

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report/License Nos.: 50-387/95-11/NPF-14; 50-388/95-11/NPF-22

Licensee: Pennsylvania Power and Light Company (PP&L)
2 North Ninth Street
Allentown, Pennsylvania 18101

Facility Name: Susquehanna Steam Electric Station and PP&L Corporate Office

Inspection At: Berwick and Allentown, Pennsylvania

Inspection Conducted: May 1-5, 1995

Inspector: Laurie Peluso 5/10/95
Laurie Peluso, Radiation Specialist
Effluents Radiation Protection Section (ERPS)

Approved by: Elizabeth Ulrich 5/10/95
Elizabeth Ulrich, Chief, ERPS
Facilities Radiological Safety and Safeguards Branch

Areas Inspected: Announced safety inspection of the Radiological Environmental Monitoring Program and Meteorological Monitoring Program including: management controls, quality assurance audits, calibration of measuring and test equipment (air samplers and meteorological instrumentation), and implementation of the Offsite Dose Calculation Manual (ODCM) and the above programs.

Results: Within the areas inspected, members of the Environmental Services-Nuclear maintained very good Radiological Environmental Monitoring and Meteorological Monitoring programs and the responsible individuals were qualified and knowledgeable with respect to the above programs. No safety concerns or violations of NRC regulatory requirements were observed.

DETAILS

1.0 INDIVIDUALS CONTACTED

1.1 PRINCIPAL LICENSEE EMPLOYEES

1.1.1 PP&L Corporate Office, Allentown, PA

- * B. Carson, Health Physicist, Environmental Services
- * C. Coddington, Senior Project Engineer-Licensing
- T. Furler, Project Engineer, Environmental Services
- * W. Hill, Health Physicist, Environmental Services
- S. Ingram, Senior Health Physicist, Radiological Controls
- * J. Kulick, Supervisor-Operations Technology
- * G. Miller, Manager-Nuclear Technology
- J. Pacer, Senior Scientist-Consulting
- * K. Shank, Supervisor-Environmental Services-Nuclear
- * C. Whirl, Supervisor-Audit Services

1.1.2 Susquehanna Steam Electric Station

- B. Rhodes, Chemistry Support Supervisor
- * R. Kichline, Licensing Specialist (PP&L)
- * G. Kuczynski, Manager-Nuclear Plant Services (PP&L)
- * R. Prego, Supervisor-Surveillance Services (PP&L)
- C. Sysco, I&C Engineering Technician
- G. Trever, I&C Engineering Supervisor
- L. Vnuk, Senior Chemist

1.2 NRC EMPLOYEES

- * M. Banerjee, Senior Resident Inspector
- B. McDermott, Resident Inspector

* Denotes those present at the exit meeting on May 5, 1995.
The inspector also interviewed other licensee personnel during this inspection.

2.0 PURPOSE OF INSPECTION

The purpose of this inspection was to review the licensee's capability to implement of the Radiological Environmental Monitoring Program (REMP) and Meteorological Monitoring Program (MMP).

3.0 MANAGEMENT CONTROLS

3.1 ORGANIZATION AND PROGRAM CHANGES

The inspector reviewed the licensee's organization and asked members of Environmental Services if there were any changes since the previous inspection conducted in July 1993. There were no significant changes in the REMP management since the previous inspection. There were, however, changes in REMP sampling stations. (See Section 3.2 of this inspection report for details.)

3.2 ANNUAL REPORT

The inspector reviewed the Radiological Environmental Monitoring Program (REMP) Annual Reports for 1993 and for 1994, as well as selected analytical results for 1995. The reports provided a comprehensive summary of the results of the REMP around the Susquehanna Steam Electric Stations (SSES) and met the Technical Specification (TS) reporting requirements. The reviewed analytical results indicated that all samples were collected and analyzed as required by the ODCM and TS. The reports were complete and no obvious omissions or anomalous data were identified.

The licensee documented environmental monitoring station changes in the REMP Annual Reports for 1993 and for 1994, as required by TS. The inspector discussed with the licensee the relocation of certain TLD and air sampling stations of the REMP. The licensee also listed exceptions to the REMP in Appendix F of the Annual Report. The inspector discussed these exceptions with the licensee. Based on discussions with the licensee, the inspector determined that (1) the changes have had no significant impact on the sampling data and did not change the intent of the REMP and (2) compensatory sampling and other corrective actions were appropriate.

3.3 QUALITY ASSURANCE AUDIT AND SURVEILLANCE REPORTS

The inspector reviewed the following Quality Assurance Audit Reports (QA) and Surveillance Audit Reports (SR) as part of the evaluation of the implementation of the TS requirements:

- QA #94-027, Radiological Environmental Monitoring Program
Nuclear Technology
- QA #94-045, Offsite Dose Calculation Manual and
Meteorological Program
- QA #94-088, 1994 Radiological Environmental Monitoring
Program Vendors
- SR #94-073, REMP Fish Sample Collection
- SR #94-020, REMP Vendor/Water Sampling (Ecology-III)

The above Audits and Surveillances were performed by qualified personnel from the Quality Assurance (QA) Department. The inspector noted that one part of QA #94-088 was conducted by other utility personnel (Wolf Creek Station) because the utility also utilized the same vendor as PP&L and the other part of QA #94-088 was conducted by QA Department personnel. The inspector noted that the audits and surveillances probed for programmatic weaknesses and strengths and were of sufficient technical depth to assess the implementation of the REMP and MMP.

