

September 20, 2000

Mr. Oliver D. Kingsley  
President, Nuclear Generation Group  
Commonwealth Edison Company  
ATTN: Regulatory Services  
Executive Towers West III  
1400 Opus Place, Suite 500  
Downers Grove, IL 60515

SUBJECT: LASALLE - NRC INSPECTION REPORT 50-373/2000015(DRS);  
50-374/2000015(DRS)

Dear Mr. Kingsley:

On September 1, 2000, the NRC completed an inspection at your LaSalle Nuclear Generating Station, Units 1 and 2. The results of this inspection were discussed on September 1, 2000, with Mr. J. Meister and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, facility walkdowns, and interviews with personnel. Specifically, the inspection reviewed aspects of both your occupational and public radiation safety programs, and focused on radiation monitoring instrumentation, radiological environmental monitoring, and radioactive material controls. Additionally, performance indicator data reported for the public radiation safety cornerstone and for the reactor coolant system specific activity component of the mitigating systems cornerstone was verified for accuracy.

Based on the results of this inspection, there were no findings identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/imdex.html> (the Public Electronic Reading Room).

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

***/RA/***

Gary L. Shear, Chief  
Plant Support Branch  
Division of Reactor Safety

Docket Nos. 50-373; 50-374  
License Nos. NPF-11; NPF-18

Enclosure: Inspection Report 50-373/2000015(DRS);  
50-374/2000015(DRS)

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services  
C. Crane, Senior Vice President, Nuclear Operations  
H. Stanley, Vice President, Nuclear Operations  
R. Krich, Vice President, Regulatory Services  
DCD - Licensing  
C. Pardee, Site Vice President  
J. Meister, Station Manager  
F. Spangenberg, Regulatory Assurance Supervisor  
M. Aguilar, Assistant Attorney General  
State Liaison Officer  
Chairman, Illinois Commerce Commission

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-373; 50-374  
License Nos: NPF-11; NPF-18

Report No: 50-373/2000015(DRS); 50-374/2000015(DRS)

Licensee: Commonwealth Edison Company

Facility: LaSalle Nuclear Generating Station, Units 1 and 2

Location: 2605 N. 21<sup>st</sup> Road  
Marseilles, IL. 51341-9756

Dates: August 28 - September 1, 2000

Inspectors: Wayne Slawinski, Senior Radiation Specialist  
John House, Senior Radiation Specialist

Approved by: Gary L. Shear, Chief  
Plant Support Branch  
Division of Reactor Safety

# NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

## Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

## Radiation Safety

- Occupational
- Public

## Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

## SUMMARY OF FINDINGS

IR 50-373/2000015(DRS), IR 50-374/2000015(DRS), on 8/28/00-9/1/00; Commonwealth Edison Company; LaSalle Nuclear Generating Station; Units 1 and 2. Radiation safety specialist report.

The inspection was conducted by two regional senior radiation specialists. There were no findings identified during this inspection.

## Report Details

Summary of Plant Status: Both units operated at or near 100 percent power throughout the five day inspection period.

### **2. RADIATION SAFETY**

Cornerstone: Occupational Radiation Safety

#### 2OS3 Radiation Monitoring Instrumentation

##### .1 Tests and Calibrations of Radiation Monitoring Instrumentation

###### a. Inspection Scope

The inspectors verified that radiological instrumentation associated with monitoring transient high and/or very high radiation areas, instruments used for remote emergency assessment, and portable radiation detection instruments used for job coverage of high radiation area work had been calibrated consistent with industry standards and in accordance with station procedures. Also, the inspectors reviewed the licensee's alarm setpoints for selected area radiation monitors (ARMs) and continuous air monitors (CAMs), and verified that the setpoints were established consistent with the Updated Final Safety Analysis Report and Technical Specifications. Specifically, the inspectors selectively reviewed calibration procedures and calendar year 2000 calibration and functional test records for the following radiation monitoring instrumentation:

- Unit 1 & Unit 2 Reactor Building Exhaust Plenum Radiation Monitors
- Unit 1 Post Accident Monitoring Containment Gross Gamma Radiation Monitor
- Unit 2 Drywell Air Particulate and Noble Gas CAM
- Refuel Floor High Range ARM
- RSO-5 Portable Survey Meter
- MG Telepole Portable Survey Meter

Additionally, the inspectors reviewed use and surveillance procedures and calendar year 2000 calibration records for selected radiation monitors used for assessment of internal exposure, and those instruments utilized for surveys of personnel and equipment prior to release from the radiologically controlled area. The inspectors verified that these instruments were tested and calibrated properly, consistent with procedures. These instruments included:

- Canberra Fastscan Whole Body Counter System
- PM-7 Portal Monitor
- Small Article Monitor
- IPM 7/8 Personnel Contamination Monitor

The inspectors observed radiation protection technicians complete in-field source tests of a portal monitor, a small article monitor and a personnel contamination monitor, to ensure that the radiation protection staff adequately tested instrument response as

specified in station procedures. The inspectors also evaluated portable survey instruments stored in the licensee's instrument calibration facility and verified that those instruments designated "ready for use" had current calibrations, and were operable and in good physical condition. The inspectors discussed the source check procedure and observed radiation protection staff source check portable radiation survey instruments, and verified that those tests were completed in accordance with procedures using appropriate radiation sources.

b. Findings

There were no findings identified.

