

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION I

Report No. 79-26
Docket No. 50-334
License No. DPR-66 Priority -- Category C

Licensee: Duquesne Light Company
435 Sixth Avenue
Pittsburgh, Pennsylvania 15219

Facility Name: Beaver Valley Power Station, Unit 1

Inspection At: Shippingport, Pennsylvania

Inspection Conducted: November 26-29, 1979

Inspectors: L. H. Thonus
L. H. Thonus, Radiation Specialist

1/9/80
date

date

date

Approved by: W. H. G. [Signature]
Acting Chief, Radiation Support
Section, FF&MS Branch

1/11/80
date

Inspection Summary:

Inspection on November 26-29, 1979 (Report No. 50-334/79-26)

Areas Inspected: Special, unannounced inspection by a regional based inspector of the licensee's response to IE bulletin 79-19 and of radiation protection during operation and refueling. Areas inspected included licensee action on previous inspection findings, document control, training, respiratory protection, licensee audit, procedures, radioactive waste solidification and packaging, refueling preparations, and plant tours. The inspection involved 33 inspector-hours onsite by one NRC regional based inspector.

Results: Of the nine areas inspected one item of noncompliance was found in one area; (infraction-failure to follow respiratory protection procedures-paragraph 8)

DETAILS

1. Persons Contacted

Principal Licensee Employees

Mr. D. Arnold, Radcon Foreman
Mr. F. Bissert, Technical Assistant - Nuclear
*Mr. E. Ewing, QA Supervisor
*Mr. L. Hutchinson, Station QA
*Mr. J. Kosmal, Radcon Supervisor
*Mr. E. Kurtz, Sr. QA Engineer
*Mr. F. Lipchick, Station QA
Mr. N. Rodi, Building Maintenance Foreman
Mr. E. Schnell, Radcon Foreman
*Mr. L. Schiad, Operations Supervisor
*Mr. J. Vassello, Training Supervisor
*Mr. J. Werling, Station Superintendent
*Mr. M. Williams, Chief Engineer

Others

*Mr. D. Beckman, NRC Resident Inspector

The inspector also interviewed several other licensee and contractor personnel including radcon technicians, clerks, and maintenance personnel.

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (334/79-01-01) Shipping radioactive material without fulfilling the conditions for a general license. The licensee has registered as a user of several casks with the Director of Nuclear Material Safety and Safeguards and has an NRC approved Quality Assurance program, docket number 71-0275, dated May 17, 1979. This completes the requirements for a general license.

The inspector had no further questions at this time.

3. Document Control

The licensee keeps copies of regulatory requirements in two forms: bound copies - typically revised and published on an annual basis, these do not reflect recent changes in the regulations and page change copies which are

updated as the regulations change. The radcon office currently has the most recent bound copies of 10 CFR and 49 CFR parts 100-199 and has an up to date copy of the licenses of the burial site it utilizes. The radcon office has page change copies of 10 CFR and 49 CFR Parts 100-199 on order. The station quality assurance group currently maintains a page change copy of 10 CFR.

No items of noncompliance were identified.

4. Training

Radioactive Waste

The inspector reviewed the course content and attendance list for a training program conducted on September 26-27, 1979 by a contractor. The course covered packaging, Department of Transportation (DOT) requirements (49 CFR) and NRC requirements (10 CFR). Attendees included the plant chemist, radcon supervisor, radwaste supervisor, and radcon foremen. Additionally the training staff has developed a module (Module 6) which primarily covers compliance with DOT regulations. During the period August 31 thru October 26, 1979, the plant radcon technicians and the radwaste supervisor completed this module. Minimization of the creation of solid waste is included in the basic radiation worker course. Training in process control to minimize volume and assure correct physical and chemical form has not been implemented. This training will be required when the licensee finalizes his process control program for waste solidification.

Respiratory Protection

The licensee's training department generates a list of individuals qualified to use respiratory protection equipment for the maintenance department to use when issuing respirators. Several different types of respirators are used at the station and there is specific training for each. The training program includes field use of respirators in a "smoke house". The inspector reviewed part of the lesson plans used in the training program and the training and qualification records of 10 plant workers.

No items of noncompliance were identified.

5. Licensee Audit

The licensee conducted two audits of the solid waste program. The first was an Offsite Review Committee (ORC) audit of waste processing and transportation conducted September 11, 1979. The second audit was conducted by Quality Assurance on September 19-21, 1979 and covered management control, document control and adherence to procedures. Adherence to NRC regulation, DOT regulations and licensee procedures were covered in the audits but neither audit report referenced a review of licensee compliance

with burial site limitations. Both audit programs include exit interviews at the end of the audit, written audit reports, 30 day response by the plant staff, and re-audit and followup as necessary.

No items of noncompliance were identified.

