

ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-344, 72-17

License No.: NPF-1

Report No.: 50-344/97-01; 72-17/97-01

Licensee: Portland General Electric Company (PGE)

Facility: Trojan Nuclear Plant

Location: 121 S. W. Salmon Street, TB-17
Portland, Oregon 97204

Dates: February 4-6, 1997

Inspector: Louis C. Carson II, Health Physicist

Accompanied by: Lee H. Thonus, Project Inspector

Approved by: D. Blair Spitzberg, Ph.D., Chief
Nuclear Materials Licensing Branch

Attachment: Partial List of Persons Contacted;
List of Inspection Procedures Used;
List of Items Opened, Closed, and Discussed; and
List of Acronyms

EXECUTIVE SUMMARY

Trojan Nuclear Plant NRC Inspection Report 50-344/97-01;72-01

This inspection included a review of the radiation protection program, compliance with Technical Specifications, operations involving licensee inspection of spent fuel, and Quality Assurance Program implementation.

- The licensee's decommissioning and spent fuel activities were progressing safely. Good radiological controls were being implemented. The inspector concluded that the licensee's external and internal radiological controls were in compliance with 10 CFR Part 20 and the Permanently Defueled Technical Specifications (Section 1).
- The inspector observed that the licensee maintained an adequate foreign materials exclusion area around the spent fuel pool. Facility material condition, housekeeping, and cleanliness were excellent. A detailed tour of the spent fuel pool areas verified that structures, systems, and components continued to be maintained adequately for the safe storage of spent fuel (Section 2).
- Water chemistry, level, and temperature had been maintained within the required Permanently Defueled Technical Specification parameters for the Trojan spent fuel pool during the period reviewed (Section 2).
- The inspector determined that the licensee's maintenance program for the spent fuel pool bridge, crane, and hoist was adequate. Certified fuel handlers and the fuel handling equipment were operationally ready to support spent fuel inspections. In conducting the fuel inspections, the licensee adequately followed procedures required by Permanently Defueled Technical Specification 5.7.1 (Section 2).
- The Quality Assurance activities conducted to date and planned for the rest of the year included a good mix of topical areas for audits and surveillances. Audits and surveillance reviewed by the inspector appeared to have been comprehensive and well documented (Section 3).
- One violation was identified concerning failure to conduct a required audit. Technical Specification 6.8.5 required the Radiological Environmental Monitoring Program procedures to be implemented in accordance with Trojan's Quality Assurance program. The Quality Assurance program requires all Technical Specifications to be audited every 5 years. Contrary to this requirement, the inspector determined that the Annual Radiological Environmental Report Technical Specification 6.9.1.5.1 was not audited within the required 5-year time frame (Section 3).

Report Details

Summary of Plant Status

The Trojan nuclear facility is undergoing decommissioning and dismantlement. Trojan's Decommissioning Plan was approved on April 4, 1996. The licensee had developed an integrated work schedule for the work activities necessary to remove the contaminated equipment and material from the site. A license application was submitted to the NRC on March 26, 1996, for an Independent Spent Fuel Storage Installation. This license, when issued, will allow spent fuel to be transferred from the spent fuel pool and placed in a dry cask storage system. On January 20, 1997, the licensee started spent fuel bundle and spent fuel pool rack inspections in preparation for the Independent Spent Fuel Storage installation dry cask storage loading.

1 Occupational Exposure During Safstor and Decon (83100)

1.1 Inspection Scope

This inspection included a review of Trojan's radiation protection program. The inspector reviewed the licensee's as low as is reasonably achievable (ALARA) program, personnel exposures and records, and radioactive material controls for compliance with 10 CFR Part 20 and the Permanently Defueled Technical Specifications.

1.2 Observations and Findings

a. Decommissioning Activities

The inspector observed various dismantling activities including a tour of the Trojan containment to monitor work activities. Tours of the containment and selected areas of the auxiliary building and spent fuel building indicated that the facility was being well maintained. Radiological postings and barriers were current with existing radiological conditions in the facility.

