U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-344/82-22

Docket No. 50-344 License No. NPF-1

Licensee: Portland General Electric Company

121 S. W. Salmon Street

Portland, Oregon 97204

Facility Name: Trojan

Inspection at: Rainier, Oregon

Inspection conducted: July 6-9, 1982

Inspector: M. Cillis — 7/23/82
M. Cillis, Radiation Specialist — Date Signed

Approved by: R. F. Fish for — 7/23/82
F. A. Wenslawski, Chief, Reactor Radiation Protection Section — Date Signed

Approved by: H. E. Book — 7/23/82
H. E. Book, Chief, Radiological Safety Branch — Date Signed

Summary:

Inspection on July 6-9, 1982 (Report No. 50-344/82-22)

Areas Inspected: Routine unannounced inspection by a regionally-based inspector of licensee activities associated with the packaging and shipment of radioactive materials; licensee actions on previous inspection findings; actions on IE Circulars, and a tour of the facility. The inspection involved 28 hours on-site time by one NRC inspector.

Results: Of the areas inspected, no items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

   a. Portland General Electric (PGE) Personnel

   *T. Walt, Manager, Radiological Engineering
   C. P. Yundt, General Manager, Trojan
   *C. A. Olmstead, Manager, Operations and Maintenance
   T. Meek, Radiation Protection Supervisor
   *L. Larson, Unit Supervisor, Radioactive Material Control
   G. Rich, Chemistry Supervisor
   *J. D. Reid, Manager, Plant Services
   *R. P. Schmitt, Manager, Technical Services
   *M. R. Snook, Quality Assurance Senior Inspector
   *S. Newcomb, Radiation Protection Engineer
   M. Huey, Unit Supervisor of Radiation Protection
   D. Flaherdy, C&RPT
   G. Davis, C&RPT

   b. Non-PGE Personnel

   *H. F. Moomey, Oregon State Department of Energy Resident Engineer
   C. Pierce, Combustion Engineering, Radiation Protection Supervisor
   R. L. Nyswaner, Combustion Engineering, Senior Radiation Protection Technician

   *Denotes those individuals attending the exit interview on July 9, 1982.

   In addition to the individuals noted above, the inspector met with and interviewed other members of the licensee's staff.

2. IE Circular Follow-up

   IE Circular 79-21, "Prevention of Unplanned Release of Radioactivity"

   The licensee's documented evaluation of this circular and applicable plant procedures was reviewed during the inspection and was determined to be adequate. Current procedures and practices implemented by the licensee appeared to adequately address the concerns of this circular. This matter is considered closed (IC-79-21).

3. Licensee Action on Previous Inspection Findings

   a. (Closed) Follow-up (50-344/79-13)

   Corrective actions taken by the licensee in response to a Region V concern discussed in paragraphs 4.b and 9.c of IE Inspection Report No. 50-344/79-13 were examined. The inspection

report disclosed that there was no documentation relating the organization to the management and operation of the environmental monitoring program required by the Technical Specifications, Appendix B, and as recommended by Section B of Regulatory Guide 4.15.

The inspection revealed that documentation of the environmental monitoring program including duties and responsibilities is adequately discussed in paragraph 2.1.2.1.1 of PGE document No. 8005, Rev. 1, dated April 1982. This matter is considered closed (79-13-03).

b. (Closed) Corrective actions taken by the licensee in response to a Region V Notice of Violation (IE Inspection Report No. 50-344/80-17) were examined. The inspection report identified two items of noncompliance associated with a shipment of radioactive materials upon receipt at the Richland, Washington burial site. The items involved two containers that were not marked in accordance with Department of Transportation regulations and a leaking (liquid) container.

The licensee's timely response dated September 12, 1980 and corrective actions discussed in the response were examined. The examination revealed that the licensee's actions appeared to adequately address the concerns identified in Inspection Report No. 50-344/80-17. This matter is considered closed (50-344/80-17).

