

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/92025(DRS:)

Docket No. 50-255

License No. DPR-20

Licensee: Consumers Power Company
212 West Michigan Avenue
Jackson, MI 49201

Facility Name: Palisades Nuclear Plant

Inspection At: Palisades Site, Covert, Michigan

Inspection Conducted: October 19-23, 1992

Inspector: William Snell for
D. W. Nelson
Radiation Specialist

11/12/92
Date

Approved By: William Snell
William Snell, Chief
Radiological Controls Section 2

11/12/92
Date

Inspection Summary

Inspection on October 19-23, 1992 (Report No. 50-255/92025(DRSS))

Areas Inspected: Routine unannounced inspection of the radiation protection, environmental and effluent monitoring programs, including: organization, management controls and training; audits and surveillances; gaseous and liquid radioactive waste; solid radioactive waste storage; effluent and environmental reports; process monitor control and calibration; and meteorological instrumentation operability (IP 86750, 84750).

Results: No violations or deviations were identified. The licensee's environmental and effluent monitoring programs appear to be effective in accomplishing their assigned tasks. Strengths include the review and revision of the environmental and effluent monitoring procedures, the continued good fuel performance as demonstrated by the very low level of radioactivity in their effluents, and housekeeping in the auxiliary and radioactive waste buildings. Areas where improvement appears to be merited is training (beyond the in-house radiation protection (RP) core curriculum) given the new supervisors of the environmental and effluent programs, and documentation of follow-up of "deficiencies" found during Nuclear Performance Assessment Department (NPAD) audits and surveillances.

DETAILS

1. Persons Contacted

- * D. Anderson, Nuclear Performance Assessment
- * P. Donnelly, Safety and Licensing Director
- * J. Kuemin, Licensing Administrator
- * M. Mennucci, Health Physics (HP) Technical Supervisor
- * T. Neal, HP Support Superintendent
- * R. Rice, Nuclear Performance Assessment
- * G. Slade, Plant General Manager
- * J. Stuedeman, Duty HP Supervisor
- * G. Sturm, Radioactive Materials Control Supervisor

- * D. Passehl, Resident Inspector

The inspectors also interviewed other licensee and contractor personnel during the course of the inspection.

* Denotes those present at the exit meeting on October 23, 1992.

2. General

This inspection was conducted to review aspects of the licensee's radiation protection, environmental and effluent monitoring programs. The inspection included tours of radiation controlled areas in the auxiliary and radioactive waste buildings, a tour of the environmental sampling sites, observations of licensee activities, review of representative records and discussions with licensee personnel.

3. Organization and management Controls (IP 83750, 84750)

The inspector reviewed the licensee's organization and management controls for the environmental and effluent monitoring programs including: organizational structure, staffing, delineation of authority and management techniques used to implement the program and experience concerning self-identification and correction of program implementation weaknesses.

On June 30, 1992, the Radiological Services Department (RSD) reorganized and, as a result, two individuals were reassigned to supervise the environmental and effluent monitoring programs. Even though both individuals had extensive radiation protection experience neither was initially qualified by training or experience to assume responsibility for their programs. Turnover time in their respective departments (programs) was minimal and neither individual was sent off-site for additional preliminary training. Both did, however, receive basic in-house training on the requirements of their programs and both were continuing to receive on-the-job training. The inspector noted that neither program had failed to meet any of the requirements due to the lack of experience of the supervisors. The concern about the lack of training for new supervisors was raised at the exit meeting.

In the last inspection report (Inspection Report 50-255/92020(DRSS)) it was reported that following the RSD reorganization the Radiation Protection Manager (RPM) would serve as an in-house assessor and report to corporate as well as plant management. That was inaccurate; the RPM will only report to plant management. Two other inaccuracies were: radiological services not ALARA will be responsible for the hot spot reduction program and HP technical not ALARA will assume responsibility for engineering design changes.

Inspection Report 50-255/92020(DRSS) indicated that the licensee would benefit in a number of ways from the reorganization of the Radiological Services Department (RSD). During the inspection, two of these benefits were already apparent. Many of the new managers had already begun to review and revise their procedures. In the effluent program alone the new supervisor had reviewed and revised most if not all of his procedures. In addition, Administrative Procedure No. 7.00 had been revised to include detailed job descriptions for all RSD managers (managers, coordinators supervisors, superintendents and the Radiation Protection Manager (RPM)).

