U.S. NUCLEAR REGULATORY COMMISSION

Region I

Repcrt No. 50-334/81-19

Docket No. 50-334

License No. DPR-66 Priority -- Category C

Licensee: Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

Facility Name: Beaver Valley Power Station, Unit 1

Inspection at: Shippingport, Pennsylvania

Inspection conducted: July 8 and 9, 1981

Inspectors: R. E. Baer, Radiation Specialist — 3/12/82 date signed

Approved by: P. J. Knapp, Chief, Facility Radiological Protection Section, Technical Inspection Branch — 3-11-82 date signed

Inspection Summary:
Inspection on July 8 and 9, 1981 (Report No. 50-334/81-19)
Areas Inspected: Special, unannounced inspection to followup on Regional Requests and verify that engineering controls are being used to control airborne radioactivity. Areas inspected included the licensee's Solid Waste Disposal facility; Radiation and Contamination Surveys; Airborne Radiation Surveys; and the Radiological Work Permit program. The inspection involved 7 inspector-hours onsite by one regional based inspector.
Results: No items of noncompliance were idertified.

Region I Form 12
(Rev. April 77)

DETAILS

1. Persons Contacted

* Mr. J. C. Allingham, Health Physicist, DLC
* Mr. G. L. Beatty, Quality Assurance Engineer
* Mr. R. F. Burski, Sr. Licensing Engineer, DLC
  Mr. H. Jenkins, Operations Foreman
* Mr. J. A. Kosmal, Radcon Supervisor
  Mr. W. S. Lacey, Chief Engineer
  Mr. V. J. Linnenbom, Radiochemist
* Mr. S. Sovick, Compliance Engineer, DLC
* Mr. J. W. Wenkhous, Reactor Control Chemist
* Mr. H. P. Williams, Superintendent

Other Personnel

* Mr. D. A. Beckman, Senior Resident Reactor Inspector, USNRC

The inspector also interviewed several other licensee and contractor employees including health physics technicians and operations personnel.

* denotes those persons present at the exit interview on July 9, 1981.

2. Solid Waste Disposal Facility

The inspector discussed with a licensee representative the circumstances which necessitated the use of a water film to reduce the airborne particulate radioactivity potential in the Solid Waste Disposal facility. The licensee stated that the floor contamination was the result of a resin spill on the 722'6" elevation. They were presently in the process of removing the material stored in the area to facilitate decontamination. An area of major concern was the Spent Resin and Decontamination tanks in the area which are sources of high radiation. Levels, up to 10 Rem/hr, have been observed. Until the floor can be decontaminated, a layer of water approximately 1 inch deep was being maintained in the area.

The inspector noted from a radiation survey performed on June 24, 1981, to support RWP No. 007828, there were three 65-cubic foot shipping liners and two 55-gallon drums stored in the area. The liners were measured at 2 Rem/hr and the 55-gallon drums at 1.5 Rem/hr at contact with the surface of the packages. Smears taken of transferable contamination were 3,330 to 111,000 disintergrations per minute per 100 centimeters square (dpm/100 cm^2).

The inspector inquired if a monitoring program had been initiated by the licensee to determine whether water leakage from the solid waste disposal facility could occur to the ground water. A review of the storm drainage catch basin layout indicated that two catch basins, CB-4 and CB-5, are located in the immediate area of the Solid Waste Disposal facility. The licensee routinely samples these catch basins on a quarterly schedule for gross beta-gamma radioactivity in the liquid and bottom soil contents. A licensee representative stated that samples will include tritium analysis in addition to gross beta-gamma radioactivity measurements. He was attempting to acquire additional information on the storm sewer system, depth of the catch basins, catch basin bottom construction and construction and connecting the joint construction between catch basins. The licensee indicated that this information would be available for review at a subsequent inspection (81-19-01).

The inspector questioned the use of a water cover in place of proper engineering controls to control airborne radioactivity levels. The inspector noted that good practice would be to decontaminate the area and direct operations to maintain contamination levels as low as practicable.

No violations were identified.

3. Radiation and Contamination Surveys

The inspector reviewed radiation and contamination survey data sheets for the years 1980 and 1981. He selected random areas and reviewed all surveys performed during the above time frame. Areas reviewed included the maintenance shop and decontamination room; the 735 foot and 752 foot elevations of the auxiliary building; and the 692 foot and 718 foot elevation of the containment building.

A radiological clearance or work permit is required for all entries into the radiological controlled area. Control measures used by the licensee for entrance into contaminated areas are regulated by station procedures RP-2.1, Area Entry Requirements and RP-9.3, Anti-Contamination Clothing Specifications. Three contamination control levels are designated, and protective clothing requirements are determined by contamination level. These control levels and clothing requirements are:

a. Less than 1000 dpm/100 cm^2
   No protective equipment normally required.

b. Greater than 1000, less than 111,000 dpm/100 cm^2
   Coveralls, plastic shoe covers, cloth hoods or skull caps and rubber gloves.

c. Greater than 111,000 dpm/100 cm^2
   Double coveralls, double plastic shoe covers, cloth hood, rubber gloves and respiratory protective equipment may be worn.

The inspector questioned the licensee's representative about efforts being directed to keep track of and reduce the contamination levels within the radiological controlled area.

The licensee maintains a plant layout drawing in the Radiation Control Supervisor's office which depicts the areas contaminated above the 1000 dpm/100 cm^2 level. He is presently making a continuing effort to reduce or confine the contamination in all buildings with the exception of the reactor containment. A licensee representative stated those areas inside the reactor containment, where work is scheduled during the next refueling outage, will be decontaminated prior to the start of work.

No violations were identified.

4. Airborne Radiation Surveys

The inspector reviewed the 1981 airborne radiation survey data for compliance with Procedure RP-7.3, Issue 1, Revision 1, titled Airborne Particulate Sampling and RP-7.5, Issue 1, titled Air Particulate Radioactivity Sample Assessment. The inspector selected a cross section of general area, process and breathing zone sample data and reviewed approximately 100 of the 5000 airborne radiation surveys performed since January 1, 1981. All air sample forms were properly completed and reviewed by the Radiation Control Supervisor. There were no samples which indicated levels greater than 10^{-9} microcuries per cubic centimeter, the administrative limit requiring follow-up analysis.

No violations were identified.

5. Radiological Work Permit Program

The licensee's program for Radiological Work Permits (RWP) was revised in May 1981 with the issuance of Procedure RP-8.1, Issue 2. The inspector selected 14 of the 79 RWP's issued between June 22 and July 1, 1981, and reviewed them for procedural compliance. The inspector noted that the licensee was still in the process of assembling supporting data sheets on July 9 for RWP's which were terminated on July 1, 1981. Specifically, RWP No. 007822, which required the use of respiratory protective equipment, did not include the Radiological Work/Access Permit - Status Report Respiratory Protection Requirements, and RWP No. 007821 contained only the RWP form and survey data. The supporting data forms such as the Permit Acceptance/Dosimetry Data Record were not contained in the RWP package. The two RWP's mentioned above had not received a post-job review by the Radiation Control Supervisor.

The inspector discussed with the Radiation Control Supervisor that timely completion of the RWP packages should be performed.

No violations were identified.

6. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on July 9, 1981. The inspector summarized the scope and findings of the inspection.