.2 Respiratory Protection

a. Inspection Scope

The inspectors reviewed aspects of the licensee's respiratory protection program for compliance with the requirements of Subpart H of 10 CFR Part 20, and to ensure that self-contained breathing apparatus (SCBA) were properly maintained and stored. The inspectors also verified that selected emergency response personnel required to use SCBAs were trained and qualified. Specifically, the inspectors reviewed monthly SCBA inspection records for January through July 2000, for equipment maintained for emergency use in various areas of the plant, and reviewed respiratory protection equipment use and maintenance procedures to verify consistency with regulatory requirements. The inspectors completed walkdowns of the SCBA air bottle filling station in the turbine building and SCBA storage locations in the control room, the operations support center and in the turbine building, and inspected numerous SCBA units to assess material condition and to verify that air bottle hydrostatic tests were current. The inspectors also verified the licensee's capability for refilling and transporting SCBA bottles to the control room and support locations in the plant. Additionally, the inspectors reviewed respiratory protection training lesson plans and worker qualification records, and confirmed that station fire brigade and control room personnel were trained and qualified for SCBA use.

b. Findings

There were no findings identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed: (1) the results of a focus area self-assessment of radiation monitoring instrumentation completed by the radiation protection (RP) staff just prior to the inspection; (2) RP self-assessment reports for the fourth quarter 1999 and the first



and second quarters of 2000, completed as part of the licensee's ongoing self-assessment program; and (3) the licensee's problem identification form (PIF) database and a variety of individual PIFs related to instrumentation and the respiratory protection program generated since 1999. The inspectors evaluated the effectiveness of the self-assessment process to identify, characterize and prioritize individual problems and repetitive issues and trends, and to implement corrective actions to achieve lasting results.

b. Findings

There were no findings identified.

Cornerstone: Public Radiation Safety

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs

.1 Review Of Environmental Monitoring Reports and Data

a. Inspection Scope

The inspectors reviewed the most current (1999) Annual Environmental Monitoring Report submitted by the licensee, along with monthly environmental monitoring progress reports for the first and second quarters of 2000. The inspectors also reviewed changes to the offsite dose calculation manual (ODCM) related to environmental monitoring, sampling location commitments, monitoring and measurement frequencies, land use census, inter-laboratory comparison program, and data analysis. These reviews were conducted to verify that the radiological environmental monitoring program (REMP) was implemented as required by Technical Specifications and the ODCM, and that any changes did not affect the licensee's ability to monitor the impacts of radioactive effluent releases on the environment. The inspectors also reviewed the ODCM to verify that environmental monitoring stations were located consistent with the Updated Final Safety Analysis Report and NRC guidance. The most recent audit of the licensee's vendor laboratory for environmental monitoring was reviewed to verify that the vendor laboratory fulfilled the requirements of NRC Regulatory Guides 4.15 and 4.13.

b. Findings

There were no findings identified.

.2 Walkdowns Of Radiological Environmental Monitoring Stations and Meteorological Tower

a. Inspection Scope

The inspectors conducted a walkdown of six of the nine environmental air sampling stations and twelve of the 84 thermoluminescence dosimeter (TLD) monitoring stations to determine whether they were located as described in the ODCM and to assess the equipment material condition and operability. Records were reviewed and instrument readouts were observed to verify that the meteorological instruments were operable,

calibrated, and maintained in accordance with regulatory guidance and the licensee's procedures. Meteorological data readouts and recording instruments in the control room and at the tower were verified operable and compared to determine if there were any line loss differences.

b. Findings

There were no findings identified.

.3 Review Of REMP Sample Collection and Analysis

a. Inspection Scope

The inspectors accompanied a vendor technician to observe the collection and preparation of a variety of environmental samples, including surface water, air filters (particulate), and charcoal cartridges (iodine) to verify the sampling was representative and that the sampling techniques were sound and in accordance with station procedure. The inspectors observed the technician complete air sampler maintenance field checks, and confirmed that the checks were conducted in accordance with procedure. Selected air sampler calibration and maintenance records for 1999 and 2000 were reviewed to verify that the equipment was being properly maintained. Additionally, the inspectors reviewed the most recent results of the vendor laboratory's inter-laboratory comparison program and quality assurance program to verify that the vendor was capable of making adequate radio-chemical measurements.

b. Findings

There were no findings identified.