Since the last inspection, the RPM left to assume another position. The RPM from the Big Rock Point Power Plant was chosen to replace him and will report for duty sometime around January 1, 1993. Following the reorganization the RPM lost some of the responsibilities historically associated with that position to the Radiological Services (RS) Superintendent. In Inspection Report 50-255/92020, a question was raised about whether or not the qualification guidelines of Regulatory Guide 1.8 apply to an individual who assumes many of the responsibilities of the RPM but not the title. The new RPM will be asked to examine this issue.

The licensee has notified the NRC that it will implement the provisions of Generic Letter 89-01 and remove the Radiological Effluent Technical Specifications (RETS) from the main body of the Technical Specifications and place them in the Offsite Dose Calculation Manual. As a result the Limiting Condition of Operation (LCO) will change to a "Control" format for ODCM entries. The change will occur sometime in the winter of 1992-1993.

No violations or deviations were identified.

4. Surveillances and Self Assessments (IP 84750)

The inspector reviewed the results of the annual NPAD audit conducted by the licensee on the effluent and environmental monitoring programs. Also reviewed was the extent and thoroughness of the audit.

The last audit of the effluent and environmental programs was conducted September 30 - October 4, 1991. The audit was to assess: Technical Specification (TS) effluent monitor operability and calibrations; the Offsite Dose Calculation Manual (ODCM); the Radiological Environmental Monitoring Program (REMP); various REMP/Radiological Effluent Technical Specifications (RETS) surveillances and reports; off-site environmental sample collection activities; operability of equipment; stack-gas filter changeout and follow-up of implemented corrective actions from the

previous audit (1990). The audit identified four observations/recommendations: a mix-up of data sheets, a minor math error in the Semi-annual Radioactive Effluent Release Report, a problem with the hard copy retention of TS surveillances (they were retained on microfilm and the originals discarded) and a stack gas recorder that was found to be recording on the wrong scale. These were considered to be of minor significance and no corrective action document (Action Item Report (AIR) or Deviation Report (DR)) was issued.

Two other items discussed in the audit, however, raised questions about NPAD's criteria for identifying, reporting and tracking "conditions adverse to quality" (concerns, deficiencies, findings or violations). One item identified the continuing problems with air sample data results due to the poor work practices utilized by their contractor. Even though this problem had been reported in a 1990 inspection report (50-255/90022(DRSS)) and the REMP coordinator had taken action to correct it (a letter to the contractor), the poor practices had continued. The other item reported that several process monitors had been out of service for extended periods of time and the licensee's corrective actions taken to fix the problem appeared to have been inadequate. The inspector noted that neither of these items had been reported as a condition adverse to quality and corrective action documents had not been written to address them. Following the audit, one of the NPAD auditors did call the REMP coordinator on several occasions to see if correction actions had been taken but had not documented the conversations. The inspector also noted that NPAD had not conducted a surveillance on either the effluent or environmental programs in the year following the audit and none had been scheduled for 1993. The fact that NPAD was finding deficiencies in a program but not adequately documenting and tracking them indicates a weakness in the program. The inspector discussed this issue with the NPAD and raised it at the exit meeting.

No violations or deviations were identified.

5. Maintaining Occupational Exposure ALARA (IP 83750)

Total station dose for the first eight months of 1992 was 281 person-rem or 96% of the revised target of 293 person-rem for the year. During August the average daily dose was 65 mRem/day. This was slightly higher than the daily dose for July and should this trend continue the total person-rem dose should be close to that predicted for the year. The number of personnel contamination events for the same period was about 139% of the 1992 plant goal of 99. A significant amount of total outage dose (59 person-rem out of a total of 269 person-rem) was due to emergent work. This had an adverse effect on the projected dose for the outage as well as the year and may have had an impact on the number of PCIs. Auxiliary Building contaminated footage increased from 12% in July to 13% during August. This continued a trend seen throughout the year of the total contaminated footage staying just above the 1992 plant goal of 10%.

No violations or deviations were identified.