Several findings and observations/recommendations were identified during the above audits. Those findings and observations were not safety related, but were intended to enhance the REMP. The inspector reviewed responses to the findings and observations during this inspection. The inspector noted that the QA Department personnel used a tracking system

to follow the status of the findings and observations. The majority of findings and observations were closed at the time of this inspection.

Based on the above audits, reviews and responses to the findings and observations, the inspector concluded that (1) audits and surveillances for the REMP and MMP were performed according to the frequency required by TS, (2) the above findings were very good and were assigned to the appropriate responsible groups, and (3) responses to the findings were timely and corrective actions were appropriate.

4.0 IMPLEMENTATION OF THE RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

4.1 DIRECT OBSERVATIONS

The inspector examined selected sampling stations to determine whether samples were being obtained from the locations designated in the ODCM and whether air samplers were operable and calibrated. The sampling stations included air samplers for iodines and particulates, broad-leaf vegetation, milk, surface water, drinking water, and TLD stations for measurements of direct ambient radiation. All REMP samples were collected and prepared by vendor personnel, Ecology III, who forward the samples to a separate vendor for analysis. The inspector witnessed the weekly exchange of charcoal cartridges and air particulate filters at selected sampling stations. The inspector noted that the exchanges were performed according to the appropriate procedure. The inspector also noted that the licensee collects and analyzes more samples than required by TS. All air sampling equipment at the selected locations was operational at the time of the inspection. The above environmental sampling media were available at the locations designated in the ODCM and TLDs were placed at locations designated in the ODCM.

Based on the above program review and discussions with the responsible individuals, the inspector determined that the licensee continues to effectively implement a very good REMP.

4.2 REVIEW OF REMP PROCEDURES

The inspector reviewed the following licensee's environmental monitoring procedures:

- NEPM-QA-1014, Radiological Environmental Monitoring Program
- NEPM-QA-1015, Radiological Environmental Monitoring Technical Specifications Compliance Verification
- NEIM-QA-1042, Processing of Environmental TLDs on the Panasonic 710A Auto Reader
- NEIM-QA-1047, Instruction for the Handling and Processing of Environmental TLDs
- NEIM-00-1049, Quality Control and Calibration of Panasonic 710A Automatic Reader

The inspector reviewed the licensee's procedure manual, Quality Assurance Program and Procedures for the REMP and Emergency REMP (EREMP) at the SSES Environmental Laboratory. This manual contained the sampling and sample preparation procedures during normal and emergency operations. The procedures provided the required guidance to implement an effective REMP.

The inspector also reviewed the licensee's air sampler calibration procedures and records. Calibration of gas meters was performed after nine months of operation and calibration of the dry gas test meter was performed annually. Results of these calibrations were within the licensee's specified acceptance criteria and performed according to the specified frequencies stated in the appropriate procedure.

Based on this review, the inspector determined that the procedures reflected the environmental program changes and that the licensee had good procedures for implementation of the REMP.

4.3 QUALITY ASSURANCE AND QUALITY CONTROL FOR ANALYTICAL MEASUREMENTS

The inspector reviewed the licensee's programs for quality assurance (QA) and quality control (QC) of analytical measurements for radiological environmental samples to determine whether the licensee had adequate control with respect to sampling, analyzing, and evaluating data for the implementation of the REMP. The contractor laboratory, TBE-ES, participates in the EPA cross-check program. The inspector reviewed the results and noted that the results were within acceptance criteria. The QC program consists of measurements of duplicate, spike, and split samples. The inspector reviewed the analytical results and noted that the results were generally within the licensee's acceptance criteria. The contractor laboratory supplies reports of QC results to the licensee who reviews the data. When discrepancies were found, the HP consults the laboratory personnel and reasons for the discrepancies were investigated and resolved.

Based on the above review and discussions with the licensee, the inspector determined that the licensee continued to conduct very good QA and QC programs.

5.0 METEOROLOGICAL MONITORING PROGRAM (MMP)

The inspector examined the licensee's MMP calibration procedures and most recent calibration results to determine whether the instrumentation and equipment were operable, calibrated, and maintained. Calibrations were performed semiannually by Instrument & Controls (I&C), as required by TS. The inspector reviewed the calibration records for the primary and backup towers, with emphasis on wind speed, wind direction, and temperature sensors. All reviewed calibration results were within the licensee's defined acceptance criteria. The inspector witnessed the responsible I&C individuals calibrate the temperature sensors from both towers. The results were within the acceptance criteria.

The inspector also noted that the licensee had four meteorological towers, one primary, one backup, and two supplemental; the upriver supplemental tower was terminated as of October 1994. This tower provided supplemental information and its termination had no impact on the MMP.

Based on the above review, direct observations, discussions with personnel, and examination of procedures and records for calibration of equipment, the inspector determined that the licensee continued to effectively implement a very good MMP.

6.0 EXIT MEETING

The inspector met with the licensee representatives denoted in Section 1.0 of this report at the conclusion of the inspection on May 5, 1995. The inspector summarized the purpose, scope and findings of the inspection. The licensee acknowledged the inspection findings.