4. Transportation Activities

a. General

The inspection included an examination and discussion with the staff of licensee's commitments made in response to IE Bulletin 79-19, "Packaging of Low-Level Radioactive Waste for Transport and Burial." The licensee's response to the bulletin dated September 26, 1979 is also discussed in Region V IE Inspection Report No. 50-344/80-07. The purpose for the review was to determine if the licensee commitments made in response to the bulletin were consistent with 10 CFR 30, 10 CFR 71, 49 CFR 100-199, and if they are still being implemented in accordance with their letter of September 26, 1979. The results of the examination are discussed in the subsequent sections of this report.

No items of noncompliance or deviations were identified.

b. Management Controls and Governing Procedures

PGE Administrative Order AO-11-3, Radioactive Waste Control, defines the responsibilities, procedures, and controls governing

management of radioactive wastes. The Trojan Nuclear Plant, "Radiation Protection Manual (RPM)," Revision 37, dated February 24, 1982, discusses radioactive material controls in sections II.E and II.G. Appendix B of RPM provides specific procedures (listed below) for control of radioactive materials:

Procedure No.	Title	Revision
RPMP-1	Radioactive Material Receipt and Shipment	0
RPMP-2	Radioactive Waste Druming	0
RPMP-3	Dewater Procedures for Resin Liners	0

The inspection and review of the above procedures did not identify any significant changes in the administrative controls of radioactive wastes from what is discussed in paragraph 3.(a) of IE Inspection Report No. 50-344/81-12 and paragrphs 12.e and 12.g of IE Inspection Report No. 50-344/81-25.

Additional procedures governing the control of radioactive materials which have been developed are as listed below:

Procedure No.	For	Revision
OI-11-7	Sluicing and Charging Auxiliary Building Ion Exchanger	3
OI-T-4	Spent Resin Solidification using Chem Nuclear Process	1
OI-T-30	Spent Resin Storage Tank Recirculation and Transfer Process	1

The Plant General Manager has overall administrative responsibility of the radioactive waste control program. The Radiation Protection Supervisor has been assigned to manage the program for the plant. A Unit Supervisor Radioactive Material Control (USRMC) has been delegated the responsibility for the collection, packaging, shipment, and receipt of radioactive materials. The USRMC, who reports directly to the Radiation Protection Supervisor, is responsible for directing the activities of nine full-time utility workers and 22 temporary workers. The temporary workers have been assigned to help during the recent refueling outage.

A review of the procedures denoted in this section was conducted. The review revealed that the procedures were consistent with the requirements of Technical Specification 6.8, 10 CFR 30, 10 CFR 71, 49 CFR 100-199, and the burial site criteria. The procedures have been revised to include the concerns identified in paragraph 3.a of IE Inspection Report No. 50-344/81-12.

The inspection also revealed that the licensee maintains current copies of the NRC/DOT regulations and burial site requirements.

No items of noncompliance or deviations were identified.

c. Training

The inspector examined training records associated with the licensee's commitment in response to Item No. 5 of IE Bulletin 79-19, dated September 26, 1979. The licensee's response identified that initial training of radiation protection supervisory personnel and C&RPT was conducted on February 13, 1979, and that their procedures require annual retraining in NRC/DOT regulatory requirements. The response also stated that records would be maintained to allow for auditing of the training program. Discussion in regards to this training program was held with the USRMC and Radiation Protection Supervisor.

The examination and discussions revealed: (1) all personnel had not received the initial training as indicated in the response, (2) records for the 1981 annual retraining could not be located although the Radiation Protection Supervisor stated the training was given, and (3) the training records revealed that all personnel may not have received the retraining provided in 1980 and 1982 to date.

The need to ensure that a training and retraining program in DOT/NRC regulatory requirements and maintaining of training records, as was originally committed to by the licensee in their response to IE Bulletin 79-19, was emphasized by the NRC inspector during discussions with the licensee staff and at the exit interview. The licensee agreed. This matter will be examined during a subsequent inspection (82-22-01).

A review of the utility worker training/retraining outline and associated utility worker training records was conducted. The NRC inspector verified that utility workers had received the training. The utility worker training outline and the applicable training records appeared to be adequate.

