U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-373/80-37

Docket No. 50-373 License No. CPPR-99

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

Facility Name: LaSalle County Nuclear Station, Unit 1

Inspection At: LaSalle Site, Marseilles, IL

Inspection Conducted: July 28 through September 5, 1980

Inspectors: R. L. Spessard for
R. D. Walker, Senior Resident Inspection 10/3/80

R. L. Spessard for
S. E. Shepley, Resident Inspector 10/3/80

Approved By: R. L. Spessard
R. L. Spessard, Chief, 10/3/80
Projects Section 1

Inspection Summary
Inspection on July 28 - September 5, 1980 (Report No. 50-373/80-37)
Areas Inspected: Routine, resident inspector, preoperational inspection consisting of a review of licensee action on previous inspection findings, IE Bulletins and IE Circulars received by the licensee since last inspection, preoperational test program records, observance of preoperational testing, Emergency/Abnormal procedures, inspection requirements for verifying license application, response to headquarters request, inspection activities preparatory to license issuance, and a plant walkthrough/operational status review. The inspection involved a total of 194 inspector-hours onsite by two NRC inspectors including 84 inspector-hours onsite during off-shifts.
Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

*R. Holyoak, Station Superintendent
*R. D. Kyrouc, Quality Assurance Engineer
G. J. Diederich, Station Operating Assistant Superintendent
R. D. Bishop, Technical Staff Supervisor
C. W. Schroeder, Assistant Technical Staff Supervisor
R. Raguse, Senior Operating Engineer
J. M. Marshall, Operating Engineer
J. Renwick, Operating Engineer
W. Huntington, Technical Staff
H. J. Hetschel, Technical Staff
T. Shill, Technical Staff
E. E. Spitzner, Administrative and Support Services Assistant Superintendent
G. E. Groth, Construction Engineer

The inspector also interviewed other licensee employees including members of the technical, operating, and construction staff, as well as certain licensee contractor employees.

*Denotes persons present at management interview onsite.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance Item (373/80-16-11): The inspector reviewed the licensee's corrective action with respect to this item of noncompliance which was concerned with failing to properly control conditions such that the cleanliness of the reactor vessel was properly controlled and such that the 1A Diesel Generator Air Start System Air Compressor Electric Drive Motors were properly protected from the weather. The inspector found the licensee's corrective action to be adequate and implemented.

(Closed) Unresolved Item (373/79-15-14): The inspector had identified errors in procedure LOP-HP-01E "High Pressure Core Spray System Electrical Checklist." The inspector has reviewed Revision 3, dated May, 1980, of this procedure and found the errors corrected.

(Closed) Unresolved Item (373/79-15-15): The inspector had identified errors in procedure LOP-HP-01M "High Pressure Core Spray System Mechanical Checklist." The inspector has reviewed Revision 3, dated May, 1980, of this procedure and found the errors corrected.

(Closed) Noncompliance Item (373/80-24-09): The inspector had found the licensee's corrective action on this item which involved failure to have a procedure to remove control rods from the reactor vessel to

be inadequate in Inspection Report 50-373/80-30 because it failed to address plans to improve the effectiveness of the licensee's management control systems as related to the Station Operations/Construction interface. The licensee has submitted and implemented a supplemental response which the inspector has reviewed and found to be adequate.

(Closed) Unresolved Item (373/79-38-17): Final inspector review of IE Circular 77-15. The inspector verified that the circular was received by the licensee management, that a review for applicability was performed, and that appropriate action was taken or scheduled.

No items of noncompliance were identified in this area.

3. Review of IE Bulletins Received Since Last Inspection Report

The licensee received IE Bulletins 80-18, 80-19, and 80-20 since the last inspection report written by the inspector. The inspector verified that IE Bulletin 80-18 was received by the licensee for information only.

This bulletin will not be applicable to the licensee when the construction phase of the plant is completed and the startup/operating phase is entered; therefore, the licensee need not provide an answer to the bulletin for the inspector's review prior to license issuance.