The inspector reviewed selected Radiation Work Permits to determine the extent of work being performed on contaminated equipment and in radiologically controlled areas. Discussions were held with the decommissioning manager regarding equipment dismantlement activities. The inspector determined from plant tours, records review, and discussions with licensee management that minor decommissioning activities had been conducted since the last inspection. The integrated schedule for decommissioning activities was reviewed. The inspector reviewed plant equipment and facility drawings that were highlighted to illustrate decommissioning activities underway at Trojan. The inspector observed that Trojan was efficiently repackaging contaminated material being removed during decommissioning to reduce volume.

b. Radiation Protection During Spent Fuel Inspections

The inspector observed radiation protection activities during the spent fuel bundle inspections. The inspector reviewed the licensee's implementation of Radiation Work Permit 970015, which was the primary Radiation Work Permit used during the inspection of the spent fuel pool racks and spent fuel. The inspector observed that a health physics technician with a radiation survey meter in hand was always standing next to the certified fuel handler on the spent fuel pool bridge crane. The inspector noted that the licensee had revised the Radiation Work Permit ALARA pre-job briefing section to reflect a projected increase in personnel dose estimate from 0.075 person-rem to 0.150 person-rem. The inspector observed that portable radiation monitors were installed in the vicinity of the spent fuel pool and that the monitors were verified operational daily by the health physics technicians. The Radiation Work Permit had contingency instructions for handling unidentified materials in the spent fuel pool and discrete radioactive particles.

The inspector found that the licensee had incorporated into the Radiation Work Permit the lessons learned from NRC Information Notice (IN) No. 90-33, "Source of Unexpected Occupational Radiation Exposures at Spent Fuel Storage Pools." The licensee had established a radiologically controlled area around the spent fuel pool in accordance with Radiation Procedure-136, "Discrete Radioactive Particle Control and Survey Method." As required by the licensee's procedures, the licensee wrote Corrective Action Request C-97-003 to investigate and evaluate the foreign and unidentified materials found in the spent fuel pool. The inspector determined that the licensee's radiation protection coverage during the spent fuel inspections was adequate.

c. External Exposure Controls

The inspector examined the licensee's personal dosimeter program to ascertain compliance with 10 CFR 20.1201 and 20.1502. The licensee had been using contract services for providing and processing personal thermoluminescent dosimeters. The inspector found that Trojan's new thermoluminescent dosimeter contractor had a current National Voluntary Laboratory Accreditation Program certificate, which stated, in part, that the contractor's facility thermoluminescent dosimeters and thermoluminescent dosimeter reader met the requirements of ANSI-N13.11.

The inspector observed the licensee's use of digital alarming dosimeters. These dosimeters provided immediate tracking of personnel's quarterly and accumulated dose when the individual logged on and off a Radiation Work Permit. The dosimeters also provided current doses. The digital alarming dosimeter system allowed downloading of personnel dose status reports for dissemination to management. Observations of personnel practices involving proper worker use of the dosimeters inside the auxiliary, containment and fuel handling buildings in full protective clothing revealed the following:

- Personnel wore the dosimeters under protective clothing.
- The dosimeters were audible under working conditions.
- Workers checked their doses when they exited radiological controlled area.

d. Internal Exposure Controls

The inspector reviewed the licensee's ALARA process and engineering controls for reducing internal radiation exposure from airborne radioactivity as required by 10 CFR 20.1701 - 20.1704. Requirements regarding internal radiological controls were found in the following licensee procedures:

- RP-119, "Air Sampling"
- RP-160, "Air Sample Analysis"
- RP-161, "DAC-Hour Tracking"

Internal radiological controls were detailed in radiation protection procedures, ALARA work package, and Radiation Work Permits. The licensee used the following internal dose control measures:

- Breathing zone air sampling
- Area air sampling
- Respiratory protection equipment
- High-efficiency particulate air filter ventilation systems
- Contamination containment systems

Generally, the licensee had determined that respiratory protection equipment was not required during the current decommissioning activities, but respirators were required for pipe insulation removal. The inspector noted that one worker received a recorded uptake in 1996. The exposure from this uptake was less than regulatory limits. Air samples collected were considered by the licensee to be abnormal when radioactivity measured in excess of 10 percent of the applicable derived air concentration.

