U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-334/88-19
50-412/88-15

Docket No. 50-334
50-412

License No. DPR-66 Priority -- Category C
NPF-64

Licensee: Duquesne Light Company
P.O. Box 4
Shippingport, PA 15077

Facility Name: Beaver Valley Power Station, Units One and Two

Inspection At: Shippingport, PA

Inspection Conducted: May 16-20, 1988

Inspectors: Barry S. Davidson 6/28/88
Barry S. Davidson, Radiation Specialist date

Approved by: Walter J. Pasciak 7/7/88
Walter J. Pasciak, Chief, Effluents
Radiation Protection Section, FRSSB, DRSS date

Inspection Summary: Inspection on May 16-20, 1988 (Combined Inspection Report Nos. 50-334/88-19 50-412/88-15)

Areas Inspected: Routine, unannounced inspection of the licensee's radioactive gaseous and liquid effluent controls program including radioactive discharges, radiation monitoring system calibrations and tests, air cleaning equipment surveillances and tests.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

1.1 Licensee Personnel

*R. Vento, Director, Radiation Engineer
*S. Vasseilo, Director, Licensing
*F. Lipchick, Senior Licensing Supervisor
*V. Linnenbom, Director Plant Chemistry
*D. Hunkele, Director QA Operations
*W. Lacey, General Manager Nuclear Operations
*T. Noonan, Plant Manager
*B. Sepelak, Licensing Engineer
*D. Szucs, Senior Licensing Engineer
*J. Wenkhous, Senior Health Physicist Specialist
*A. Mucha, Senior Health Physicist Specialist
*A. Lonnett, Senior Health Physicst Specialist

1.2 NRC

*J. Beall, Senior Resident Inspector
*S. Pindale, Resident Inspector

All of the above individuals attended the exit interview on May 20, 1988.

2.0 Actions on Previously Identified Items

2.1 (Closed) Unresolved Item (334/83-30-05)
Evaluate line losses in effluent monitor sample lines. The licensee performed a study of line losses using radioanalytical and particle sizing measurements. The study was reviewed by the inspector who found it to adequately address the concerns. As a result of the study, the licensee uses correction factors for line losses observed. This item is closed.

2.2 (Closed) Inspector Followup Item (412/87-50-03)
Evaluate potential for line losses in low flow/high activity sampling system. The data the licensee acquired from other facilities with similar systems who already performed line loss studies provide a basis for a corrective factor which was determined to be adequate. This item is closed.

3.0 Radioactive Effluent Controls Program

The organizational structure in the Radiological Controls (Rad Con) program is divided into groups with responsibilities separated into major areas. The routine day to day activities are performed by Rad Con technicians who sample effluents prior to release and Health Physics Specialists who review their work. Health Physics Specialists report to the Director, Radiological Effluents who reports to the Manager, Radiological Controls.

The licensee's effluent controls program was reviewed through discussions with Rad Con personnel, through review of applicable procedures and through review of radioactive effluent release data and permits. Procedures were established and implemented for liquid and gaseous wastes as required by Technical Specifications.

The inspector reviewed release information and performed a spot check on the calculated doses as a verification, using the equations in the Offsite Dose Calculation Manual (ODCM). The ODCM was well stated and provided details and bases for the calculation methodology. Four releases were reviewed:

Unit No.	Date	Type
1	12/16/87	Containment Purge
1	3/10/88	1LW-TK-7B liquid discharge
2	1/8/88	2SGC-TK-21 liquid discharge
2	10/11/87	Containment Vacuum Pull

Independent calculations by the NRC Inspector were performed for the releases given above. Licensee values compared well with the inspector's.

The inspector noted that reported abnormal releases appeared high. Several "abnormal" releases were recorded as a result of observed increases in radiation monitor readings as a result of routine plant operations or spurious signals. Consequently, the licensee is revising its definition of "abnormal releases." However, numerous releases occurred as a result of operator or maintenance error, i.e. inadvertent discharge of one waste gas tank instead of another, and inadvertent discharge of both waste gas tanks or liquid waste tanks. An error in assembly of a ball valve 90° out of alignment contributed to the liquid waste discharge. In all cases reviewed, the Rad Con group exhibited competence and properly quantified and accounted for the released activities. The NRC Resident Inspectors had previously documented these occurrences and, as appropriate, violations were issued.

Within the scope of this review no violations were found.

4.0 Chemistry

The organizational structure in the chemistry department was also reviewed. The Chemistry Supervisor has responsibility for the day to day activities and program implementation. The Chemistry Supervisor reports to the Director, Plant Chemistry, who reports to the Manager of Technical Services.

The licensee's radiochemistry program was reviewed through discussions with chemistry personnel, review of applicable procedures and surveillance records for reactor coolant dose equivalent iodine - 131 and E-bar requirements in Technical Specifications.

Review of routine weekly RCS sample data from January to April, 1988 was made. Semi-Annual determinations of E-bar were reviewed for 1987-1988.

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

5.0 Audits

During the inspection, the inspector attended an exit interview for licensee QA audit number BV-C-88-15 which reviewed the licensee's effluent controls program in the three week period preceding the inspection. The report included one finding and four recommendations.

The audit was found comprehensive in scope and technically complete.

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

6.0 Air Cleaning System Tests

The inspector reviewed the licensee's air filtration system testing with regard to the Technical Specification's requirements. The following systems and tests were reviewed:

- Supplementary Leak Collection and Recovery System (SLCRS), BVT 1.1-1.16/2.1-1.16 (Alignment, Air Flow, DOP tests, Methyl Iodide Removal Efficiency). Records from 1984 to date were reviewed for Unit One. Unit Two tests were reviewed during start up.

- Control Room Emergency Breathing Air BVT 1.1-1.44/2.1-1.44 (Alignment, Air Flow, DOP tests, Methyl Iodide Removal Efficiency). Records from January 1985 to date were reviewed for Unit One.

- Fuel Building Vent-Test BVT 1.1-1.16.2/2.1-1.16.2 (Alignment, Air Flow, DOP and Methyl Iodide) July 1984 to present.

There were no inspector concerns in this area. No violations were found.

7.0 Radiation Monitoring System

The inspector reviewed the licensee's gaseous and liquid radiation monitoring program with respect to Technical Specification requirements for calibration and functional/channel checks. The inspector reviewed selected procedures and accompanying records for calibration and surveillance activities for the following monitors

- Ventilation Vent Radiation Monitor (VS101)
  - Maintenance Surveillance Procedure (MSP) 43.12 and 43.13
  - Operational Surveillance Test (OST) 1.43

- Process Vent Radiation Monitor (GW-108)
  - MSP 43.21
  - OST 1.43

- Liquid Radwaste Monitor (LW-104)
  - MSP 43.18
  - OST 1.43

- Fuel Building Exhaust Gross Activity Radiation Monitor (VS-103A)

  - MSP 43.14
  - OST 1.43

- Reactor Building/SLCRS Rad Monitor (VS-107)

  - MSP 43,18
  - OST 1.43

Surveillances for 1987-1988 and calibrations within the last refueling cycle or since start-up for Unit Two were reviewed. Within the scope of this review, no violations were found.

8.0 Exit Interview

The inspector met with licensee representatives denoted in Section 1.0 at the conclusion of the inspection on May 20, 1988. The inspector summarized the scope of the inspection and the inspection findings.

At no time during the inspection were written materials provided to the licensee by the inspector.