The inspector verified that IE Bulletins 80-19 and 80-20 were received by the licensee with a response required. The time period for the licensee's required response to IE Bulletin 80-20 has not elapsed and the licensee is still formulating the required response. The inspector will review the licensee's response to this bulletin under Open Item Number (373/80-37-01).

The inspector verified for IE Bulletin 80-19 that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presentation in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

No items of noncompliance were identified in this area.

4. Review of IE Circulars Received Since Last Inspection Report

The following IE Circulars have been issued since the last inspection report written by the inspector: 80-16, 80-17, 80-18, 80-19, and 80-20. The inspector verified the licensee has initiated a review of

IE Circulars 80-16 and 80-18 for applicability, but this review has not been completed. Final review of the licensee's response to these IE Circulars remains open with Open Item Numbers (373/80-37-02) and (373/80-37-03) for 80-16 and 80-18 respectively. The inspector found that IE Circulars 80-19 and 80-20 were not sent to this licensee because they are not applicable to reactor facility licensees. The inspector verified for IE Circular 80-17 that the circular was received by the licensee management, that a review for applicability was performed, and that if the circular were applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

No items of noncompliance were identified in this area.

5. Preoperational Test Program Records

The inspector reviewed the licensee's preoperational test records program. As a part of this review, the inspector:

a. Checked the licensee QA Manual and administrative procedures to verify that (1) administrative controls have been established for maintaining preoperational test procedures and results, corrective and preventive maintenance records, design changes and modification documents, component, system, and structure turnover records, during the preoperational testing period, and (2) responsibilities have been assigned to assure these records are being maintained.

b. Verified the licensee's procedures are being implemented by selecting a sample of specific records and observed that these are being maintained in accordance with the specified administrative controls.

c. Inspected the licensee's storage facilities and systems including storage locations, physical controls, filing systems, transmittal documentation, access control, accountability and updating methods for conformity with the specified requirements.

d. Interviewed the assigned record custodians for knowledge of procedures, requirements, and responsibilities.

e. Compared the record retention periods as established by the applicant, along with the controls for assuring these retention periods, with the specified requirements.

As a result of this review, the inspector ascertained that the licensee's program for records control is currently in accordance with SAR commitments and Regulatory requirements, 10 CFR 50, Appendix B, Criterion XVII and Reg. Guide 1.88, and that these controls as applied

to records generated during the preoperational test program are currently being adequately implemented. The inspector communicated to the licensee certain minor concerns which the licensee has successfully addressed.

No items of noncompliance were identified in this area.

6. Observance of Preoperational Testing

On August 14, 1980, the inspector observed the 10 start preoperational test of the "0" Diesel system. The system failed the test due to equipment malfunction. The test was re-run without any repairs and the system passed the test. The test procedures seemed adequate. The inspector observed the following:

a. A proper procedure was used.

b. Minimum crew requirements were met.

c. All prerequisites were met.

d. Proper plant systems were in service.

e. Testing was performed as required by the procedure.

f. The test sequence was adequately coordinated.

g. All data was collected for final analysis.

The applicant wrote a deficiency on the system as a result of the first test.

No items of noncompliance were identified in this area.

7. Emergency/Abnormal Procedure Review

The inspector reviewed the licensee's emergency/abnormal procedures to ascertain whether they are prepared to adequately control safety related functions in the event of system or component malfunction indication. The inspector reviewed these procedures to:

a. Verify that administrative controls have been established for the review, approval, and periodic updating of these procedures.

b. Verify that the scope of the procedures were adequate to address all functional areas within regulatory requirement found in Regulatory Guide 1.33, Revision 2, February 1978, Appendix A, items 5 and 6.

c. Verify that the procedures content was adequate for the following procedure categories:

(1) Procedures for correcting abnormal, offnormal, or alarm conditions.

(2) Procedures for combating emergencies and other significant events, i.e., those procedures which specify operator actions involving manipulation of plant controls to prevent an accident, to prepare for anticipated acts of nature, or to reduce the consequences of an accident or a hazardous condition which has already occurred or developed.

d. Verify that the procedures as described in Item c. above are in the proper format as defined in ANSI N18.7 of 1976.