Discussions with the USRMC and Radiation Protection Supervisor revealed that both the USRMC and Radiation Protection Supervisor had attended a specialized waste management training course that they attended in Richland, Washington during November 1981. A review of their training records by the NRC inspector revealed that both individuals had not received credit for attending this training. The need and importance for ensuring that personnel training records are updated and maintained current was emphasized at the exit interview.

No items of noncompliance or deviations were identified.

d. Implementation

The inspector examined the licensee's records associated with the shipping and receipt of radioactive materials for the period of January 1981 through June 1982, to determine compliance with 10 CFR 20, 10 CFR 30, 10 CFR 71, and 49 CFR 100-199. The examination included a review of the licensee's procedures (see paragraph 4(b) above) associated with the shipping and receipt of radioactive materials. The following records were reviewed to determine compliance with the NRC/DOT regulatory requirements:

- Checklist of Radioactive Material Shipment Requirements
- Radioactive Material Shipment and Receipt Record
- Vehicle Survey Records
- General Computation Sheet
- Dewatering Data Sheets
- CNSI Broker Inspection Record
- Computation for Estimating Transuranic Concentrations in Wastes
- Radioactive Shipment Records Log
- Radioactive Materials Receipt Log
- Washington State Certification
- Waste Druming Checklist

The inspection indicated that the shipments and receipt of radioactive material were generally consistent with the regulatory requirements of 10 CFR 20.205, 10 CFR 30, 10 CFR 71, and 49 CFR 100-199.

Discussions with the licensee staff and review of records did reveal there may be some possible inconsistencies in regard to re-used (reclaimed) packaging, which are used by the licensee for shipment of radioactive waste. The requirements for re-used packaging are specified in 10 CFR 71.54, 49 CFR 173.22(a), 49 CFR 173.393(n), and 49 CFR 173.28. The review also revealed some possible inconsistencies in the licensee's capability in verifying the certification and supporting safety analysis required by 49 CFR 173.395(a) for Type A packaging which are marked and used as DOT Specification 7A shipping containers. A review of supply records for Specification 17H 55-gallon drums which have been purchased and received by the licensee did not indicate the type of testing performed by the vendor to show compliance with 49 CFR 173.28(m) which requires that each drum be tested by constant internal air pressure of 7 psi. A telephone call made to the vendor by the licensee during the inspection revealed that the vendor may only be performing a spot check with an air pressure of 3 psi. The review of shipping records revealed that the licensee had made two shipments which identified the packaging used as Specification Type 7A containers even though the material shipped was only LSA and the quantities and transport group were such that Type A packaging was not necessary. The USNRC was unable to verify compliance with 49 CFR 173.395(a). The licensee staff took immediate steps to resolve the problem associated with the testing of re-used packaging and for demonstrating certification and supporting safety analysis for use of Type A packages which will be used as DOT Specification 7A containers. This will be examined during a subsequent inspection (82-22-02).

The review of shipping records revealed that packaging for all shipments with the exception of several shipments of depleted resin from the CVCS cation bed consisted of reclaimed steel drums and wood boxes considered as strong, tight containers as is allowed by 49 CFR 173.393. The depleted resin was placed in an NRC certified cask for which the licensee maintains a copy of the current NRC Certification of Compliance for Model Number CNSI-6-80-2.

No items of noncompliance or deviations were identified.

e. Preparation of Packages for Shipment

During tours of the Auxiliary Building, Radioactive Waste Storage Area, and clean drum storage area, the inspector observed unloaded and packaged 17H 55-gallon drums. This inspection of the unloaded and loaded drums indicated no major dents or creases, drum lips appeared to be satisfactory, gaskets were secured to the lip, drums were free of rust, and the closure rings were in good condition. Labeling of the

loaded drums were consistent with 10 CFR 20 requirements. The waste compactor was also observed during the tour. The licensee is using plastic compaction inserts which allows a significant increase in the amount of waste which can be compressed into the 55-gallon drums.