6. Procedures

The licensee was in the process of revising several procedures as a result of bulletin 79-19. The inspector reviewed the following revised licensee procedures:

- 3.12 "Shipping Solid Radioactive Waste for Disposal - Liners" dated September 12, 1979
- 3.13 "Requirement Checklist for Shipping Greater than Type A Quantities of Radioactive Material" dated September 12, 1979
- 3.14 "Estimating Curie Content of Radioactive Material 65 ft³ Liners" dated September 12, 1979

The October 12, 1979 revision of Appendix 8 to the licensee's Radiological Controls Manual was also reviewed. Appendix 8 includes the licensee's delineation of responsibility for radioactive waste processing, analysis, and shipment.

No items of noncompliance were identified.

7. Radioactive Waste Solidification and Packaging

Several recent licensee solid radioactive waste shipments were selected and reviewed for:

- isotopic analysis and curie estimates
- shipment classification and packaging
- conformance to 49 CFR 170-179
- conformance to 10 CFR 71.12 and 10 CFR 71.54
- conformance to certificate of compliance limits.

The licensee did not have any solidified waste which was prepared for shipment on hand. The inspector then examined two casks of solidified waste for which processing was not final. One of the casks contained approximately 3 inches of free water on top of the cement matrix. The licensee's process control program calls for an inspection for water at a later step

and the addition of more cement as necessary to solidify it. The licensee has been solidifying resins with cement but has not ruled out shipping dewatered resins. The inspector reviewed the licensee's method of dewatering including the container and pump suction line geometry with a licensee representative. The current proposed method is unable to provide positive assurance that the dewatered resin will meet the licensee's "no free water" definition and requirement. The licensee representative agreed that if dewatering is utilized one of several alternates which provide assurance that the resin will meet the "no free water" requirement would be utilized.

No items of noncompliance were identified.

8. Respiratory Protection Respirator Issue and Control

10 CFR 20.103(c) allows licensees to utilize protection factors provided by respiratory protection devices "provided that such equipment is used as stipulated in Regulatory Guide 8.15, 'Acceptable Programs for Respiratory Protection.'"

The licensee has a respiratory protection program which utilizes protection factors. The licensee's Technical Specification (TS) 6.11 requires that "Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained, and adhered to for all operations involving personnel radiation exposure." Regulatory Guide 8.15 requires in section C.4.e "Written operational and administrative procedures for control, issuance, proper use and return of respiratory protective equipment..." The licensee's maintenance manual Chapter 1 Section Y "Control and Maintenance of Respiratory Equipment" states that when issuing respirators "The house and yard personnel at the issue/storage location shall assure that each individual of the work force has completed the required training using the training list."

The inspector reviewed the licensee's respirator issue lists for the time period November 21-28, 1979. On 3 occasions individuals who were not on the lists (a computer listing with several handwritten notes used to update it) at the issue point were issued respirators. The inspector reviewed the training and fitting of another individual who appeared on the list and determined that he had been issued a different type of respirator than what he had been trained and fitted on. The inspector noted that the above constituted noncompliance with regard to procedures developed pursuant to TS 6.11 (334/79-26-01).

Regulatory Guide 8.15 requires in section 4.c.h that the medical status of each respirator user is to be reviewed at least annually. The method utilized by the licensee to provide the review (and thus approval to use respiratory protection devices) is that the station is to assume that all personnel have been reviewed with satisfactory results unless notified to the contrary by the corporate medical department. This area will be reviewed at a subsequent inspection to determine if this system provides adequate accountability and control (334/79-26-02).

The licensee's program for inspection, cleaning, disinfections and maintenance of respirators was reviewed. The inspector examined the licensee personnel and facilities used to perform these functions.

9. Refueling Preparations

The inspector reviewed the following of the licensee's preparations in the radiation protection area for the refueling outage scheduled for December 1, 1979:

- increased staffing (contractor personnel)
- training for contractor technicians
- mockup training
- addition control points

Contractor personnel will be utilized to augment plant staff during the outage. In addition to radiation worker and respiratory protection training they receive training in the licensee radiation protection procedures and equipment. Mockup training is not widely utilized. The licensee was completing construction of 2 additional entry points to the radiation control area. They will limit congestion at the present control point and provide a location for radiation work permit (RWP) review; sign-in and sign-out; contamination monitoring; and protective clothing donning and removal.

No items of noncompliance were identified.

10. Plant Tours

Tours of the licensee's radiologically controlled area (RCA) were made on November 27 and 28. Posting and control of high radiation areas, radiation areas, contaminated areas and airborne radioactivity areas were examined against the criteria in 10 CFR 20.203 and the licensee's radcon manual, chapter 3, part 9. Radioactive material storage and labelling was examined against the criteria in 10 CFR 20.203(f) and the licensee's radcon manual, chapter 3, part 3. Approximately 20 licensee radiation monitoring instrument in use or available for use were examined for calibration and operability. They included contamination monitors, beta-gamma survey meters, and neutron survey instruments. Adherence to licensee radcon procedures (contained in the radcon manual) was observed.

No items of noncompliance were identified.

11. Exit Interview

The inspector met with licensee management representatives (denoted in paragraph 1) at the conclusion of the inspection on November 29, 1979. The inspector summarized the purpose and scope of the inspection and the findings.