U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-334/90-26
50-412/90-26

Docket Nos. 50-334
50-412

License Nos. DPR -66 Category C
NPF-73 C

Licensee: Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279

Facility Name: Beaver Valley Power Station, Units 1 and 2

Inspection At: Shippingport, Pennsylvania

Inspection Conducted: November 26 - 30, 1990

Inspector: P. O'Connell, Radiation Specialist — 12-18-90 date

for D. Chawaga, Radiation Specialist — 12-18-90 date

Approved by: W. Pasciak, Chief, Facilities Radiation Protection Section — 12/21/90 date

Inspection Summary: Inspection conducted on November 26 -30, 1990. NRC Combined Inspection Report Nos. 50-334/90-26; 50-412/90-26.

Areas Inspected: Routine, unannounced inspection of the Radiation Protection Program. Areas reviewed include: Status of Previous Inspection Findings, Facility Tours, Training, Planning/Changes, Calibrations, and ALARA.

Results: Within the scope of this review no violations were identified.

DETAILS

1.0 Individuals Contacted

1.1 Licensee Personnel

D. Batina, Supervisor - Quality Data Assessment
D. Blair, Director, Radiological Health Services
*D. Canan, Senior Health Physics Specialist
E. Cohen, Director, Radiological Operations (BV2)
J. Freund, Senior Health Physics Specialist
*D. Girdwood, Director, Radiological Operations (BV1)
*M. Helms, Senior Health Physics Specialist
J. Kosmal, Manager, Health Physics
*F. Lipchick, Senior Licensing Supervisor
J. McIntire, Senior Health Physics Specialist
*D. Orndorf, Chemistry Supervisor
*M. Pavlick, Director - Quality Services
*B. Sepelak, Licensing Engineer
*D. Spoerry, General Manager, Nuclear Operations Services
*R. Vento, Director, Radiological Engineering

1.2 NRC Personnel

*J. Beall, Senior Resident Inspector, Beaver Valley
*P. Wilson, Resident Inspector, Beaver Valley

* Denotes those individuals who attended the Exit Meeting on November 30, 1990.

2.0 Purpose

The inspection was a routine, unannounced inspection of the Radiation Protection Program. Areas reviewed include: Status of Previous Inspection Findings, Facility Tours, Training, Planning/Changes, Calibrations, and ALARA.

3.0 Status of Previous Inspection Findings

3.1 During NRC inspection 50-412/90-19 the inspector reviewed the circumstances surrounding a September 15, 1990 containment purge exhaust isolation which resulted in the contamination of several elevations of the Unit II Fuel Handling Building (FHB). While flooding the reactor cavity on September 15, 1990 the containment purge isolation dampers automatically closed due to a high activity alarm on the exhaust air monitor. The containment isolation resulted in a positive pressure differential between the containment atmosphere and the ambient atmosphere of the FHB. The resulting pressure difference caused the water level to rise above conduit penetrations in the transfer canal and onto the floors and floor grating of the FHB. This resulted in the contamination of several elevations of the FHB.

The inspector reviewed the licensee's corrective actions to preclude a similar incident from happening in the future. As part of the corrective actions, the licensee made several changes to the Unit II Operating Manual section on filling the reactor refueling cavity. The procedure changes should preclude the occurrence of a similar incident at Unit II. The inspector asked if the licensee had evaluated whether a similar scenario could occur when filling the Unit I reactor refueling cavity. The licensee stated that they were still evaluating the necessity of changing the Unit I Operating Manual. The corrective actions for Unit I will be reviewed during a future inspection.

4.0 Facility Tours

The inspector conducted several tours of the facility and verified that areas were properly posted, barricaded or locked as required. The inspector independently took dose rate measurements and verified the accuracy of recent radiological surveys. No discrepancies were noted. Postings and general housekeeping throughout the facility were good.

5.0 Training

The inspector reviewed training lesson plans for permanent staff HP Technicians and general employees allowed to work in the Radiologically Controlled Areas (RCA) of the facility. Lesson plans reviewed included:

General Employee Training
General Employee Refresher Training
HP Technician Initial Training
HP Technician Continuing Training
Technical Personnel Training

The inspector also reviewed personnel training records of selected permanent staff HP Technicians and general employees. Within the scope of this review no major deficiencies were noted. The lesson plans and training records indicated that the licensee had a comprehensive initial and continuing training program. The licensee had an adequate program for ensuring that personnel whose training had expired were not allowed into the RCA.

The inspector noted one area for improvement in the training program. Under the licensee's current program HP Technicians are allowed to document survey results using various methods. While the licensee has a preferred method for documenting survey results, the licensee does not insist on the same method for all surveys. The lack of uniformity in documenting survey results could result in confusion and lack of worker awareness of radiological conditions, especially during periods of increased maintenance work such as during an outage. This item will be reviewed during the next outage inspection.

6.0 Planning/Changes

The licensee currently has two contractors conducting ALARA reviews for the next outage. The licensee plans on augmenting the HP staff with approximately the same number of HP Technicians as during previous refueling outages, i.e. approximately 180 contractor HP Technicians. The proposed staffing level of HP Technicians appears to be sufficient to cover the anticipated work during the next refueling outage.

During the last refueling outage, the licensee augmented their supervisory oversight staffing with six licensee supervisors who were detailed as radiological controls quality assessors for the duration of the outage. This augmentation was a noted strength. The licensee stated that they plan on continuing this practice during the next refueling outage.

The licensee is continuing efforts to make improvements in their radiation protection program. The licensee recently purchased several alarming dosimeters and is in the process of writing procedures for their use and calibration.

7.0 Calibrations

The inspector reviewed selected procedures and records for calibration and quality control of radiation monitoring instruments. The inspector reviewed applicable records for the count room instruments, including the germanium detectors, portable radiation surveying instruments, and pocket ion chambers. Within the scope of this review no major discrepancies were noted. The licensee had an adequate program for calibrating, source checking, and issuing radiation monitoring instruments.

While the quality control of the germanium detector was considered excellent, the inspector noted that the quality control for some of the other types of radiation monitoring instruments was not as comprehensive as the quality control for the germanium detectors. Some of the air sample and smear counters (i.e. SAM-2s) did not have control charts. Some of the procedures for calibrating portable radiation survey instruments (i.e. teletectors, RO-7s) did not specify acceptance criteria. The licensee stated that they would revise the applicable procedures to specify acceptance criteria. The licensee also stated that they plan on replacing the SAM-2s with new counters (MCAs) and they will implement control charts when the new counters are put in service.

8.0 ALARA

The inspector reviewed the cumulative exposures to date for the two units. The cumulative exposures for Unit 2, which included a refueling outage, was approximately 283 person-rem. The cumulative exposures for Unit 1 was less than 50 person-rem. The licensee anticipates the 1990 cumulative exposure for the two units to be approximately 348 person-rem, which is less than the licensee's 1990 ALARA goal of 350 person-rem. The personnel

exposures at the facility compare favorably with other pressurized water reactors. The licensee was still developing their 1991 ALARA goal. The inspector reviewed several ALARA review packages and found the packages to be comprehensive. The licensee is actively pursuing their evaluation for conducting a full system decontamination. They have completed their material evaluation for the decontamination effort. Based on this review the inspector concluded that the licensee was setting and achieving challenging ALARA goals, and making progress in evaluating methods for source term reduction.

9.0 Exit Meeting

The inspector met with licensee representatives denoted in Section 1 of this report on November 30, 1990. The inspector summarized the purpose, scope and findings of the inspection.