U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-373/90017(DRSS); 50-374/90018(DRSS)

Docket Nos. 50-373; 50-374 Licenses No. NPF-11; NPF-18

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle County Station, Marseilles, Illinois

Inspection Conducted: July 30 through August 21, 1990

Inspector: R. A. Paul — Date 9/11/90

Approved By: M. C. Schumacher, Chief
Radiological Controls and
Chemistry Section — Date 9/11/90

Inspection Summary

Inspection on July 30 through August 21, 1990 (Reports No. 50-373/90017(DRSS); No. 50-374/90018(DRSS))

Areas Inspected: Routine, unannounced inspection of the licensee's radwaste/transportation program, including: organization and management controls (IP 83750, 84750), training and qualifications (IP 83750, 84750), gaseous radwaste (IP 84750), shipping and transportation (IP 83750), audits and appraisals (IP 83750, 84750), process and effluent control instrumentation (IP 84750), and air cleaning systems (IP 84750).

Results: The organizational structure, management controls, staffing levels, and upper management support for the radwaste/transportation program appeared generally adequate. The licensee's 10 CFR 61 waste generation, classification, and characterization program appears to be good. No violations were identified. Weaknesses were perceived regarding the lack of progress in correcting a previous NRC-identified station deficiency in correcting high background problems on the liquid radwaste discharge monitor (Section 3).

DETAILS

1. Persons Contacted

A. Bailey, Radwaste Shipping Coordinator
*G. Diederich, Station Manager
*T. Hammerick, Regulatory Assurance Supervisor
*D. Hieggelke, Health Physics Supervisor
K. Klotz, GSEP Coordinator
*P. Nottingham, Chemistry Supervisor
J. Schuster, Lead Chemist
*J. Shields, Auxiliary Group Leader, Technical Staff

The inspector also contacted other licensee and contractor personnel.

*Denotes those present at the onsite exit meeting on August 7, 1990.

2. General

This inspection was conducted to review the licensee's radwaste/radioactive material shipping and transportation program and liquid, gaseous and solid radwaste management programs including compliance with waste generator requirements of 10 CFR 20 and 10 CFR 61. The inspection included tours of the onsite radwaste facilities, observation of work in progress, review of representative records, and discussions with licensee and contractor personnel, independent verification of ODCM dose results, and surveys performed of low-level waste stored outside the main controlled area.

3. Licensee Action on Inspection Findings

(Closed) Unresolved Item (373/89014-04; 374/89014-04): Resolve certain regulatory concerns regarding the ventilation filter testing program. The licensee issued Action Item Record No. AIR 373-100-89-001404 to resolve the subject concerns. The resultant Action Summary, dated December 15, 1989, was reviewed by the inspector. The licensee has resolved inconsistencies between Technical Specifications and procedures regarding the specification of appropriate face velocities for charcoal sample testing and acceptance criteria for Standby Gas Treatment System filter leak testing. This matter is closed.

(Closed) Violation (373/89014-03; 374/89014-03): Failure to properly implement carbon absorber Technical Specification Surveillance Requirements into procedural requirements. Licensee corrective actions outlined in the licensee's response dated July 31, 1989, were reviewed; no problems were noted.

(Closed) Open Item (373/89014-06; 373/89014-06): Review corrective actions to prevent contaminated condensate storage water from entering the clean demineralized water system (MC). In addition to previous corrective actions taken concerning this item, the licensee has issued a work request to install check valves on all MC drops to prevent backflow and potential contamination of piping.

(Closed) Open Item (373/88009-05): Installation of additional permanent shielding around several Unit 1 containment penetrations. The modification has been completed and subsequent surveys performed at various power levels indicate the shielding modification has effectively reduced neutron flux levels.

(Closed) Open Item (373/88028-03; 374/88028-03): Review licensee's investigation of high integrity container (HIC) liner overflows. The inspector reviewed the licensee's investigation and corrective actions to prevent HIC overflows; the corrective actions appear to have been effective.

(Open) Open Item (373/89014-05; 374/89014-05): Reduce high background levels on liquid radwaste discharge monitor. The licensee attempted to correct the problem by replacing the sample chamber with a especially coated sample chamber, and a major design modification; neither has been effective. The licensee is continuing to look at other options and expects to resolve this mater in the near future. This matter was discussed with the plant manager and remains open.