During daily licensee management meetings, the radiation protection manager informed the staff of internal contamination concerns relating to potentially contaminated water spraying from piping systems. The systems were being dismantled and were considered previously drained. Licensee staff agreed to develop an action plan to prevent the potential for internal contamination.

c. Whole-Body Counter

The inspector observed the licensee operating the whole-body counter. Additionally, the inspector reviewed whole-body counter calibration records, quality control records, and the whole-body counter log. On February 3, 1997, the whole-body counter experienced a system failure. The licensee notified the whole-body counter service representative who helped the licensee resolve the

problem, which was attributed to an overheated circuit. Before placing the whole-body counter back into service, the licensee performed the daily energy calibration check using a cobalt-60 source and an americium-241 source. The inspector reviewed the results of daily energy calibration data, which were found to be acceptable. The inspector compared the results of the biannual calibration data from May 21, 1996, with the results from November 26, 1996, and determined that the results were in agreement. The inspector determined that Trojan's whole-body counter operations were adequate.

f. Maintaining Exposures As Low As is Reasonably Achievable (ALARA)

The licensee did not set an ALARA goal for 1996; however, they maintained job specific ALARA goals. The inspector reviewed Trojan's Monthly ALARA Reports which indicated performance in such areas as bioassay results, personnel contamination reports, Radiological Event Reports, lessons learned, and ALARA suggestions made by workers. The inspector determined that the licensee's radiation exposure controls and ALARA program had been effective.

g. Occupational Exposure Records

The inspector reviewed personnel exposure records to determine if the licensee had maintained the records according to 10 CFR Part 20. The review included personnel exposure termination letters that were sent to former Trojan radiation workers. The inspector determined that the licensee's personnel exposure records and exposure letters issued to terminated workers met the requirements of 10 CFRs 19.13 and 20.2106.

1.3 Conclusion

The licensee's decommissioning and spent fuel activities were progressing safely, and good radiological controls were being implemented. The inspector concluded that the licensee's external and internal radiological controls were in compliance with 10 CFR Part 20 and the Permanently Defueled Technical Specifications.

2 **Spent Fuel Pool Activities (86700), Operation of an Independent Spent Fuel Storage Installation (60855), and Plant Procedures (42700)**

2.1 Inspection Scope

The inspection included an assessment of the spent fuel pool and fuel handling area housekeeping, fire hazards, radiation material control, access, and lighting. Section 3.1 of the Permanently Defueled Technical Specifications set requirements for spent fuel pool operations. The requirements related to the spent fuel pool operations, level, temperature, and water chemistry were reviewed. Additionally, the inspector reviewed the spent fuel inspections that were being performed to

meet 10 CFR Part 71 packaging, and 10 CFR Part 72 Independent Spent Fuel Storage Installation requirements.

2.2 Observation and Findings

a. Spent Fuel Pool Area Tours

The inspector toured the fuel handling building and systems to assess the status of structures, systems, and components in SAFSTOR. Within the spent fuel pool and fuel handling building, good housekeeping and foreign material controls were observed. Materials observed within the fuel handling building and around the spent fuel pool were appropriately controlled for spent fuel pool operations. Fire hazards were nonexistent with the exception of work materials that were being used during spent fuel pool inspections. Water clarity was good, and spent fuel pool underwater lights were operable. The inspector observed no buildup of boron crystals on the spent fuel pool liner, level instrumentation, or other components. Foreign material controls were implemented and provided assurance that extraneous materials would not degrade the spent fuel pool cooling system.

b. Spent Fuel Pool Operational Requirements

Section 3.1.1 of the Permanently Defueled Technical Specification requires the spent fuel pool water level to be maintained at or above 23 feet over the top of the irradiated fuel assemblies, and Permanently Defueled Technical Specification 3.1.3 requires the spent fuel pool coolant temperature to be maintained at or below 140 degrees Fahrenheit. Additionally, Permanently Defueled Technical Specification 3.1.2 requires that the boron concentration in the spent fuel pool be maintained greater than or equal to 2000 parts per million.

Records for the spent fuel pool water level and temperature for the period of June 19, 1996, through February 6, 1997, were reviewed. The records documented that water temperature had been maintained below the required 140 degrees Fahrenheit. Throughout this period, spent fuel pool water temperatures were generally less than 80 degrees Fahrenheit. Water level had been maintained above the required 23 feet with typical water levels between 24 and 24.5 feet. The inspector reviewed the results of spent fuel pool water chemistry analyses for the period from October 14, 1996, to February 3, 1997. The inspector found that the spent fuel pool boron concentration was maintained above the 2000 parts per million requirement. However, the inspector noted that from October 1996 to February 1997 boron concentrations had trended downward; from 2225 parts per million to 2060 parts per million.

c. Spent Fuel Pool and Fuel Assembly Inspections

Before this inspection, the licensee initiated a spent fuel examination program to satisfy 10 CFR Part 71 packaging and 10 CFR 72 Independent Spent Fuel Storage

Installation dry storage requirements. The licensee is required to identify, characterize, and document that each spent fuel assembly being stored in an Independent Spent Fuel Storage Installation dry cask meets the Certificate-of-Compliance requirements or site-specific license requirements. On January 20, 1997, the licensee began the spent fuel and spent fuel pool rack inspections. The inspector observed some spent fuel pool rack inspections and reviewed the spent fuel inspection process, implementing procedures, and preparations made by the Trojan staff.

