

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 84-19

Docket No. 50-334

License No. DPR-66 Priority -- Category C

Licensee: Duquesne Light Company

Suite #210, PA Route 60

Pittsburgh, PA 15205

Facility Name: Beaver Valley Power Station, Unit 1

Inspection At: Shippingport, PA

Inspection Conducted: July 23-27, 1984

Inspectors: Richard K. Struckmeyer  
Richard K. Struckmeyer,  
Radiation Specialist

8/28/84  
date

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

8/30/84  
date

Inspection Summary: Inspection on July 23-27, 1984 (Report No. 50-334/84-19)

Areas Inspected: Routine, unannounced inspection of the licensee's radioactive waste management program. Areas reviewed included: management controls, radioactive effluent release records, effluent control procedures, instrument calibrations, and testing of air cleaning systems. The inspection involved 32 inspector-hours onsite by one regionally-based inspector.

Results: Within the areas inspected, no items of non-compliance were identified.

DETAILS1. Individuals ContactedDuquesne Light Company

L. Bastianelli -	Coordinator, Planning and Schedules
B. Becker -	Planning Engineer, Planning and Schedules
M. Burke -	Health Physics Specialist
*A. Cannizzaro -	Engineer, Nuclear Operations
M. Coppola -	Superintendent, Technical Services
*A. Dometrovich -	Testing and Plant Performance
B. Fenner -	Data Coordinator
*J. Kosmal -	Radcon Operations Coordinator
*V. Linnenbom -	Reactor Control Chemist
*F. Lipchick -	Senior Compliance Engineer
*T. Lonnett -	Health Physics Specialist
J. McIntire -	Environmental Coordinator
*J. Miller -	Quality Assurance
H. Mulcahy -	Health Physics Specialist
D. Pickens -	Procedure Engineer
*J. Rathke -	Instrumentation and Controls Coordinator
*E. Schnell -	Radcon Supervisor
*B. Sepelak -	Licensing Engineer
*M. Somerville -	Health Physics Specialist
*J. Wenkhous -	Environmental Protection Programs Coordinator
K. Winter -	Health Physics Specialist
T. Zyra -	Supervisor, Testing and Plant Performance

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\*J. Buchanan - I&E, Division of Reactor Programs  
 \*U. Cheh - Reactor Engineer, DETP, Region I  
 \*D. Johnson - Resident Inspector  
 \*W. Troskoski - Senior Resident Inspector

\*Denotes those present at the exit interview on July 27, 1984.

2. Management Controls

The inspector reviewed the management structure as it pertains to the Beaver Valley Power Station liquid and gaseous effluent control program. Responsibilities in the area of effluent release (discharge) permits, as well as effluent monitor calibrations, resides within the Radiological Operations Group. The Semiannual Radioactive Effluent Release Reports are prepared by health physics specialists within the Environmental and Radiological Safety Group.

Reactor coolant radiochemical analyses are performed by the Chemistry Section, which is headed by the Reactor Control Chemist.

The Testing and Plant Performance Section is responsible for tests of air filtration systems.

Calibrations of the electronics associated with effluent radiation monitors are performed by the Instrumentation and Control Section.

### 3. Effluent Release Records

The inspector reviewed selected radioactive liquid and gaseous release permits, as well as associated procedures and calculations for 1983 and 1984. The inspector determined that the licensee has explicit procedures for control of effluents, and that procedural requirements are being followed. The procedures provide methods for hand calculations that are lengthy and somewhat complicated, and therefore potentially subject to error. The licensee stated that all calculations are reviewed by a Radcon Foreman, and that a computerized method of performing these calculations is under development. The inspector determined that no Technical Specifications limits for gaseous or liquid effluents have been exceeded in 1983 or 1984 to date.

The inspector also reviewed the Semiannual Radioactive Effluent reports for 1982 and 1983. These are required by Section 6.9.1.13 of the Technical Specifications, which incorporates Regulatory Guide 1.21, Revision 1, 1974, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants".

The inspector noted that the report covering the first half of 1983 did not contain estimates of dose to members of the public, or the results of strontium composite analyses, as required by the Technical Specification. In the letter which transmitted this report to the NRC, the licensee stated that this missing data would be supplied at a later date. However, the data was not transmitted until the issuance of the report for the second half of the year. The inspector discussed this with a representative of the licensee, who stated that this had been a recurrent problem in the past, but that measures were recently taken to deal with it. The licensee now maintains a log of required sample analyses, in which their completion is noted. Copies of the log are included in the monthly report which is sent to all department heads, and copies are also sent directly to the department heads with responsibilities pertaining to the effluent report. The licensee stated that this would help to assure prompt reporting of data, and provide a mechanism by which missing analyses can be completed prior to issuance of the report. The inspector stated that the effectiveness of this method would be reviewed in a future inspection (50-334/84-19-01).