.4 Unrestricted Release of Material From the Radiologically Controlled Area

a. Inspection Scope

The inspectors evaluated the licensee's controls, procedures and practices for the unrestricted release of material from radiologically controlled areas. Specifically, the inspectors verified that: (1) radiation monitoring instrumentation used to perform surveys for unrestricted release of materials was appropriate; (2) instrument sensitivities were consistent with NRC guidance contained in Inspection and Enforcement (IE) Circular 81-07 and Health Physics Positions in NUREG/CR-5569 for both surface contaminated and volumetrically contaminated materials; (3) criteria for survey and release conformed to NRC requirements; (4) licensee procedures were technically sound and provided clear guidance for survey methodologies; and (5) radiation protection and chemistry staffs adequately implemented station procedures. In addition, the inspectors verified that the licensee identified its plant radionuclide mix and adequately assessed the impact of difficult to detect contaminants (such as those that decay by electron capture) relative to its unrestricted release program.

b. Findings

There were no findings identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed the results of the licensee's most recent REMP self-assessment performed during the second quarter of 1999, and the PIF database, to determine whether identified problems were entered into the corrective action program and timely resolved. The inspectors also reviewed the licensee's pre-inspection readiness evaluation of the REMP, which evaluated the current state of the program and the completion status of the previous self-assessment items.

b. Findings

There were no findings identified.

**4. OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors verified that the licensee had accurately assessed and reported the PIs for the public radiation safety cornerstone and for the reactor coolant system specific activity component of the mitigating systems cornerstone, consistent with the criteria specified in Nuclear Energy Institute (NEI) 99-02, Revision 0, "Regulatory Assessment Performance Indicator Guideline." Specifically, the inspectors selectively reviewed gaseous effluent release data and associated offsite dose information for 1999 through June 2000, and discussed gaseous effluent release calculation methods with a member of the RP staff. No liquid effluents were released from the plant in 1999 or 2000 to the date of the inspection. The inspectors reviewed the licensee's chemistry sample analysis results for maximum dose equivalent iodine-131 for the three and four quarters preceding the inspection for Unit 1 and Unit 2, respectively. Also, the inspectors reviewed the licensee's assessments and PIF database to determine if problems with the collection, assessment or reporting of PI data occurred, and interviewed members of the licensee's staff responsible for data acquisition and analysis.

Additionally, the inspectors observed a chemistry technician collect and analyze a primary system sample to ensure procedures were followed, and to verify that the methodology for coolant activity determination was adequate.

b. Findings

There were no findings identified.

#### 4OA6 Management Meetings

##### Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Meister and other members of licensee management and staff at the conclusion of the inspection on September 1, 2000. A follow-up telephone conversation was held with the chemistry supervisor on September 12, 2000, to discuss minimum detectable activity analysis of waste oil. The licensee acknowledged the findings presented. No proprietary information was identified as having been received by the inspectors.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Bost, Engineering Manager  
L. Bryant, Instrumentation Coordinator  
J. Burns, Chemistry Manager  
J. Estes, Radiation Protection Engineering Supervisor  
T. Gierich, Work Management Manager  
R. Gilbert, Operations Manager  
A. Howard, Emergency Preparedness Coordinator  
S. Kovall, Health Physicist  
J. Kutches, Training Department  
C. Maney, Operations Support Staff  
J. Meister, Station Manager  
M. Pearson, Unit Chemist  
P. Quealy, Radiation Protection Technical Support Supervisor  
J. Rappeport, Chemistry Supervisor  
M. Rumick, Radiation Protection Programs Coordinator  
M. Schiavoni, Maintenance Manager  
S. Shields, Regulatory Assurance  
F. Spangenberg, Regulatory Assurance Manager  
S. Taylor, Radiation Protection Manager  
M. Wolfe, Health Physicist

Contractor

A. Lewis, REMP Technician

NRC

E. Duncan, Senior Resident Inspector

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

None

Discussed

None

## LIST OF BASELINE INSPECTION PROCEDURES PERFORMED

The following inspectable-area procedures were used to perform this inspection. Documented findings are contained in the body of the report.

|             | <u>Inspection Procedure</u>   | <u>Report Section</u> |
|-------------|---|-----------------------|
| No. 71121.3 | Radiation Monitoring Instrumentation  | 2OS3                  |
| No. 71122.3 | Radiological Environmental Monitoring Program<br>and Radioactive Material Control Program | 2PS3                  |
| No. 71151   | Performance Indicator Verification  | 4OA1                  |

