

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-277/92-08 and 50-278/92-08
Docket Nos. 50-277 and 50-278
License Nos. DPR-44 and DPR-56
Licensee: Philadelphia Electric Company (PECo)
P. O. Box 195
Wayne, Pennsylvania 19087-0195
Facility Name: Peach Bottom Atomic Power Station, Unit 2 and Unit 3
Inspection At: Peach Bottom Site in Delta, Pennsylvania, Corporate Offices in Wayne,
Pennsylvania and at Teledyne Isotopes, Westwood, New Jersey
Inspection Conducted: March 23-27, 1992 and March 31, 1992

Inspector: Laurie Peluso 4/16/92
Laurie A. Peluso, Radiation Specialist
Effluents Radiation Protection Section (ERPS)
Facilities Radiological Safety and
Safeguards Branch (FRS&SB) Date

Approved by: Thomas J. Bores 4/16/92
Robert J. Bores, Chief, ERPS, FRS&SB
Division of Radiation Safety and Safeguards Date

Areas Inspected: Announced safety inspection of the Radiological Environmental Monitoring Program (REMP) including management controls, audits, QA/QC of analytical measurements, the Meteorological Monitoring Program (MMP) and the implementation of the above programs and Offsite Dose Calculation Manual (ODCM).

With in the scope of the inspection, the licensee conducted an effective REMP and however, one violation was identified, as described in Section 4.1 of this inspection

DETAILS

1.0 Individuals Contacted

1.1 Corporate Office, Wayne, Pennsylvania

- ** +J. Ballantine, Supervisor, Environmental Group
- D. Wahl, Health Physicist, Environmental Group

1.2 Peach Bottom Site Personnel

- * K. Cepull, I&C Technician "A"
- * J. Cockroft, Superintendent, Quality Assurance
- * P. Hoffman, I&C Technician "B"
- * R. Jones, Lead Auditor, Nuclear Quality Assurance
- * S. Lee, Engineer, Quality Assurance
- * S. Malin, Senior Technician, O/S Chemistry
- * D. Odell, Senior Chemist
- * P. Ott, PSE&G Site Representative
- * R. Smith, Regulatory Group
- * J. Toon, Foreman, I&C Planning

1.3 Teledyne Isotopes (Contractor Laboratory), Westwood, New Jersey

- + A. Hogan, Program Manager, Environmental Analysis
- +J. Martin, Vice President Technical, Environmental Analysis
- N. Cobin, Technician, Environmental TLDs
- H. Jeter, Manager, Radiochemistry and Environmental Analysis

1.4 Radiation Management Corporation (REMP Sampling Contractor)

C. Reid, Sampling Contractor

* Denotes those individuals present at the exit interview held on March 27, 1992.

** Denotes those individuals who participated by telephone in the exit interview held on March 27, 1992.

+ Denotes those individuals present at the exit interview held on March 31, 1992 at the contractor laboratory, Teledyne Isotopes.

Other licensee employees were contacted and interviewed during this inspection.

2.0 Purpose

The purpose of this inspection was to review the licensee's ability to implement the Radiological Environmental Monitoring Program (REMP) and the Meteorological Monitoring Program (MMP), based on Technical Specifications and the Offsite Dose Calculation Manual (ODCM), during normal and emergency operations.

3.0 Management Controls

3.1 Program Changes

The inspector reviewed the organization and administration of the REMP and discussed with the licensee any changes made since the previous inspection conducted in June 1991. The REMP is administered by the PECO Corporate Environmental Group. One responsibility of the Group Supervisor is to review the contractors' performance of the REMP. The inspector determined that the organization and administrative control of neither the REMP nor the MMP have changed since the last inspection. However, the licensee did make one program change. During May 1991, the licensee contracted the Public Service Electric and Gas, Research and Testing Laboratory in Maplewood, New Jersey to perform analytical quality control for environmental analyses. This function was formerly done by Clean Harbors of Natick, Massachusetts.

Based on the above reviews, the inspector determined that the program change has had no adverse affect on the implementation of the REMP. The inspector had no further questions in this area.

3.2 Audits

The inspector reviewed the following Nuclear Quality Assurance (NQA) Audit Report.

- A0167269 REMP/ MMP March 4, 1992

This NQA audit, conducted January 22 - February 6, 1992, covered the areas of the ODCM, REMP, and MMP. This audit also covered the contractors' activities (RMC Environmental Services Corporation and Teledyne Isotopes). The audit assessed the quality of the REMP and MMP and covered the stated objectives. One recommendation in the area of the MMP was documented. The inspector noted that this item did not have safety significance.