#### 4. Effluent Monitor Calibrations

The inspector examined the liquid and gaseous effluent monitor calibration and functional test records to determine compliance with Technical Specifications. The inspector noted that, due to redundancy of monitors on effluent pathways, the Technical Specifications do not require calibration of all the available channels. For those that require calibration, the frequency is at 18 month intervals, which normally coincides with refueling. Similarly, not all channels require functional tests, which are done monthly where applicable. The inspector further noted that procedures for calibration of the radiation detector recently had been combined with those for calibration of the electronics, thus helping to ensure that the calibrations are done in the correct sequence. The calibrations are the joint responsibility of the Radcon Section and Instrumentation and Control Section. With the exception of the Waste Gas Decay Tanks process monitor (RM-GW101), which is out of service, all required calibrations have been performed at the required intervals. The licensee stated that grab samples are being taken in lieu of the out-of-service monitor, per Technical Specification requirements (Table 3.3-13). The inspector reviewed selected calibration records and found that the licensee had generally followed its procedures. Two problems were noted concerning MSP 43.60, calibration of the Ventilation Vent Monitor (RM-VS 109), performed on March 17, 1984. A "briefing sheet", included in the procedure, states that everyone participating in the calibration must sign to indicate that he/she has read, understood, and will follow the procedure. This had not been signed by a Radcon participant who had initialled one of the steps of the procedure to verify that an I&C technician had performed that step. The licensee stated that this was an oversight resulting from the recent merger of the Radcon procedure with the I&C procedure. The I&C section had required that the briefing sheet be signed, whereas Radcon had no such requirement. The second problem concerned a table at the beginning of "Data Sheet 1", entitled "Test Source Activities", that is intended to be a record of the radioactive sources used in the calibration of the monitor. This table had been left blank. Although this is contrary to the instructions in the calibration procedure, the inspector determined that the required sources are uniquely identified within the procedure, and therefore the table is, in effect, redundant. The same sources are used for each calibration of this monitor. The inspector discussed with the licensee the proper completion of the data sheet to include this table. The issue of proper completion of these records will remain unresolved pending further review (50-334/84-19-02).

#### 5. Reactor Coolant Chemistry

Analyses of dissolved oxygen, fluoride, chloride, I-131 dose equivalent, E-bar, gross activity, and isotopic iodines (I-131, I-133, I-135) in the primary reactor coolant are required by the Technical Specifications. Analyses of gross activity and I-131 dose equivalent are required for the secondary coolant. The inspector reviewed selected analytical results

for 1983 and 1984 and found that the licensee is meeting its Technical Specifications requirement for frequency of analysis. The inspector also reviewed selected procedures in this area and found that the procedures were acceptable. However, the Chemistry Department file of controlled procedures contained several temporary procedures that had expired, but had not been removed. In addition, at least two of these temporary procedures (84-4 and 84-5) had not been stamped "controlled", as had the other procedures in this file, and at least one (84-4) lacked the signature of the Beaver Valley Power Station Superintendent, as required. The licensee committed to review these procedures to determine which may have future applicability, and which were of no further use. The inspector stated that this item would remain unresolved pending the licensee's determination of (1) which procedures will be made permanent, (2) how the existence of expired and improperly controlled procedures was allowed to go undetected, and (3) if uncontrolled procedures were used (50-334/84-19-03).

#### 6. Testing of Air Cleaning Systems

The inspector reviewed the licensee's air filtration system testing with regard to the Technical Specifications requirements. The inspector reviewed the results of the HEPA filter and charcoal adsorber in-place tests for the Control Room Emergency Habitability System, the Supplemental Leak Collection and Release System, the Containment Hydrogen Purge System and the Fuel Building Ventilation System.

The tests met the Technical Specification requirements. The inspector noted that the licensee has an adequate method for scheduling air filtration system tests, and for logging actual dates on which tests were performed, thus ensuring that the Technical Specifications requirements for frequency of these tests will be met.

The inspector also reviewed selected records of the monthly operability tests required for air filtration systems. These tests appear to have been performed adequately and on time.

#### 7. Audits

The inspector reviewed the licensee's program for audits of programs concerned with liquid and gaseous effluents. The following 1983 and 1984 audits covered aspects of plant operation related to the effluents program: Audits 83-08 and 84-06 covered Technical Specifications Appendix A, including air filtration system testing and effluent monitor tests and calibrations. Audits 83-28 and 84-08 covered Chemistry; audits 83-16 and 84-16 covered Training; and audits 83-04 and 84-11 covered Effluent Monitoring. The latter audits covered Appendix B Environmental Technical Specifications in 1983 and earlier; however, the licensee's Technical Specifications were amended so that it now operates under Radiological Effluent Technical Specifications (RETS). Audit 84-11 covered Technical Specifications Appendix A 3/4.33 (Monitoring Instrumentation) and 3/4.11 (Radioactive Effluents). This review indicated that the licensee is meeting its Technical Specifications requirement for audits in this area.

8. Unresolved Item

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during this inspection are discussed in Paragraphs 4 and 5.

9. Exit Interview

The inspector met with the licensee representatives (identified in Paragraph 1) at the conclusion of the inspection on July 27, 1984. The inspector summarized the purpose and scope of the inspection and the inspection findings. At no time during this inspection was written material provided to the licensee by the inspector.