## PARTIAL LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings.

### Procedures

OP-AA-101-701, Revision 1, NRC Active License Maintenance.  
OP-AA-201-005, Revision 1, Fire Brigade Qualifications.  
LRP-6021-9, Revision 1, Monthly Inspection of Control Room Breathing Air System.  
LRP-1310-5, Revision 14, Inspection of the ISI Magnum Self-Contained Breathing Apparatus.  
LRP-5410-4, Revision, 1, Operation of Canberra/RMC Fastscan Whole Body Counter.  
LRP-5822-10, Revision 0, Operation and Calibration of the Eberline PM-7 Portal Monitors.  
LRP-5822-7, Revision 5, Surveillance and Operating Guidelines for the IPM Contamination Monitor.  
LRP-5822-11, Revision 7, Operation and Calibration of the Small Article Monitor.  
LIS-CM-106, Revision 6, Unit 1 Post Accident Monitoring Containment Gross Gamma Radiation Monitor Calibration.  
LCP-140-26, Revision 3, Determination of "a priori" Lower Limits of Detection, March 24, 1997.  
LCP-140-26 Revision 3, Miscellaneous Liquids LLD Determination Unconditional Release Samples, October 28, 1998.  
RP-AA-034 Revision 3, Unconditional Release Surveys.

### Audits and Assessments

Radiation Protection Department Quarterly Self-Assessment Reports for the 4<sup>th</sup> Quarter 1999, 1<sup>st</sup> Quarter 2000 and 2<sup>nd</sup> Quarter 2000.  
Focus Area Self-Assessment Report, August 17-18, 2000, "Radiation Monitoring Instrumentation, Radioactive Material Control and REMP."  
Illinois Power Quality Assurance Audit of Teledyne Brown Engineering Environmental, VA1999-02, May 6, 1999.  
Teledyne Brown Engineering Air Sample Pump Calibration Records.  
Nuclear Oversight Assessment Report NOA-01-00-031, Radwaste Shipping, Effluent and Monitoring, May 28, 1999.  
Nuclear Oversight Assessment of Station Readiness, QVL 01-00-011, January 20, 2000.  
Self-Assessment Report, Program Monitoring and Controls for Iron 55 and Other Difficult-to-Measure Radio-Nuclides, January 4, 2000.

### Problem Identification Forms (Condition Reports) and Related

Various PIFs generated between January 1999 and August 25, 2000, related to radiation protection instrumentation, REMP and radioactive material control, including PIF Nos. L2000-00626, L2000-03358, L2000-02719, L2000-00510, L2000-04249, L1999-03238, L1999-03388.

Apparent Cause Evaluation for La Salle PIF L1999-03238.

### Surveillance and Test Records

LIS-PC-206A, Unit 2 Primary Containment Panel 2PL75J Air Particulate and Noble Gas Monitor Calibration, completed August 4, 2000.

LIP-AR-902, Refuel Floor High Range Area Radiation Monitor Calibration, completed March 21, 2000.

LIS-VR-401, Unit 2 Reactor Building Exhaust Plenum Radiation Monitor calendar year 2000 Calibration, and Functional Tests completed 1<sup>st</sup> and 2<sup>nd</sup> quarters of 2000.

LIS-VR-301, Unit 1 Reactor Building Exhaust Plenum Radiation Monitor calendar year 2000 Calibration, and Functional Tests completed 1<sup>st</sup> and 2<sup>nd</sup> quarters of 2000.

Calibration of the Canberra Fastscan Whole Body Counter System, completed August 5, 1999.

LRP-1240-6, RSO-5 (SN #A963X) Portable Survey Instrument Calibration, completed July 13, 2000.

LRP-5823-41, MG Telepole (SN 6696-104) Portable Survey Instrument Calibration, completed August 28, 2000.

Calibration of the PM-7 Portal Monitor (SN 110), completed May 17, 2000.

Calibration of the Small Article Monitor (SN 159), completed May 31, 2000.

Calibration of the IPM 7/8 Personnel Contamination Monitor (SN 220), completed June 20, 2000.

LIS-CM-106, Unit 1 Post Accident Monitoring Containment Gross Gamma Radiation Monitor Calibration, completed March 17, 1999.

### Other Documents

Respiratory Qualification Matrix for Fire Brigade and Operations Staffs.

Updated Final Safety Analysis Report, Chapters 12.3 and 7.

Gaseous Effluent Worksheets and Effluent Dose Data for 1999 - June 2000.

Unit 2 Reactor Water Gamma Spectroscopy Analysis, August 31, 2000.

La Salle Unit 1 Performance Indicators.

La Salle Unit 2 Performance Indicators.

La Salle County Station Annual Radiological Environmental Operating Report for 1999.

Gamma Spectroscopy Analysis for Conditional Oil Release, August 24, 2000.

Gamma Spectroscopy Analysis for Conditional Oil Release, December 2, 1999.

Gamma Spectroscopy Analysis for Conditional Oil Release, December 4, 1999.

Gamma Spectroscopy Analysis for Conditional Oil Release, December 22, 1999.

Radioactive Waste Streams Report, August 21, 2000.