(Open) Open Item (373/89014-01; 374/89014-01): Followup on problems identified in station QA surveillance QAS 1-88-28. The surveillance concern relates to undesirable chemistry (concentrator waste tank) sampling facilities. The licensee has approved a modification to install sampling cylinders which would allow isolating the sample in the cylinder after recirculation. The cylinder would be removed, a spare cylinder would be installed, and the entire sample piping would be flushed. The modification is scheduled for early 1991, and the inspectors will review this matter during a future inspection.

(Closed) Open Item (373/89024-01; 374/89024-01): Weaknesses identified during suppression pool work in which workers received a small intake of radioactive material. In a letter to Region III, dated April 3, 1990, the licensee outlined their review of the weaknesses and described the corrective actions to prevent recurrence. The inspector reviewed these actions and found them acceptable.

(Closed) Violation (373/900013-01; 373/90014-01): Failure to perform an adequate evaluation of radiological conditions associated with floor contamination before allowing workers to enter radwaste tank rooms. LaSalle station radiation protection procedure has been revised to include additional requirements for extremity monitoring when dose rates

exceed 100 mrem/hour and with the extremity submersed in the source. The licensee has instructed all radiation protection staff on the procedural change, acceptable survey techniques and required documentation. The inspector verified the procedural changes, the additional training, and observed workers involved in the radwaste tank cleanup project were wearing required whole body and extremity dosemitry.

4. Organization and Management Controls (IP 83750, 84750)

The inspector reviewed the licensee's organization and management controls for the radwaste and shipping transportation programs including organizational structure, staffing, delineation of authority, effectiveness of procedures and other management techniques used to implement the program, and experience concerning self-identification and correction of program implementation weaknesses.

The overall management of the solid, liquid, and gaseous radwaste and radwaste transportation programs is described in Inspection Report Nos. 50-373/89012 and 50-374/89014. The only significant change in the programs was the appointment of a new Rad Waste Coordinator. The organization and management controls for the radwaste/transportation programs appear adequate.

No violations or deviations were identified.

5. Training and Qualification (IP 83750, 84750)

The inspector reviewed training and qualifications related to the licensee's radwaste/transportation programs including changes in responsibilities, policies, programs and methods, and qualifications of personnel. The training provided to station personnel responsible for DAW collection/processing, waste classification, and manifest and shipment preparation appears acceptable. There have been no significant changes in the training program for radwaste personnel since Inspection Reports No. 50-373/89014; 50-374/89014.

No violations or deviations were identified.

6. Gaseous Radioactive Waste (IP 84750)

The inspector reviewed the licensee's gaseous radwaste management program, including; changes in equipment and procedures; gaseous effluent release records and sampling/analysis data for 1989 and effluent summary data for 1990 to date. There have been no significant changes in the gaseous effluent release paths, control and filtration mechanisms, and effluent sampling and quantification methods since Inspection Reports No. 50-373/88024; 50-374/88023. Sampling frequency and analysis methods appear to meet technical specification requirements; no problems were noted.

In 1989, about 1100 curies of noble gas and 5.6E-3 curies of iodine-131 were released in gaseous effluents from both units combined. The majority of noble gas release occurred during the third quarter 1989 before the licensee corrected fuel cladding problems identified in September 1989. Using the Offsite Dose Calculation Manual (ODCM) methodology, the licensee calculated maximum whole body doses to an individual beyond the site boundary from the 1989 releases of 1.5E-2 mrem for the year. A comparison with 1988 gaseous effluent data indicates that the amount of noble gas released decreased significantly. No significant increase in the primary coolant dose equivalent iodine-131 resulted from the cladding problem.

No violations or deviations were identified.

