

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-334/84-10

Docket No. 50-334

License No. DPR-66 Priority - Category C

Licensee: Dusquesne Light Company

Post Office Box 4

Shippingport, Pennsylvania 15077

Facility Name: Beaver Valley Power Station, Unit 1

Inspection At: Shippingport, Pennsylvania

Inspection Conducted: April 10 - 13, 1984

Inspectors: Marie Miller
M. T. Miller, Radiation Specialist

6/1/84
date

Approved by: M. Shanbaky
M. M. Shanbaky, Chief, Facilities
Radiation Protection Section

6/4/84
date

Inspection Summary: Inspection on April 10 - 13, 1984 (Report No. 50-334/84-10)

Areas Inspected: Routine, unannounced safety inspection of the licensee's Radiation Protection Program. Inspection areas included: licensee action on previously identified items; radiological controls organization; personnel selection, qualification and training; external exposure control and personnel dosimetry; and audits. The inspection involved 26 inspector-hours onsite by one region based inspector.

Results: No violations were identified.

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Details

1. Persons Contacted

1.1 Duquesne Light Company

- J. D. Sieber, Manager - Nuclear Safety and Licensing
- A. Bevan, Radiological Controls Foreman
- D. Blair, Senior Health Physics Specialist
- A. Castagnacci, Health Physics Specialist
- E. D. Cohen, Senior Health Specialist
- J. M. Clark, Radiological Controls Foreman
- * K. D. Grada, Superintendent Licensing
- J. Kosmal, Radiological Operations Coordinator
- J. Kowalski, Safety Review Coordinator
- S. LaVie, Senior Health Physics Specialist
- * F. J. Lipchick, Senior Compliance Engineer
- E. Schnell, Radiological Controls Foreman
- B. Sepelak, Licensing Engineer
- M. Somerville, Health Physics Associate
- * R. M. Vento, Radiation Program Coordinator
- K. J. Winter, Health Physics Specialist

1.2 NRC

- D. Johnson, Resident Inspector
- W. Troskowski, Senior Resident Inspector

Other licensee or contractor employees were also contacted or interviewed during this inspection.

- * Denotes those individuals not present during exit interview on April 13, 1984.

2. Purpose

The purpose of this inspection was to review the licensee's Radiation Protection Program with respect to the following elements:

- Status of Previously Identified Findings
- Radiological Controls Organization
- Personnel Selection, Qualification and Training
- External Exposure Control and Personal Dosimetry
- Audits

3. Status of Previously Identified Items

- 3.1 (Closed) Follow-up Item (50-334/83-30-01): Formalization of Radiological Controls training program and development of contractor training program. The licensee had formally established programs to

train Radiological Controls Technicians (both contractor and permanent) under the direction of the Director Nuclear Division Training.

- 3.2 (Open) Follow-up Item (50-334/83-30-02): Review implementation of corporate ALARA program procedure. The corporate ALARA procedure was to be implemented April, 1984, but was delayed because of reorganization. The licensee stated the corporate ALARA procedure would be fully implemented by September 1, 1984, or, as a minimum, the site ALARA procedure would be revised to describe a methodology for performing on-going job reviews and include criteria for use of engineering controls to reduce personnel exposure to airborne radioactivity.
- 3.3 (Open) Unresolved Item (50-334/83-30-03): Evaluate beta radiation exposure from entering noble gas atmospheres. Review of the licensee's preliminary efforts and scope of the beta radiation evaluation appeared acceptable. The licensee plans to use the data base from NUREG/CR-1918 to be included in the dose assessment program. This will define a finite distance cloud for photons and a semi-infinite cloud for betas. The program will also provide for shielding allowances for the thickness of protective clothing. By December, 1984, the licensee also intends to evaluate beta radiation exposures using the Panasonic 812 badge which will be calibrated for beta radiation.
- 3.4 (Open) Follow-up Item (50-334/83-30-04): Administrative control of locked high radiation area keys. The number of available keys was not known by the shift supervisor nor were the keys inventoried to determine if all keys were accountable. The inspector noted that the high radiation area keys were maintained by the Shift Supervisor. However the licensee procedures did not include the method by which the keys would be issued, inventoried and accounted. The licensee stated that procedural improvements in this area will be examined. The inspector stated that this area will be examined during an outage situation to determine if the current system is acceptable.
- 3.5 (Open) Unresolved Item 50-334/83-30-05: Determine if Effluent Monitoring Systems are providing representative samples. The licensee established a committee to develop and conduct a radiation monitoring study. To determine if there are significant losses at the three effluent monitoring systems, one effluent pathway was selected. An isokinetic probe will draw particulate samples at the sample probe located in the duct of the Supplementary Leak and Collection Effluent Monitoring System.

