

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-373/92012(DRSS); 50-374/92012(DRSS)

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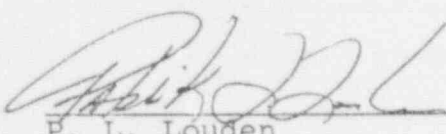
Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle County Station, Marseilles, Illinois


Inspection Conducted: May 11 through 15, 1992

Inspector:


P. L. Loudon


Date

Approved By:


William Snell, Chief
Radiological Controls Section


Date

Inspection Summary

Inspection on May 11 through 15, 1992 (Report Nos. 50-373/92012(DRSS); 50-374/92012(DRSS))

Area Inspected: Routine unannounced inspection of the licensee's radiation protection (RP) program, including audits and appraisals (IP 83750); training and qualifications (IP 83750); external exposure controls (IP 83750); source term reduction efforts; post outage results of the Unit 2 spring outage (L2RO4); control of radioactive materials and contamination (IP 83750); and observations from general plant tours.

Results: No violations or deviations were identified. The organizational structure, management controls, staffing levels, and upper management support of the radiation protection program continues to improve; the stability and experience level of the radiation protection staff is good. The licensee's audit program for self-identification and resolutions of problems was assessed to be a station strength. The station's approach to contaminated area control was assessed to be consistent with ALARA principles. One open item was initiated to track the station's performance in source term reduction.

DETAILS

1. Persons Contacted

Licensee staff

- * T. Benoit, Nuclear Quality Programs, Corporate
- * D. Carlson, Regulatory Assurance, NRC Coordinator
- * D. Cooke, Radiation Protection Technician
- * G. Diederich, Station Manager
- * D. Hieggelke, Health Physics Services Supervisor
- J. Houston, Emergency Preparedness Coordinator
- * W. Huntington, Superintendent, Technical Services
- C. Kelley, ALARA Analyst/Coordinator
- P. Knoll, Contamination Control Coordinator
- * W. Luett, Operational Lead Health Physicist
- * M. Page, Radiation Protection Technician
- * J. Schmeltz, Superintendent, Production
- * J. Terrones, Inspector, Nuclear Quality Programs
- * D. Trager, Training Department
- * J. Walkington, Station Services Director
- * J. Watson, Nuclear Licensing Engineer, Corporate

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- * D. Hills, Senior Resident Inspector
- * W. Snell, Chief, Radiological Controls Section

Illinois Department of Nuclear Safety

- * J. Roman, Resident Inspector

The inspector also interviewed other licensee personnel in various departments in the course of the inspection.

- * Indicates those present at exit meeting on May 15, 1992.

2. Audits and Appraisals (IP 83750)

The inspector reviewed recently completed audits and field observations performed by the station Nuclear Quality Programs (NQP) staff of the radiation protection (RP) program.

The current NQP staff performing RP audits consists of six auditors, two of which were formerly with the station's RP or chemistry department. The auditing staff appeared to be experienced and well qualified to perform RP audits.

In addition to the normally scheduled audits of the RP program, the NQP group performs field observation on a

regular basis. The focus of these observations is to monitor RP and worker performance with respect to proper radiological controls practices. As of May 1992, 170 field observations had been performed in the area of RP. If performance is found to be marginally acceptable or unacceptable, the responsible supervisor is informed of the observation. Recurring problems are trended and tracked by the NQP group to provide indicators for areas which may warrant more frequent reviews or a more detailed audit. Licensee staff indicated that the program appears to be effective in identifying isolated problem areas in the early stages of development before the problem expands into a generic station-wide problem. The staff also indicated that supervisory station personnel were generally responsive to the field observations of any unacceptable RP activities.

The inspector reviewed a recently completed audit of the RP program. Audit # 01-92-14 "Radiation Protection", was reviewed and was found to contain substantive findings and appeared to be thorough in nature. NQP staff indicated that a good working relationship existed between their staff and the RP department, and that audit findings were corrected in a timely manner. Overall, the inspector found the NQP staff and field observation program to be a station strength.

No violations or deviations were identified.

3. Training and Qualifications (IP 83750)

The inspector reviewed the Radiation Protection Technician (RPT) continuing training program and current RPT training records. Radiological events detailed in past inspection reports expressed possible concerns with the quality of continuing training RPTs were receiving at the station. The inspector reviewed the current program and new modules introduced to address possible problem areas.