7. Liquid Radioactive Waste (84750)

The inspector reviewed the licensee's liquid radwaste management program and reviewed selected June 1989 radioactive liquid batch release sampling and analysis records and liquid effluent summary and trending data from 1989 to date. The sampling and analysis performed appear to comply with technical specification requirements. These records indicated that releases were well within regulatory limits. The inspector also performed independent calculations that verified that licensee calculated doses from releases were consistent with the methods in the licensee's ODCM. Station Procedure No. LCP-140-07 governing liquid effluent releases was reviewed and the adequacy of release rate, MPC fraction, and monitor alarm setpoint calculation verified; no significant problems were identified.

The radioactive effluent release path ways and the licensee's method for determination of radwaste discharge flow rates and effluent monitor alarm setpoints remain as previously described in Inspection Reports No. 50-373/88024; 50-374/88023 and 50-373/89014; 50-374/89014.

In 1989, there were 20 liquid radioactive effluent batch release (both units combined) totaling about 0.4 curies of gross beta-gamma activity (excluding tritium) and 1 curie of tritium. In 1988 there were 48 liquid batch releases with about 11 curies of gross beta-gamma activity from both units combined; no liquid batch releases have been made in 1990 to date. The decrease in batch releases and in liquid effluent activity released in 1989 was primarily the result of less total organic compounds (TOTs) in the waste liquid effluents. The licensee calculated whole body and organ (GI-LLI) dose from liquid effluents in 1989 to an individual beyond the site boundary of 4.4E-5mrem and 2.75E-4 mrem, respectively.

No violations or deviations were identified.

8. Solid Radwaste and 10 CFR 61 (IP 84750)

The inspector reviewed the licensee's solid radioactive waste management program including changes to equipment and procedures, processing, control and storage of solid wastes adequacy of implementing procedures to properly classify and characterize waste, prepare manifests, and mark packages; and overall performance of the process control and qualify assurance programs. The inspector also observed the DAW compaction, waste stream solidification and dewatering facilities in the radwaste truck bay.

Solid radioactive waste consists mainly of spent resin, filter sludge, evaporator bottoms, dry active waste (DAW) and contaminated metal/scrap. In 1989, the licensee shipped about 19,000 cubic feet of solidified/dewatered waste to low-level waste burial sites, and about 17,000 cubic feet of DAW. In 1990 through June, radwaste burial volumes were about 4400 cubic feet of solidified/dewatered products and about 3500 cubic feet of DAW.

Through June 1990, the licensee had an inventory of about 19,000 cubic feet of contaminated wastes awaiting further processing. About 50% of it was waste water and sewage treatment drying bed dirt, and about 25% was low level sump sludges and oil sludges. Most of this inventory is stored in the oil separator building, quonset huts, warehouses, and the radwaste building; about 40% is stored near the waste water treatment facility (WWTF). Licensee representatives stated their intention to significantly reduce the backlog of radioactive inventory over the next year. All of the storage facilities are located within the licensee's controlled area with the exception of the (WWTF), which is located north of the controlled main plant area. Tours of the storage facilities indicated they were properly posted and controlled. The inspector noted that the fence around the WWTF had recently been installed in response to a licensee audit finding.

The licensee's solid waste processing has not significantly changed since Inspection Reports No. 50-373/89014; 50-374/89014. The Stock Equipment cement solidification system is still used for solidification of evaporator bottoms.

The inspector reviewed the licensee's revised Process Control Program (PCP) procedure LAP-200-6 "LSCS PCP" and T/S revision LOSR-89-0389. The revisions were made in accordance with NRC Generic Letter 89-01 "Implementation of Programmatic Controls for Radiological Effluent T/S in the Administrative Controls Section of the T/S and the Relocation of Procedural Details of RETS to the ODCM or to the PCP." No problems were identified with the revisions.

The inspector reviewed the licensee's solid radwaste program for compliance with waste generator requirements of 10 CFR 20.311, 61.55 and 61.56. The licensee's waste classification program has not significantly changed since described in Inspection Reports No. 50-373/89014; 50-374/89014. Waste classification is accomplished in accordance with Station Procedure LRP-1520-8 which is consistent with regulatory requirements. Waste manifests for radwaste shipments made in 1990 were selectively reviewed and appear to meet 10 CFR 20.311 requirements.

The licensee's program for waste classification, form and characterization appears to be properly implemented. It appears no significant problems have been identified by waste burial inspectors.

No violations or deviations were identified.