The inspector discussed with the licensee's representative the potential losses in sample due to iodine plate-out in the sampling lines. The licensee stated that an iodine plate-out study will be also performed. The summary evaluation report will be provided to Region I by December 31, 1984.

4. Radiological Controls Organization

The inspector reviewed the licensee's Radiological Controls Organization with respect to criteria contained in the following:

- Technical Specification 6.2, "Organization,"
- Station Administrative Procedure, Chapter 6, "Radiological Control Group Administration," dated November 14, 1983,
- Radiological Control Manual, Appendix 1, "Radcon Administrative Guide," Part III, "Organization and Responsibilities."

Examination of the licensee's performance in this area was based on review of applicable documents and discussion with licensee Radiological Controls personnel.

Within the scope of this review, no violations were identified.

5. Personnel Selection, Qualification and Training

The inspector reviewed the selection, qualification and training of contractor Radiological Controls personnel with respect to criteria contained in the following:

- Technical Specification 6.3, "Facility Staff Qualifications,"
- ANSI N18.1, 1971, "Selection and Training of Nuclear Power Plant Personnel."

The following licensee documentation was reviewed:

- Nuclear Divisions Training Manual, Revision 1, Section 3.0, Radiological Controls Training
- Contractor Radiological Controls Technician Procedure Qualification Package,
- Radiological Controls Regualification Program and Lesson Plans
- Class 3 Radiological Controls Technician Training Records.

The licensee performance in this area was verified through discussions with cognizant licensee personnel and review of documentation.

Within the scope of this review, the following matters were identified:

- The Nuclear Division Training Manual was not updated to reflect the Contractor Training Program administered by Radiological Controls Organization;

- Procedural check-offs were not signed-off in individual's files from Class 3 Radiological Controls Technician. The licensee stated the official training record indicated Class 3 Technicians had completed training in the appropriate procedures.

The licensee stated both the Nuclear Division Training Manual and the individual training files would be updated to address these concerns.

The above matters will be reviewed during a subsequent inspection (50-344/84-10-01).

6. External Exposure Control and Personal Dosimetry

The External Exposure Control Program was reviewed against criteria contain in:

- 10 CFR 20.101, "Radiation Dose Standards for Individuals In Restricted Areas"
- 10 CFR 20.102, "Determination of Prior Dose"
- 10 CFR 20.105, "Permissible Levels of Radiation In Unrestricted Areas"
- 10 CFR 20.201, "Surveys"
- 10 CFR 20.202, "Personnel Monitoring"
- 10 CFR 20.203, "Caution Signs, Labels, Signals and Controls"
- 10 CFR 20.401, "Records of Surveys, Radiation Monitoring, and Disposal"
- Regulatory Guide 8.2, "Guide For Administrative Practices In Radiation Monitoring"
- Regulatory Guide 8.4, "Direct-Reading and Indirect-Reading Pocket Dosimeters"
- Regulatory Guide 8.7, "Occupational Radiation Exposure Records Systems"
- Licensee Procedure 3.5.1, "Exposure Authorization and Control Procedure"
- Licensee Procedure 3.4.7, "TLD Badges - Testing and Dose Response Calibration."

The licensee's performance relative to these criteria was determined from:

- Discussions with the Radiological Controls Manager, members of his staff, and members of the Corporate Radiological Safety Programs Department;
- Direct observations during plant tours;
- Examination of records relating to air samples, MPC Hour determination, and personnel monitoring reports; and
- Review of a vendor quality control analysis of the licensee's TLDs.

Within the scope of this review, no violations were identified.

7. Audits

The inspector reviewed licensee audits in the area of Radiological Controls with respect to criteria contained in the following:

- Technical Specification 6.5, "Review and Audit".

The licensee's performance relative to this criteria was determined by review of the following audits and corrective action documentation:

- BV-1-83-16, "Training," dated June 15, 1983;
- BV-1-83-41, "Radcon," dated December 12, 1983.

The licensee's radiological audits appeared adequate and effective.

Within the scope of this review, no violations were identified.

8. Exit Interview

The inspector met with the licensee's representatives (denoted in paragraph 1) at the conclusion of the inspection on April 13, 1984. The inspector summarized the purpose and scope of the inspection and identified findings as described in this report.

At no time during this inspection was written material provided to the licensee by the inspectors.