6. Meteorological Parameters (IP 84750)

The inspector reviewed the meteorological tower data availability records for the first nine months of 1992. During that time the monthly percent availability of each parameter indicated that with one exception, all parameters were available 100% of the time. The only exception occurred in February and March 1992 when the 60 meter wind speed indicator was down 5% of the time due to icing. Full calibration and maintenance services were performed in March 1992 per requirements and all instruments were performing within tolerances.

No violations or deviations were identified.

7. Gaseous Radioactive Wastes (IP 84750)

The inspector reviewed the licensee's gaseous radioactive waste management program, including: changes in equipment and procedures; gaseous radioactive waste effluents for compliance with regulatory requirements; adequacy of required records, reports, and notifications; process and effluent monitors for compliance with operational requirements and experience concerning identification of programmatic weaknesses.

The inspector reviewed the calibration records for a number of gaseous process monitors including: RJA-1113 (waste gas), RIA-0631 (condenser offgas), RIA-2325 (main steam/dump valve) and RIA-2320 (steam generator blowdown vent). The calibrations appeared to meet the TF requirements for timeliness and content and the procedures used were comprehensive and user friendly. In addition, the inspector noted that when a problem arose (questionable data points for example) the issue was discussed with management and the results of the discussion documented.

The inspector reviewed an Instrument and Calibration Engineering (I&CE) report to management on the process radiation monitors trending program and noted that from 1988 through 1991 (four years) the average availability (percentage) for newer digital monitors was 98.58% compared to 97.45% for the older analog monitors. The report did not, however, indicate whether numerous monitors were unavailable for short periods of time or a few monitors were unavailable for extended periods of time. The effluent group does not routinely track the performance of individual monitors during releases; operability records are kept by I&CE. The 3rd quarter I&CE process monitor report did indicate that the availability of monitors during releases had improved. Several monitors had been upgraded and the licensee was contemplating replacing others. Inoperable monitors were reported per the requirements of both the Technical Specifications and the ODCM (Section 9).

The inspector reviewed selected records of radioactive gaseous effluent releases including the Semiannual Radioactive Effluent Release Report for the first half of 1992. The samples collected and analyses performed appeared to comply with Technical Specifications. Total gaseous effluents released during the first half of 1992 consisted of approximately 75.33, 7.201E-4, and 3.33 curies of noble gas, radioiodine and tritium, respectively. Gaseous releases remained well below one percent of allowable annual limits and indicated continuing good fuel

performance. One incident involving an unplanned release occurred during the reporting period. On January 6, 1992, the escape airlock inner door equalizing valve stuck open for 35 minutes (LER 92-004-02) and approximately $1.34E-02$ curies of contaminated air was released. This was noted in the Semiannual Radioactive Effluent Release Report.

The inspector observed the collection of weekly particulate and iodine samples from the stack. The samples were collected using good RP practices. The samples were analyzed and the results recorded per procedure and in a timely manner.

No violations or deviations were identified.

8. Liquid Radioactive Wastes (IP 84750)

The inspector reviewed the licensee's liquid radioactive waste management program, including: liquid radioactive waste effluents for compliance with regulatory requirements; the adequacy of required records, reports, and notifications; process and effluent monitors for compliance with operational requirements and experience concerning identification and correction of programmatic weaknesses.

The inspector reviewed selected records of radioactive liquid effluent releases and the Semiannual Radioactive Effluent Release Report for the first half of 1992. During that time there were 4 radioactive liquid effluent batch releases consisting of $8.86E-05$ liters and $4.41E-03$ curies total activity (excluding tritium, gross alpha, and dissolved and entrained gases). The releases included approximately $4.36E-2$ curies of tritium. No problems were identified.

The inspector reviewed the calibration records of a number of the liquid process monitors including: RIA-0833 (service water system effluent), RIA-1049 (liquid radioactive waste effluent) and RIA-5211 (turbine building sump effluent). The calibration records appear to be complete and within the requirements of the Technical Specifications. Again, whenever a problem arose it was discussed with management and documented.

Planning and scheduling is responsible for tracking the calibration requirements for those monitors described in the Technical Specifications (TS). The effluent group gets a monthly computer printout of the calibration record for each of the monitors and is responsible for ensuring that they are calibrated per TS requirements. A review of the printout indicated that all of the monitors had been calibrated within TS time constraints. There was a concern within the group, however, that the planning and scheduling group would no longer track the calibration records once RETS requirements were incorporated into the OLM. This issue was discussed at the exit meeting.