New station RPTs are provided initial training at the licensee's Production Training Center (PTC) at the Braidwood site. This training is a 14 week curriculum which covers radiation protection and health physics fundamentals. This training provides the foundation for the RPTs working knowledge of the RP field which is then supplemented by a 3 week program at the station which includes on-the-job-training sign offs requiring about six additional weeks to complete. The inspector discussed, with training staff and students, the quality of the training and the feedback the training department was receiving concerning the content of the program. All individuals expressed that other than minor concerns with the scheduling of the program the technical content and field exercises were good, and all past students of the program interviewed felt that they were

well prepared for their duties as an RPT. Training staff concurred with the student's observations and indicated that positive and negative feedback received was reviewed and implemented into the program when possible. A review of lesson plans indicated that the RPTs were receiving adequate training in the areas of industry events, plant systems, new instrumentation, and specific events occurring at LaSalle station.

As a corrective action to possible root causes of previously identified radiological events, involving questioning attitudes of technicians and technicians performing their own self checking; the licensee has initiated a training module which specifically addresses the appropriate approach to job coverage and RPT performance. The pilot presentation had just concluded and initial feedback was very positive from the first group of students. The training module included items such as RPT roles and responsibilities, elements which go into job planning, "tools" for the job, and a practical exercise which reviews a job and the students discuss what items would be a concern with respect to their responsibilities in performing job coverage. The inspector indicated at the exit meeting that this module appeared to be a good inclusion to the RPTs continuing training and would monitor the results of this additional training as more RPTs receive this module.

No violations or deviations were identified.

4. External Exposure Control (IP 83750)

The inspector reviewed selected standing and special Radiation Work Permits (RWPs) for appropriateness of the radiation protection requirements based on work scope, location, and radiological conditions. No problems were identified.

In response to concerns with adequate information being provided within the RWP, the RP department instituted the addition of a log sheet which is placed in the RWP folder and can be reviewed for updates, surveys/work yet to be done, or any other relevant information deemed necessary to inform workers/technicians using the RWP of the most current conditions in the area.

No violations or deviations were identified.

5. Control of Radioactive Materials and Contamination, Surveys, and Monitoring (IP 83750)

At the time of the inspection, the licensee had recorded 73 personnel contamination events (PCEs) for the year. This

number is well below the projected PCE goal of 140 for this timeframe following the Unit 2 refuel outage. Contaminated area controlled at the time of the inspection was about 37% of the radiologically controlled area (RCA), and decontamination efforts were still ongoing to reclaim areas controlled during the Unit 2 outage. As discussed in a previous inspection report (ID 50-373/92006(DRSS); 50-374/92006(DRSS)), the large reported percentage of contaminated area is partially due to the conservative nature in which the licensee establishes contaminated areas. LaSalle station posts contaminated areas when any contamination is detectable. This varies from other stations who post at a set limit (e.g. 1,000 dpm/100cm²). An additional factor in the large percentage is the various areas included in the calculation of the reported number. These parameters also vary from station to station thus somewhat skewing comparative numbers. During the previously referenced inspection, the inspector accompanied an operator on his shiftly rounds to determine how significant an impediment contaminated areas were to the performance of the rounds. The conclusion was that based on one full dressout and three minimal (gloves and booties) dressouts that the impact was minimal. The inspector revisited this issue to determine dose rates in the larger areas and attempted to determine person-rem costs to reclaim such areas. Based on walkdowns and discussions with licensee staff, a rough estimate to decontaminate a significant portion of the controlled areas would expend about 50 to 70 person-rem for the initial cleaning. An additional 15 to 20 person-rem would be required each year to maintain these areas clean. After reviewing these rough calculations, and considering the higher than average station doses recorded during recent years, the inspector informed licensee management that their current policy of conservative postings and leaving some areas controlled from an ALARA standpoint was understood, and that it appeared that source term reduction to eliminate/reduce the dose rates in some of these areas should be a major focus with decontamination efforts to follow. These observations were discussed at the exit meeting.

No violations or deviations were identified.

6. Maintaining Occupational Exposures ALARA (83750)

a. Source Term Reduction

The inspector reviewed and discussed with licensee staff the current source term reduction efforts ongoing at LaSalle Station.