The inspector also noted that the NQA audit addressed the inoperability of the composite water samplers, however, no deficiencies were issued. The inspector discussed with members of the NQA audit team the requirements of the Technical

Specifications with regard to sampling frequency and completing corrective actions prior to the next sampling period. The audit team stated that the Regulatory Group assessed this issue and determined that the corrective actions were in compliance with Technical Specifications. (See Section 4.1 of this inspection report for details.)

The licensee evaluated and accepted audits performed by the Nuclear Procurement Issues Committee (NUPIC) to fulfill the annual audit requirements for radiological environmental services supplied by Teledyne Isotopes. The NUPIC consists of multi-utility representatives who use the same vendor services. The inspector reviewed the following audits and determined that they met the Technical Specification audit requirements.

- o Duquesne Light Company Quality Services Audit Report (VEND-91-56), July 31-August 2, 1991.
- o QA Audit Report AR-91-TELIS-01, June 19, 1991. (Toledo Edison)
- o Teledyne Isotopes Audit, April 15, 1991. (Niagara Mohawk)

Based on the review of the audits and discussions with the licensee, the inspector determined that the NQA audit and the NUPIC audits adequately assessed the implementation of the REMP and MMP.

3.3 Review of the Annual Report

The inspector reviewed the Annual Radiological Environmental Operating Report for 1990 as well as the available 1991 and 1992 analytical data for the REMP. The report provided a comprehensive summary of the analytical results of the REMP around the Peach Bottom site, and met the Technical Specification reporting requirements. The reviewed results indicated that all samples were collected as required. Program exceptions were documented when air samplers and water compositors were not in service for short periods of time. The inspector discussed with the licensee the causes of these discrepancies and determined that except for the composite water sampling as discussed in Section 4.1 of this report, no significant deviations from the REMP were identified. The inspector had no further questions in this area.

4.0 Radiological Environmental Monitoring Program (REMP)

4.1 Direct Observations

The inspector examined selected environmental sampling stations with respect to the requirements of the Technical Specifications, Offsite Dose Calculation Manual (ODCM), and appropriate procedures. These stations included air particulate and airborne iodine samplers, composite water sampling stations, a milk sampling station, and a number of thermoluminescent dosimetry (TLD) stations for direct ambient radiation measurements. The inspector witnessed the weekly exchange of air particulate filters and air iodine cartridges. The inspector also witnessed the weekly composite water sampling at the intake structure and the Conowingo Dam as well as a daily grab sample taken at the discharge canal. All selected air sampling equipment was operable at the time of inspection. Milk samples appeared to be available at the sampling locations specified in the ODCM. The TLDs were placed at the locations specified in the ODCM. The composite water samplers at the intake structure and the Conowingo Dam were operable, however, the compositor at the discharge canal was inoperable at the time of the inspection.

Upon review of the licensee's program, the inspector noted that the licensee had not complied with the following Technical Specification requirements. Section 4.8.E.1 of Technical Specifications states, in part, that "Deviations are permitted from the required sampling schedule if specimens are unobtainable due to....malfunction of automatic sampling equipment. If equipment malfunction occurs, an effort shall be made to complete corrective action prior to the end of the next sampling period." The inspector noted that the composite water samplers at the intake and discharge were inoperable since August 30, 1991 and August 8, 1991, respectively. The inspector also noted that the licensee had identified the sampler problem and issued Action Requests (A/Rs) for the repair of the intake and discharge compositors on November 7, 1991 and August 24, 1991, respectively (a total of nine weeks and two weeks after the date the compositors were out-of-service). The A/Rs became work orders after being prioritized by Maintenance Planning. The work orders were then issued to maintenance in January, 1992 (two months later). The water compositor at the intake was cleaned, repaired, and put back into service two months after that date (March 19, 1992). Although the intake water compositor had now been repaired and was operable at the time of the inspection, the time to complete corrective actions from 8/30/91 to 3/19/92 clearly exceeds the anticipated outage time allowed by the Technical Specifications. The composite water sampler at the discharge canal remained inoperable at the time of this inspection. The licensee's efforts to repair the samplers were ineffective in returning the equipment to service prior to the end of the next sampling period. This constitutes an apparent violation of Technical Specification 4.8.E. (50-277/92-08-01, 50-278/92-08-01)

During the time when the compositors were out of service, chemistry personnel had been taking daily grab samples, compositing them weekly and then further compositing them monthly according to Chemistry procedure ST-C-095-835-2, "Circulating Water Intake and Discharge Composite Sampling". Table 4.8.3.a.3 of the Technical Specifications states, in part, that "Composite samples shall be collected by collecting an aliquot at intervals not exceeding two hours." Although taking daily grab samples follows the chemistry procedure, this daily sampling does not meet the intent of the Technical Specifications for the condition when the compositor(s) were out of commission. The inspector discussed with the licensee that this was considered to be a weakness in the sampling program and the licensee stated that this issue would be reviewed. The inspector stated that this issue would be reviewed during a subsequent inspection.