As was the case with the gaseous monitors, the availability of liquid monitors appears to be improving. For example, since October 1992, tests have indicated that none of the TS monitor high alarm, high voltage and check source setpoints had drifted. In addition, during the third quarter of 1992 only one monitor was out-of-service for an

extended period of time (RIA-5211 (turbine building sump)) and that monitor was under consideration for replacement.

No violations or deviations were identified.

9. Effluent Reports (IP 84750)

The inspector reviewed radiological effluent analysis results and the monthly environmental monitoring reports to see if they met the regulatory requirements.

The inspector reviewed the Semiannual Effluent Release Report for the first half of 1992. The reporting requirements of the Technical Specifications were met. The report noted one unplanned release (Section 7) and one change in the ODCM. In addition, they reported that they had found that two main steam line radiation elements (RE-2323 and RE-2324) were not environmentally qualified per 10 CFR 50.49 and had declared them inoperable. The gaseous and liquid effluents, solid radioactive waste and the summary of the radiological impact on man were all reported per regulatory requirements. No problems were noted.

The inspector reviewed the in-house monthly environmental reports. No problems or deviations from the requirements were noted.

No violations or deviations were identified.

10. Environmental Monitoring (IP 84750)

The inspector visited most of the air particulate sample collecting and direct radiation (TLD) monitoring stations and several of the vegetable sample sites. All of the sites were in excellent condition and the air particulate samplers were in calibration. No problems were noted.

During the last year the licensee has observed a marked improvement in the work practices of their environmental sample collecting contractor. As a result of the problems identified in the 1990 NRC inspection report the licensee began to monitor the activities of its contractor. Their contractor analyzes as well as collects the environmental samples. Monthly surveillances (HP 10.1 and 10.10) are performed to ensure that radiological monitoring programs are substantially conducted as described in the TS. Each surveillance includes: verification that sample collection checklists are completed and signed; air sample volume is checked at each site and the results recorded; calibration dates are checked and verified against the master air meter calibration file; the monthly analytical results are compared to the TS and Lower Level of Detection (LLD) requirements and deviations in the program are submitted through the corrective action system. A review of the surveillances indicated that many of the problems identified in the 1990 NRC inspection report and the 1991 audit had been corrected.

No violations or deviations were identified.

11. Plant Tours (IP 83750, 86750)

During a tour of the auxiliary and radioactive waste buildings the inspector noted the following: postings, labeling and radiological controls in the radioactive waste and auxiliary buildings were in accordance with regulatory and licensee procedural requirements and housekeeping in the readily accessible areas of the auxiliary and radioactive buildings was very good to excellent. The inspector did find a plastic hose used to drain a contaminated valve spilling liquid onto a floor (the hose was too short to reach the contaminated drain). This problem was fixed immediately and no other problems were observed.

The inspector noted during the tour of the south radioactive waste storage building that the area radiation monitor had been moved to a location adjacent to the stored waste containers. The monitor had been attached to the wall and may not have been able to detect a spill.

The inspector also toured a contaminated material storage building located adjacent to the south radioactive waste storage building. The inspector noted that since the last inspection all of the material in the building (mostly scaffolding) had been placed in large metal boxes. This is definitely an improvement, the contaminated material had been stacked throughout the building and may have been a fire hazard.

During a tour of the east radioactive waste building the inspector noted that the anti-tip frame and its support plates had not been moved (Inspection Report 50-255/92020(DRSS)). The inspector was shown an action plan developed by the radioactive waste group that commits the licensee to moving the frame and plates indoors as soon as possible. The licensee had been unable to move the objects because the ground surrounding the frame had been wet during much of the summer and fall and they were concerned about an accident occurring during the move.

No violations or deviations were identified.

12. Exit Interview (IP 83750, 84750, 86750)

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on October 23, 1992, to discuss the scope and findings of the inspection.

During the exit interview, the inspector discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. Licensee representatives did not identify any such documents or processes as proprietary. The following items were specifically addressed at the exit meeting:

- a. The lack of training for supervisors (Section 3).
- b. The tracking of process monitors (Section 8).
- c. Observations made during the tours (Section 11).