The inspector's findings with respect to each of these items are as follows:

a. Administrative Controls

The inspector found that proposed Technical Specification 6.1.G.2 contains the requirements for the "Onsite Review and Investigative Function," that proposed Technical Specification 6.1.G.2.a.1 requires this review for procedures required by proposed Technical Specification 6.2, and that proposed Technical Specification 6.2.A adequately defines the appropriate procedures to be reviewed.

The inspector found that the following administrative procedures have been prepared, reviewed, and implemented per current regulatory requirements:

Procedure #	Revision	Revision Date	Procedure Title
LAP 820-1	11	9-8-80	Station Procedures
LAP 820-2	14	6-13-80	Station Procedure Preparation and Revision
LAP 820-3	15	8-18-80	Procedure Distribution
LAP 820-4	7	6-19-80	Temporary Procedure Changes
LAP 820-6	3	10-23-79	Use of Procedure Deficiency Sheets
LAP 820-7	0	1-29-80	Special Procedures
LAP 1200-1	2	9-8-80	Onsite Review and Investigative Function
LAP 1200-6	1	11-9-79	Onsite Review of Procedures

The above procedures adequately define the administrative controls for procedures to meet the proposed technical specifications and other regulatory requirements.

b. Procedure Scope

The inspector found from the review of the procedures that the term Emergency Procedure is not used in conjunction with procedures which control plant parameters in any event, but are reserved for implementing the Generating Station Emergency Plan (GSEP). These procedures are designated as "Emergency Plan Implementing Procedures" (LZP). The inspector found that procedures predescribed as "Procedures for Combating Emergencies and Other Significant Events" in Section 6 of Appendix A of Reg. Guide 1.33 with three exceptions are defined as either "General Plant Abnormal Procedures" (LGA) or "Operational Abnormal Procedures, Volume 1" (LOA). The three areas which differ from this format are:

(1) Reactor Trip. This procedure is defined as a General Operating Procedure (LGP) because the procedure is in effect a scram procedure for general operating conditions.

(2) Plant Fires. These procedures are (LZP) designated because they are implementing procedures for the GSEP.

(3) Loss of Protective System Channel. This area is covered by alarm procedures (LOA, Volumes II through VII) which refer to a System Operating Procedure (LOP) for loss of the Reactor Protection System Motor Generator Set.

The inspector found that procedures described as "Procedures for Abnormal, Offnormal, or Alarm Conditions" in Section 5 of Appendix A of Reg. Guide 1.33 are defined as "Operational Abnormal Procedures" (LOA). The LOA's consist of seven volumes. The first volume is confined to procedures described in Section 6 of Appendix A of Reg. Guide 1.33 and Volumes II through VII are confined to annunciator procedures. The inspector has concluded from his review that the procedures have sufficient scope to meet the regulatory requirements; however, the inspector found that certain areas of the above procedures are being completely rewritten and reorganized per "NRC Action Plan Developed as a Result of the TMI-2 Accident NUREG-0660" requirements defined in Task I.C.1 and I.C.8. The specific areas to be rewritten are Inadequate Core Cooling, Loss of Main Feedwater, and Small Break Loss of Coolant Accidents. These three areas cut across the boundaries of many of the licensee's current procedures and will necessitate a complete reorganization of the current licensee procedures that remain intact. This reorganization and rewriting will be reviewed by a team of NRC personnel headed by representatives of the Office of NRR, Division of Human Factors Safety, Procedures and Test Review Branch and is not a function of the inspector's current review.

c. Procedure Content

(1) The procedures identified in this category are annunciator procedures. The licensee currently has approximately 2000 of these procedures. The inspector has reviewed and found acceptable in previous inspection reports approximately 200 of these procedures plus all annunciator procedures associated with the operators console (Control Room Panel 1H13-P 601). The inspector is holding open items from previous inspection reports to cover any concerns associated with these procedures.