The licensee has also assigned utility workers to observe personnel exiting from their controlled areas for the purpose of assuring that wastes are properly sorted and that clean (non-radioactive) material is not inadvertently disposed of as radioactive waste. The USRMC reported a significant decrease in the amounts of radioactive waste volume have been generated since the use of plastic inserts and assignment of utility workers to observe control point exiting habits. A review of licensee radioactive waste shipping records by the NRC inspector substantiated the USRMC's observation.

No items of noncompliance or deviations were identified.

f. Quality Assurance Program

An examination of the licensee's quality assurance program in regard to Packaging of Low-Level Radioactive Wastes for Transport and Burial was conducted. The licensee's program remains unchanged from what is described in their response to (1) IE Bulletin 79-19 of September 26, 1979, (2) IE Inspection Report No. 50-344/79-21, and (3) IE Inspection Report No. 50-344/80-07.

The inspection included a review of the following quality assurance audit/surveillance reports:

Number	Scope	Date
79-07	Transfer, Packaging, and Transport of Low-Level Radioactive Waste	10/2/79
PAM-SR-028-81	Surveys and Radiation Monitoring Solid Radwaste Compaction	7/29/81
PAM-SR-031-81	Operating Instruction (Spent Resin Storage Tank Transfer and Solidification)	9/3/81
PAM-SR-032-81	Operating Instruction (Spent Resin Storage Tank Transfer and Solidification)	9/3/81

The above surveillance reports were prepared by the site Quality Assurance Group for audits/surveillances the group had performed pursuant to the licensee's response to IE Bulletin 79-19

and Quality Assurance procedures. The inspection also revealed that the corporate office Quality Assurance Group had just recently completed a June 1982 audit of the site's transportation activities. The inspection report of the corporate's audit had not been completed at the time of this inspection.

The inspection revealed that the licensee's on-site quality assurance group had recently changed their surveillance requirements to require an audit of: (1) Waste Druming, (2) Resin Transfer and Solidification, and (3) Radioactive Material Shipment and Receipt to be accomplished at least once every three years. Quality Assurance procedures include a provision for increasing the frequency for conducting audits/surveillances of these areas if significant audit/surveillance findings are identified.

The need for the licensee's on-site quality assurance group to audit Low-Level Radioactive Waste Shipment and Receipt, which was last accomplished in September 1979, was emphasized with the licensee's staff and at the exit interview.

No items of noncompliance or deviations were identified.

5. Tour of Facility

The inspector and a licensee representative conducted a tour of the licensee's Auxiliary Buildings and radioactive waste storage areas. Independent measurements obtained with a Model 36100 Keithley survey meter, Serial Number NRC 00916, due for calibration on October 23, 1982, were conducted during the tour. The tour included observations to determine compliance with the following regulatory requirements:

Areas	Requirement
Posting of radiation areas, high radiation areas, airborne activity, controlled areas, and radioactive material areas.	10 CFR 20.203(b), (c), (d), (e)
Labeling of containers	10 CFR 20.203(f)
Control of radiation and high radiation areas	10 CFR 20.105(b), 1 and 2
Engineered controls	10 CFR 103(b), 1 and 2
Packaging	49 CFR 100-199

The independent radiation survey measurements confirmed the licensee's posting and labeling practices. Considerable improvement in the licensee's posting and labeling practices from what is discussed in paragraph 9 of IE Inspection Report No. 50-344/82-15 was observed during the tour. The areas toured appeared to be exceptionally clean. Licensee personnel responsible for these improvements were commended by the inspector at the exit interview.

No items of noncompliance or deviations were identified.

6. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on July 9, 1982. The inspector summarized the scope and findings of the inspection. The licensee was informed that there were no apparent items of noncompliance or deviations.

The inspector's discussion emphasized the need for licensee improvements in the following areas:

a. Implementation of training/retraining and maintenance of applicable training records pursuant to the licensee's response to IE Bulletin 79-19 of September 26, 1981 (82-22-01).

b. Evaluation of current procedures for the purpose of assuring they provide a mechanism for implementing DOT regulations in the use of reclaimed drums and providing certification of DOT Specification 7A containers used for packaging of wastes (82-22-02).