9. Transportation of Radioactive Material and Radwate (IP 83750)

The inspector reviewed the licensee's transportation of radioactive materials program including implementing procedures, shipment compliance with regulatory requirements, and required records, reports, shipment documentation, and notification.

There has been no significant change in the type, class and coordination of radioactive material shipments since described in Inspection Reports No. 50-373/89014; 50-374/89014. No problems were identified during a review of waste manifests, radiation surveys, labeling, placarding, notifications, and of QA/QC inspections. There were no transportation incidents.

No violations or deviations were identified.

10. Audits and Appraisals (IP 83750, 84750)

The inspector reviewed Licensee Quality Assurance Audits 01-89-30 and 01-89-51 conducted in November and December, 1989, respectively. The purpose of the audits were to verify that the station and Westinghouse Radiological Services, Inc. are implementing applicable QA programs for solid radwaste. The audits appeared to be a satisfactory QA review of compliance with regulatory requirements. The inspector noted that although no significant problems/concerns were identified in the audit, two findings in each audit were made; acceptable corrective actions were taken.

No violations or deviations were identified.

11. Process and Effluent Control Instrumentation (IP 84750)

The inspectors selectively reviewed records for gaseous and liquid effluent control instrumentation calibrations and procedures, surveillances and alarm setpoint determinations, and discussed monitor operability and calibration methodology with the licensee. There have been no significant changes in set point and calibration methodology since described in Inspection Reports No. 50-373/87020; 50-374/87020. The most recent calibrations of the gaseous and liquid process waste monitors appears to have been performed in accordance with procedural requirements; no significant problems were identified.

No violations or deviations were identified.

12. Air Cleaning Systems (IP 84750)

The inspectors reviewed surveillance records for the air cleaning systems specified in the technical specifications (the standby gas treatment, and control room and auxiliary electric equipment room emergency filtration). Also reviewed was required in-place testing of HEPA filters and iodine adsorbers, and laboratory tests on activated carbon samples.

The in-place testing criterion for DOP testing of HEPA filters and for freon testing of charcoal adsorbers is no more than one percent penetration. The laboratory test criteria for carbon sample removal efficiency for radioactive methyl iodine is equal to or greater than 90 percent. The tests were performed at the required frequency by a vendor; the results met or exceeded the performance requirements specified in the technical specifications.

No violations or deviations were identified.

13. Significant Licensee Meeting

The licensee's response to findings and recommendations of the ALARA Team Inspection (Report Nos. 373/90008; 374/90009) were discussed by licensee and Region III office on August 21, 1990. The licensee representatives indicated no significant disagreement with the report and noted that it accurately reflected the station's conditions, most of which were already known by the licensee. Among the significant corrective actions in progress were increased general worker and mockup training, upgrading the quality of RWP and ALARA procedures, improvements in the job/dose tracking and trending program, and improving the qualifications of the ALARA staff.

Licensee representative also noted that in response to NRC inspector observations, the number of exit points from radiological controlled area (RCA's) had been reduced from 27 to 6. They also stated the station exposure goal for the most recent outage was exceeded by about 60 person-rem owing mainly to work hours and dose rates higher than expected for several jobs. As a result, the 1990 station goal of 875 person rem is expected to be exceeded by a like amount but will still be lower than experienced in 1989 (1386 person-rem) and 1988 (2500 person-rem). Licensee representatives reported that cleanup and repairs of radwaste tank rooms was still on schedule and is expected to meet the projected dose goals.

NRC representatives acknowledged the presentation and stated that the licensee's progress in these areas would continue to be reviewed by regional inspectors.

14. Exit Interview

The scope and finding of the inspection were reviewed with licensee representatives (Section 1) at the conclusion of the inspection on August 7, 1990. The inspector discussed the open item concerning the high background problems with the liquid waste monitor (Section 3), the amount of low-level waste on site and the current program to ship it to burial sites (Section 8), the status and inspector observations concerning the radwaste tank cleanup project (Section 13), and the recent actions taken to correct a regulatory problem concerning control of low-level waste (Section 8).

During the exit interview, the inspector discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. Licensee representatives did not identify and such documents or processes as proprietary.