(2) The procedures identified in this category are classified as Procedures for Combating Emergencies and Other Significant Events by Reg. Guide 1.33. The procedures identified below as LASALLE were reviewed by the inspector to ascertain if they had the proper content to address the events listed below in Reg. Guide 1.33.

REG. GUIDE 1.33	LASALLE PROCEDURES
Loss of Coolant	LGA-01 Loss of Coolant (Fast Leak) LGA-02 Loss of Coolant (Slow Leak) LGA-03 Major Steam Leaks (Outside the Drywell) LOA-NB-01 Primary System Leaks
Loss of Instrument Air	LOA-IA-01 Loss of Instrument Air LOA-IA-02 Loss of Normal Drywell Pneumatic Air Supply LOA-IA-03 Loss of 100# Drywell Pneumatic Air Supply
Loss of Electrical Power (and/or degraded power sources)	LGA-12 Loss of Auxiliary Electrical Power LOA-AP-01 Loss of System Auxiliary Transformer, SAT 142 (242), During Power Operation LOA-AP-02 Failure of Bus 141Y (241Y) or Bus 142Y (242Y) to Transfer to Unit Auxiliary Transformer, UAT 141 (241) Upon Loss of Power From System Auxiliary Transformer SAT 142 (242) LOA-AP-03 Loss of a 4 KV ESS Bus LOA-AP-05 Loss of a 480 VAC ESS Bus LOA-DC-01 250 VDC System Failure LOA-DC-02 125 VDC System Failure LOA-DC-03 48/24 VDC System Failure
Loss of Core Coolant Flow	LGA-08 Loss of Recirculation From - Single Pump LGA-09 Loss of Recirculation From -

	Both Loops
	LOA-RR-03 Reactor Recirculation Flow Control System Failure to Minimum Demand
Loss of Condensor Vacuum	LOA-CW-01 Loss of All Circulating Water Pumps
	LOA-OG-05 Failure of the Steam Jet Air Ejector Steam Pressure Control
	LOA 1(2)H13-P603-B201 DIV I Main Condensor Vacuum LO
	LOA 1(2) H13-P603-B212 DIV II Main Condensor Vacuum LO
Loss of Containment Integrity	LOA-PC-01 Loss of Primary and/or Secondary Containment Integrity
Loss of Service Water	LOA-WS-01 Loss of Service Water
Loss of Shutdown Cooling	LOA-RH-01 Loss of Shutdown Cooling
Loss of Component Cooling and Cooling to Individual Components	LOA-FC-01 Loss of Fuel Pool Cooling
	LOA-RH-02 Loss of Suppression Pool Cooling
	LOA-RH-03 Loss of RHR Service Water
	LOA-WR-01 Loss of Reactor Building Closed Cooling Water (RBCCW)
Loss of Feedwater and Feedwater System Failure	LGA-04 High Reactor Water Level
	LGA-05 Low Reactor Water Level
	LOA-CD-01 Loss of Condensate Pump
	LOA-HD-05 Heater Drain Tank Level HI/LO
	LOA-RL-01 Failure of Reactor Water Level Control System in Auto or Single
	LOA-RL-02 Failure of the TDRFP M/A XFR Station
	LOA-FW-01 Loss of Feedwater Heaters
	LOA-HD-01 Loss of Pumped Forward Flow Heater Drain
	LOA-HD-02 Operation with Reduced Pumped Forward Heater Drain Flow
Loss of Protective System Channel	LOA 1(2)H13-P603-A508 RPS MG 1(2) A Trouble
	LOA 1(2)H13-P603-B512 RPS MG 1(2) B Trouble
	LOP-RP-02 Reactor Protection System Bus A or B Shutdown (Includes Attachments A and B)
Mispositioned Control Rod or Rods (And Rod Drops)	LOA-RD-03 Mispositioned Control Rod
	LOA-RD-02 Uncoupled Control Rod
	LOA-RD-01 Stuck Control Rod
Inability to Drive Control Rods	LOA-RD-01 Stuck Control Rod
	LOA-RD-02 Mispositioned Control Rod
	LOA-RD-04 Control Rod Drive System

