its contracted HHS-certified laboratory to test for adulterants in all specimens that it forwards for confirmation. This information notice also reminded licensees of 10 CFR 26.24 which requires, in part, that chemical testing programs provide a means to deter and detect substance abuse.

During this inspection, the licensee stated they had recently received this notice and were reviewing it for applicability.

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 April 1, 1999. The licensee acknowledged the findings presented.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

S. Quennoz, Vice President of Thermal Operations
K. Allison, Project Manager, Independent Spent Fuel Storage Installation (ISFSI)
A. Bowman, Radiation Protection
C. Brown, Training Specialist
J. Burke, Security Watch Supervisor
C. Casciato, Licensing
K. Cox, Manager, ISFSI
L. Dusek, Licensing
R. Eder, ISFSI Specialist
S. Fallt, Engineer
M. Gatlin, Manager, Nuclear Security
D. Gildow, Manager, Decommissioning Planning (ISFSI Project Manager)
M. Lackey, General Manager, Engineering/Decommissioning
R. Magnuson, Security Supervisor, Access Authorization and Fitness-for-Duty
T. Meek, Manager, Radiation Protection
J. Mihelich, Manager, Engineering
D. Nordstrom, General Manager, Technical Functions and Plant Support
J. Perrin, Shift Manager, Operations
L. Rocha, Health Physics Engineer
G. Shoemaker, Security Supervisor
S. Schneider, Manager, Operations
C. Storms, ISFSI Specialist
J. Viagerud, Manager, Maintenance
J. Westvold, Manager Nuclear Oversight
G. Zimmerman, Licensing Specialist

Others

A. Bless, Oregon Office of Energy
D. Howard, Licensing Engineer, RIO Technical Services
D. March, Auditor, Duke Engineering
C. Stephenson, Licensing Engineer, RIO Technical Services

Nuclear Regulatory Commission

H. Gray, Region I
T. Kobetz, NMSS

LIST OF INSPECTION PROCEDURES USED

IP 81700 Physical Security Program for Power Reactors

IP 92700 Onsite Followup of Written Reports of Non-Routine Events at Power Reactor Facilities (Information Notice)

LIST OF ITEMS OPENED CLOSED AND DISCUSSED

Items Open

None

Items Closed

None

Items Discussed

Information Notice 98-35: Threat Assessments and Consideration of Heightened Physical Protection Measures

Information Notice 99-08: Urine Specimen Adulteration

LIST OF DOCUMENTATION REVIEWED

Portland General Electric Audit 98-09 of Dynacare Laboratory of Pathology, dated December 7, 1998

Portland General Electric Audit 98-06 of Bailey, Hinchy, Downs and Associates, Inc. (access authorization), dated June 15, 1998

Portland General Electric Audit AP-743 of Security and Fitness-for-Duty, dated May 12, 1998

Security Event Logs for the period March 1, 1998, through March 5, 1999

Security training and qualification records on five security officers

Annual medical qualification records on 14 security officers

Trojan Plant Procedure, 21-1, "Security Operations Administration," Revision 4

Trojan Plant Procedure 21-4, "Security Operations Equipment," Revision 4

Trojan Plant Procedure 21-8, "Security Operations Access Control," Revision 8

Trojan Plant Procedure 21-12, "Security Screening for Access Authorization," Revision 5

Trojan Plant Procedure 23-3, "Trojan Fitness-for-Duty Program," Revision 4

Trojan Security Plan (Defueled Condition), Revision 51, dated November 10, 1998

Quarterly UPS Testing Records for the period of June 1998 through March 1999

Annual Tamper Switch Test for security system records dated November 24, 1998

Weekly Biometric Hand Geometry Reader Testing Records for the period of January through March 1999

Weekly Door Test Records for the period of January through March 1999