4.2 Review of the REMP Procedures

The inspector reviewed a number of license procedures as part of the evaluation of the implementation of the REMP in accordance with the Technical Specifications and the ODCM requirements. The following sample collection and analytical procedures were reviewed in detail.

(1) Licensee Procedure

ST-C-095-835-2, Rev 0., "Circulating Water Intake and Discharge Composite Sampling", March 11, 1992

(2) Contractor Procedures

o RMC Procedure

ER-15 Rev. 0, "Collection of Water Samples for Radiological Analysis", June 1991

ER-16 Rev. 0, "Collection of Air Particulate and Air Iodine Samples for Radiological Analysis", June 1991

o Teledyne Isotopes Procedure

PRO-032-11, "Determination of Radioiodine in Milk and Water Samples", February 1, 1992

o Public Service Electric and Gas Company Procedure

MLKIRES Number 1.3.3.6 Rev. 1, "Gamma Analysis of Raw Milk for I-131", July 1, 1989

The inspector also reviewed the licensee's air sampler calibration procedures and records. The inspector noted that the licensee performs calibrations on the vacuum gages semi-annually and that the calibration results were within the licensee's acceptance criteria.

Based on the above record reviews and discussion with the licensee's representatives, the inspector determined that the licensee had excellent procedures to implement the REMP effectively.

4.3 Quality Assurance/Quality Control of Analytical Measurements

As part of the inspection, the inspector visited the licensee's primary analytical contractor laboratory, Teledyne Isotope, along with a licensee representative.

The inspector toured the contractor's TLD badge processing and calibration facilities, and discussed with contractor representatives the method of TLD reader and badge calibration. There were manual readers and one automatic reader were available. Quality control checks were performed at least daily when the equipment was in use. Readers were calibrated monthly, and the badges were calibrated following each use. Calibrations were performed with a Cs-137 beam source having an exposure rate of 63.5 mR/hr at six feet. Calibration exposures are traceable to the National Institutes of Standards and Technology via a calibrated electrometer. No problems were detected with the operation of the environmental TLD processing equipment.

The inspector also reviewed selected quality control charts for measurement equipment such as, low background gas flow proportional counters and quality assurance/quality control procedures and analytical results to determine whether the licensee had adequate control with respect to sampling, analyzing samples and data evaluation for the implementation of the REMP.

The inspector noted that the licensee independently verified all REMP analytical results provided by the contractor laboratory with the use of a computer program. When anomalies were discovered the licensee notified the contractor laboratory and resolved the concerns.

The inspector reviewed the most recent results of the EPA cross-check program, interlaboratory and intralaboratory comparison results. The inspector noted that the results of these comparisons were in good agreement with few exceptions. These exceptions were discussed with the licensee and the inspector determined that the licensee had taken appropriate actions to resolve these exceptions.

The inspector determined that the quality assurance program for analytical measurements by the contractor laboratory was good. The inspector also determined that the licensee implemented QA/QC very effectively. The inspector had no further questions in this area.

5.0 Meteorological Monitoring Program

The inspector reviewed the licensee's meteorological monitoring program to determine whether the instrumentation and equipment were operable, calibrated, and maintained. The inspector compared the meteorological parameters such as wind speed, wind direction and delta temperature at the 33-ft and 320-ft elevation levels, between the monitoring station at the main tower and the control room and determined that the comparison results were in good agreement. The inspector reviewed the most recent calibration results of the meteorological parameters and noted that the results were within the licensee's acceptance criteria.

The inspector, however, noted that the wind speed chart recorder for the River Tower was inoperable at the time of the inspection. The licensee stated that this instrument outage was due to a transmitter problem at the tower. The licensee stated that this problem is being addressed and will be fixed within two to three weeks of this inspection. The inspector stated that the corrective actions will be reviewed during a subsequent inspection.

Based on the above review and discussions with the licensee, the inspector determined that the licensee had implemented an effective Meteorological Monitoring Program.

6.0 Exit Interview

The inspector met with the licensee representatives denoted in Section 1.0 at the conclusion of the inspection at the Peach Bottom Site on March 27, 1992. The inspector summarized the purpose, scope, and findings of the inspection.