At the time of this inspection, the licensee had completed the inspection of 300 of the 780 spent fuel assemblies. The inspection involved the operation of the spent fuel pool bridge crane and utilization of the spent fuel assembly handling tool. The spent fuel pool bridge was positioned over each spent fuel assembly, and the handling tool lifted each assembly out of its spent fuel pool rack position. The fuel assembly was inserted into a spent fuel pool rack cell that had four video/monitoring cameras placed on each side of the spent fuel pool cell. Each spent fuel assembly was monitored by licensee certified fuel handlers during the insertion into the spent fuel pool monitoring cell. As each assembly was withdrawn from the monitoring cell, the certified fuel handlers turned on four videotapes to record the condition of the fuel assembly.

Each spent fuel pool cell was inspected for damage and debris so that the licensee could document the type of material on the bottom of the spent fuel pool. The licensee was developing a radwaste process for handling spent fuel pool debris that could be highly radioactive and contain fuel fragments. Also, the licensee was designing a radwaste cask for storing the debris. The spent fuel pool radwaste process system and the spent fuel pool debris cask design were both under review by NRC headquarters' staff.

During this inspection, the fuel handling bridge was declared inoperable; therefore, the inspector did not observe certified fuel handlers perform fuel inspections. However, the inspector observed certified fuel handlers inspect spent fuel pool cells for debris and damage. The inspector reviewed preliminary spent fuel pool data and held discussions with licensee staff who implement the inspection procedures.

d. Procedures for Fuel Handling Operations and Training

Section 5.7.1 of Permanently Defueled Technical Specification requires procedures for maintaining spent fuel in a safe storage configuration. The inspector reviewed the following fuel handling procedures to determine if the licensee complied with the requirements of Permanently Defueled Technical Specification 5.7.1:

- Fuel Handling Procedure 5-16, "Spent Fuel Pool Cleanup," Revision 7
- Fuel Handling Procedure 6-5, "Spent Fuel Assembly Handling Tool Operating Instructions," Revision 7

- Fuel Handling Procedure 6-12, "Spent Fuel Pool Bridge Crane Operating Instruction," Revision 11
- Fuel Handling Procedure 11, "Control and Accounting of Special Nuclear Material," Revision 22
- Fuel Handling Procedure 13, "Fuel Handling Emergency Procedure," Revision 22
- Fuel Handling Procedure 14, "Limitations and Precautions for Handling Fuel Assemblies," Revision 13
- Fuel Handling Procedure 15, "Irradiated Nuclear Fuel Inspection," Revision 14
- Fuel Handling Procedure 17, "Preparation for Spent Fuel Pool Operations," Revision 1
- Fuel Handling Procedure 18, "Fuel Movement and Position," Revision 1

All the procedures listed above, except Fuel Handling Procedure 15, were identified as Permanently Defueled Technical Specification 5.7.1.1 implementing procedures and were identified as quality-related procedures. The inspector examined the licensee's implementation of Fuel Handling Procedure 17, because this procedure provided guidelines for preparing the fuel handling bridge and personnel for moving fuel. Fuel Handling Procedure 17 required the licensee to perform maintenance on the fuel handling bridge, retrain the certified fuel handlers, and practice moving a dummy spent fuel bundle. The inspector verified that the licensee had signed and dated each preparatory step required in Fuel Handling Procedure 17. The inspector reviewed the certified fuel handler's retraining records, the completed maintenance records for the fuel handling bridge crane, and the dummy fuel bundle test results. A temporary change notice was written to Fuel Handling Procedure 17 that allowed the certified fuel handlers to practice dummy fuel bundle movements in the spent fuel pool.