In response to higher than anticipated dose rates

encountered during the Unit 2 outage, the licensee formed a Source Term Reduction Task Force to evaluate the origin of the dose rates and develop plans and recommendations to reduce the overall station source term. At the time of the inspection, the task force had concluded several meetings and was in the process of finalizing a report which included recommendations concerning plant operations and decontamination efforts. The inspector noted from plant tours, that there appeared to be a large number of shielded hot spots/hot pipes throughout the plant. Historical data indicated that the current number of tracked hot pipes (103) was on an increasing trend, and that while some hydrolazing efforts were performed no hot spots/pipes had been eliminated during 1992. The current schedule to place hydrolaze ports on hot piping was at a rate of about 2 per year and that some ports were added during the Unit 2 outage. However, hydrolazing of some piping performed during the outage was assessed to be only moderately successful. The station does not have a dedicated in house crew to perform the hydrolazing, therefore, it is only accomplished during outage times when contracted crews are on site. The inspector discussed with licensee management the current plan for additional hydrolazing and pipe flushings, and indicated that based on the apparent increasing trend the number of hot pipes throughout the station that the issue warranted attention. The inspector indicated at the exit meeting that the station's progress in the area of source term reduction would continue to be monitored. (Item 373/92012-01; 374/92012-01)

b. Unit 2 Outage Results

The inspector reviewed and discussed with licensee staff post job analyses for work accomplished during the Unit 2 spring 1992 outage (L2R04). Accumulated dose for the outage was 544 person-rem versus an estimated goal of 442. While on a whole many job estimates were accurate, a few specific evolutions could be traced as main contributors to the higher than projected doses. General area dose rates in the under vessel area and in Residual Heat Removal system rooms were approximately 25% higher than in prior outages. As detailed in an earlier inspection (IR 373/92006; 374/92006) the station performed a soft shutdown of the reactor, but did not realize the planned dose savings benefit. A hard scram in the fall of 1991 was assessed to be the main contributor to the loss of the soft shutdowns effectiveness. Specific jobs which ran somewhat higher than anticipated included vessel disassembly/assembly, local leak rate testing (LLRT),

valve maintenance as a result of LLRT failures, removal and installation of safety/relief valves (SRVs), control rod drive repairs, and miscellaneous support work. Post job briefings identified several problem/improvement areas for each job and lessons learned were still in the process of being developed for use during future outages. The inspector noted that based on reviews of selected draft post job analyses, the reports contained thorough reviews of a job's positive and negative highlights, and lessons learned were concise and extensive. The inspector discussed these reviews at the exit meeting and indicated that they appeared to be good quality reports and contained many good recommendations to consider during future outages. Overall, the inspector noted good performance by the station's ALARA staff.

No violations or deviations were identified.

7. Tours

During the course of the inspection the inspector made several tours of the RCA. Other than a few minor posting inconsistencies and maintaining tools inside of contaminated areas, no problems were noted. All minor discrepancies brought to the attention of licensee staff by the inspector were immediately corrected.

As discussed in the last inspection report (IR 373/92006;374/92006), the inspectors observed some workers exiting contaminated areas and donning their personal clothing before performing a whole body frisk. These observations were discussed with station management during the exit meeting of the above referenced inspection. During this inspection the inspector did not observe any workers violating the established procedure for frisking, and discussions with licensee staff and resident inspectors indicated that other than a few occurrences immediately following the earlier observations, that workers appeared to be performing whole body frisks before donning personal clothing as required.

No violations or deviations were identified.

8. Exit Meeting

The scope and findings of the inspection were discussed with licensee representatives (Section 1) at the conclusion of the inspection on May 15, 1992. Licensee representatives did not identify any documents or processes reviewed during the inspection as proprietary. Specific items discussed at the meeting were as follows:

- Nuclear Quality Program's field observation/surveillance efforts as being a station strength.
- Modules added to the radiation protection technician continuing training program to emphasize RPT performance and responsibilities.
- Source Term Reduction Task Force items and the apparent increasing trend of hot spots and pipes in the plant. An open item was initiated to track the station's performance with respect to source term reduction.
- The good quality of the ALARA post job reviews of work performed during L2R04.