Maintenance Request 11877 documented the performance of the fuel inspection pursuant to Fuel Handling Procedure 15 and fuel movement pursuant to Fuel Handling Procedure 18. The inspector found that Maintenance Request 11877 had detailed instructions for spent fuel inspections. Licensee personnel had signed off that Maintenance Request 11877 prerequisites were completed.

During the week of January 27, 1997, the spent fuel pool bridge crane hoist started leaking small amounts of oil out of the motor into the spent fuel pool. On February 4, 1997, the certified fuel handler on duty noticed a larger grease accumulation on the motor, placed the spent fuel bundle that was suspended from the hoist back into its spent fuel pool rack location, and declared the spent fuel pool

crane hoist inoperable. The certified fuel handler took the spent fuel pool hoist out of service and notified the operations manager. The inspector evaluated the licensee's procedures and the certified fuel handler's training to determine how abnormal operating occurrences and operating limitations were to be handled. The inspector found that certified fuel handler training material required the certified fuel handler to place equipment in a safe condition and notify the plant shift manager. The instruction to place equipment in a safe condition was found in Procedure TPP 12-1, "Nuclear Division Manual Procedure Use and Organization."

Trojan's training specifically referenced NRC Information Notice (IN) 94-13, "Unanticipated and Unintended Movement of Fuel Assemblies and Other Components Due to Improper Operation of Refueling Equipment." The inspector determined that the certified fuel handler effectively followed his training and Procedure TPP 12-1 requirements when the spent fuel pool bridge hoist was declared inoperable during this inspection. However, the inspector noted that neither Maintenance Request 11877, nor Fuel Handling Procedure 13 and Fuel Handling Procedure 14 addressed what to do if spent fuel pool hoist lost its ability to operate with a spent fuel bundle suspended from the hoist. The inspector further noted that the licensee's procedures did not address how to recover should a spent fuel bundle rupture and loose fuel pellets during the fuel inspections. The licensee noted the inspector's concerns and wrote Commitment Tracking Record 44538 to evaluate the adequacy of current procedures to address abnormal fuel handling incidents.

Section 5.2.2 of the Permanently Defueled Technical Specifications requires that the shift manager be a certified fuel handler and available on site at all times. The shift manager reported to the operations manager, who was also qualified as a certified fuel handler. The inspector determined that the licensee was in compliance with the Permanently Defueled Technical Specification, licensee procedures, and certified fuel handler training.

e. Spent Fuel Pool Equipment and the 10 CFR 50.65 Maintenance Rule

Due to the spent fuel pool hoist oil leak, the inspector examined the licensee's maintenance program for spent fuel pool equipment. The licensee's Design Basis Document-36, Appendix A, describes how the requirements of the 10 CFR 50.65 "Maintenance Rule" are met. The licensee classified the spent fuel pool system, structures, and components as "Important to Wet Fuel Storage in contrast to "safety related" or compared to "Important to Safety." The licensee had evaluated that none of the spent fuel pool components were required to be part of a performance or condition monitoring program to implement 10 CFR 50.65. The licensee determined that fuel handling equipment such as the spent fuel pool bridge, crane, and hoist were not important to wet fuel storage. The licensee concluded that maintenance checks, up-to-date maintenance records, and operational checkouts were satisfactory for the spent fuel handling equipment.

The inspector reviewed the licensee's completed maintenance records for the spent fuel pool bridge, crane, and hoist. Maintenance records indicated that the licensee had thoroughly checked out and tested the spent fuel pool bridge, crane, and hoist before the start of the spent fuel inspections. Maintenance Procedure 1-20, "Cranes, Hoist, and Winches," which establishes licensee requirements for inspection and maintenance of hoisting equipment was implemented by the licensee under Maintenance Requests 11627, 11686, and 11877. Additionally, the licensee changed the preventive maintenance program on the fuel handling equipment from annual checks to monthly checks through the completion of the Independent Spent Fuel Storage Installation project. In response to the spent fuel pool hoist oil leak, the licensee wrote Maintenance Request 12142 to investigate and repair the hoist. The licensee contacted the hoist vendor about the oil leak, and the vendor determined that the oil and grease leakage was normal considering that the hoist had not operated regularly since 1993.

2.3 Conclusions

The inspector observed that the licensee maintained an adequate foreign materials exclusion area around the spent fuel pool. Facility material condition, housekeeping, and cleanliness were excellent. A detailed tour of the spent fuel pool areas verified that structures, systems, and components continued to be maintained adequately for the safe storage of spent fuel.

Water chemistry, level, and temperature had been maintained within the required Permanently Defueled Technical Specification parameters for the Trojan spent fuel pool in the second half of 1996 and the beginning of 1997.

The inspector determined that the licensee's maintenance program for the spent fuel pool bridge, crane, and hoist was adequate. The certified fuel handlers and the fuel handling equipment were operationally ready to support spent fuel inspections. The licensee adequately followed the Fuel Handling Procedures as required by Permanently Defueled Technical Specification 5.7.1.

3 **Audit Program (40702)**

3.1 Inspection Scope

The inspector reviewed the implementation of the Quality Assurance program in relation to the decommissioning and the spent fuel pool activities. Audits conducted by the Quality Assurance organization were reviewed to determine if Quality Assurance personnel adequately functioned as an oversight group during spent fuel pool operations and decommissioning work.

3.2 Observation and Findings

a. Surveillance's and Audits

The Quality Assurance program for the Trojan facility was described in the Trojan Decommissioning Plan and in PGE-8010, "PGE Nuclear Quality Assurance Program for Trojan Nuclear Plant." The inspector reviewed the licensee's audits, surveillances, and inspections of Independent Spent Fuel Storage Installation activities which included the spent fuel pool operations. The Nuclear Oversight Department had the responsibility of independent oversight of Trojan's Independent Spent Fuel Storage Installation activities and spent fuel pool operations. Within the Nuclear Oversight Department, the Quality Assurance Department performed audits and surveillances, and the Quality Control Department performed inspections. Technical Specifications 6.5.2.8 set the required frequency of audits to be conducted in specific areas related to 10 CFR Part 50, Appendix B, activities. The inspector reviewed the following Quality Assurance implementing procedures:

- Quality procedure 17-3, "Quality Assurance Audits," Revision 0
- Quality procedure 17-11, "Nuclear Oversight Surveillance of Nuclear Division Activities," Revision 1

Quality procedure 17-3 established audit frequencies in specific programs. Quality procedure 17-11 established requirements for scheduling Quality Assurance/Quality Control surveillances and inspections of 10 CFR Part 50, Appendix B; 10 CFR Part 71; and 10 CFR Part 72 activities such as Independent Spent Fuel Storage Installation packaging and transport. The inspector reviewed audits, surveillance records, and the "1997 Integrated Audit/Surveillance Schedule." The review revealed that a variety of topical areas were covered including the spent fuel pool, dry cask storage activities, Technical Specifications, special nuclear material, and the chemistry/radiological protection program.

Surveillance 97-001, "Monthly Spent Fuel Pool and Support System Walkdown," reviewed compliance of the Technical Specifications for spent fuel pool water level, temperature, and boron concentration. Walkdowns were conducted of selected spent fuel pool systems including the cooling pumps, liner drain, drain valve manifolds, emergency makeup valves from the service water system, and component cooling water pumps. No problems were identified during the surveillance.

Surveillance 97-002, "Spent Fuel Inspection and Shuffle," reviewed the licensee's spent fuel inspection activities, fuel movement, certified fuel handler training, procedure implementation, and foreign material exclusion. Two observations were noted by the Quality Assurance personnel conducting the surveillance, but no adverse findings were identified.

b. Missed Technical Specification Audits

During NRC Inspection 50-344/96-08 conducted in November 1996, inspectors identified that the Quality Assurance department had not audited the content of Permanently Defueled Technical Specification 5.8.1.2 in more than 5 years. The most recent audit of the Annual Radiological Environmental Monitoring Report was determined to be Trojan Audit AP-595 conducted by the licensee on May 15-19, 1989.

Trojan's Permanently Defueled Technical Specifications were issued on March 31, 1995, and Permanently Defueled Technical Specification 5.8.1.2 requires that the licensee submit Annual Radiological Environmental Monitoring Reports to the NRC. Under the Technical Specifications which were in effect when the plant was operational, the same requirement existed as Technical Specification 6.9.1.5.1. Additionally, operating Technical Specification 6.8.5, Amendment 193, required, in part, that procedures for the Radiological Environmental Monitoring Program shall be implemented according to Trojan's Quality Assurance Program. Quality Assurance Procedure (Quality procedure) 17-3, "Quality Assurance Audits," Revision 0, Section 4.2.2.9, required in part, that all portions of the Technical Specifications and each license condition be audited at least once every 5 years.

As a result of the inspector's findings in November 1996, the licensee issued Corrective Action Request 96-0020 to investigate when the Quality Assurance department last audited Technical Specification 6.9.1.5.1 (now Permanently Defueled Technical Specification 5.8.1.2). The licensee found that Technical Specifications 6.9.1.5.1 for the Annual Radiological Environmental Monitoring Report had not been audited by the Quality Assurance department since 1989. The failure to conduct the Quality Assurance audit of the Annual Radiological Environmental Monitoring Report within 5 years of 1989 was determined to be a violation of Technical Specification 6.8.5, Amendment 193 (50-344/9701-01).

Quality procedure 17-3, dated July 10, 1995, continues to require an audit of all Permanently Defueled Technical Specification requirements on a 5 year frequency. The inspector examined the Quality Assurance department's "Technical Specification Audit List" dated February 6, 1997, to determine when the licensee's Quality Assurance staff was auditing Permanently Defueled Technical Specification 5.8.1.2, the Annual Radiologically Environmental Monitoring Report. The inspector found that Audit AP-736, "PGE Quality Assurance Audit of Radiation Protection, Chemistry, Radwaste, Special Nuclear Material, and Technical Specifications," was being conducted during this inspection period. Areas being audited included chemistry controls, chemical storage, work permits, spent fuel pool chemistry, contamination controls, radiological monitoring equipment, radwaste, training, special nuclear material controls, spent fuel movement and Independent Spent Fuel Storage Installation. Additionally, this Audit AP-736, included assessment of the effectiveness of Trojan's implementation of the Permanently Defueled Technical Specification 5.8.1.2.

The licensee's immediate and long-term correction actions regarding this Technical Specification violation should preclude recurrence. Audit AP-736 audited Technical Specification 5.8.1.2, which currently meets the requirement of the Quality Assurance Program. The Quality Assurance Department currently maintains a "Technical Specification Audit List" to assure that all Technical Specifications get audited at the correct frequency in the future. The inspector determined that this matter was closed.

3.3 Conclusions

The Quality Assurance activities conducted to date in 1997 and planned for the rest of the year included a good mix of topical areas for audits and surveillances. Audits and surveillances appeared to have been comprehensive and well documented. The inspector concluded that the licensee's Quality Assurance audits and surveillance activities were adequate. The audits and surveillances were comprehensive in terms of technical content.

One violation was identified concerning failure to conduct a required audit. Technical Specification 6.8.5 required the Radiological Environmental Monitoring Program procedures to be implemented in accordance with Trojan's Quality Assurance program. The Quality Assurance program requires all Technical Specifications to be audited every 5 years. Contrary to this requirement, the inspector determined that the Annual Radiological Environmental Report Technical Specification 6.9.1.5.1 was not audited within the required 5-year time frame.

4 **Exit Meeting Summary**

The inspector presented the inspection results to members of licensee management at the exit meeting on February 6, 1997. The licensee acknowledged the findings presented. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Lackey, General Manager, Decommissioning
L. Larson, Radwaste Specialist
T. Meek, Radiation Protection Manager
J. Mihelich, Engineering Manager
D. Nordstrom, General Manager, Nuclear Oversight
S. Quennoz, Site Executive
S. Schneider, Operations Manager
J. Vingerud, Maintenance Manager
H. Youngblood, Operations Shift Manager
P. Yundt, General Manager, Plant Support/Technical Function

State of Oregon

A. Bless, Oregon Department of Energy Resident Inspector

INSPECTION PROCEDURES USED

Inspection Procedure 35701	Quality Assurance Program Review
Inspection Procedure 42700	Plant Procedures
Inspection Procedure 40702	Audit Program
Inspection Procedure 60855	Operation of an Independent Spent Fuel Storage Installation
Inspection Procedure 83100	Occupational Exposure During SAFSTOR and DECON
Inspection Procedure 86700	Spent Fuel Pool Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-344/9701-01	VIO	Quality Assurances failure to audit environmental monitoring Technical Specifications 6.9.1.5.1 pursuant to Technical Specifications 6.8.5
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Closed

50-344/9701-01	VIO	Quality Assurances failure to audit environmental monitoring Technical Specifications 6.9.1.5.1 pursuant to Technical Specifications 6.8.5
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Discussed

None