	Flow Control Failure
	LOA-RD-05 Control Rod Drive Stabilizer
Conditions Requiring Use of Emergency Boration or Standby Liquid Control System	LGA-18 Transient with Failure to Scram (Greater than 25% Load) (Below 25% Reactor Power)
	LOA-SC-02 Initiation of Standby Liquid Control
Fuel Cladding Failure or High Activity in Reactor Coolant or Offgas	LOA-PR-01 Release Rate Spikes After Power Change
	LOA-PR-02 Release Rate Exponential with Power
	LOA-PR-03 High Release Rate
	LGA-16 Fuel Element Failure
Fire in Control Room or Forced Evacuation of Control Room	LOA-RX-01 Control Room Evacuation
	LOA-ZZ-05 Plant Operation with the Control Room inaccessible
Turbine and Generator Trips	LGA-10 Loss of Turbine Generator Load Greater Than 25%
	LGA-11 Loss of Turbine Generator Load Less Than 25%
Other Expected Transients That May Be Applicable	LGA-04 High Reactor Water Level
	LOA-NB-02 Failure of a Relief Valve to Seat Properly or Inadvertent Actuation of a Safety Relief Valve
	LOA-NB-05 Recovery From an ECCS Initiation Under Post Accident Conditions
Malfunction of Automatic Reactivity Control System	LOA-RR-03 Reactor Recirculation Flow Control System Failure to Minimum Demand
	LOA-RR-04 Recirculation Flow Control Valve Failure Maximum Demand
	LOA-RR-05 Reactor Recirculation Flow Control Valve Lockout
	LOA-NR-01 SRM or IRM Insert or Withdraw Failure
	LOA-NR-02 LPRM Failure/LPRM High Flux or LPRM Downscale
	LOA-NR-03 Loss of Neutron Flux Indication
Malfunction of Pressure Control System	LOA-EH-01 Pressure Regulator Failure Upscale
	LOA-EH-02 Turbine Control Valve Failure
	LOA-EH-03 Turbine Control Valve (S) Failed Open
Reactor Trip	LGP 3-2 Reactor Scram

Plant Fires	LZP-810-1 Implementing Procedure for Fire: Fire Marshall LZP-820-1 Implementing Procedure for Fire: Fire Chief (Senior Shift Foreman) LZP-830-1 Implementing Procedure for Fire: Fire Officer No. 1 (Cognizant Maintenance Foreman) LZP-850-1 Implementing Procedure for Fire: Fire Brigade LZP-860-1 Implementing Procedure for Fire: Fire Company No. 1 (Maintenance Personnel)
Act of Nature (e.g., tornado, flood, dam failure, earthquakes)	LGA-17 Bomb Threat Response LOA-AA-02 Operation During Tornado Warning LOA-VC-01 Operation of Control Room HVAC During Hi Radiation, Smoke or Chlorine Detection LOA-VE-01 Operation of Auxiliary Electric Equipment HVAC During High Radiation, Smoke or Chlorine Detection LOA-ZZ-01 Operation During Earthquake Conditions LOA-ZZ-03 Failure of the Cooling Lake Dike
Irradiated Fuel Damage While Refueling	LOA-ZZ-08 Irradiated Fuel Damage While Refueling (Fuel Handling Accident)
Abnormal Releases of Radioactivity	LOA-PR-01 Release Rate Spikes After Power Change LOA-PR-02 Release Rate Exponential With Power LOA-PR-03 High Release Rate
Intrusion of Demineralizer Resin Into Primary System (BWR Plants)	LOA-NB-04 Reactor Coolant High Conductivity

The inspector addressed his concerns with these procedures to the licensee and was assured that the concerns will be pursued in the rewrite and review discussed in b. above. The inspector verified that these procedures are in the proper format as defined in ANSI N18.7 of 1976. It is understood that procedures that are affected by the NUREG-0660 requirements discussed in b. above, will no longer be in this format and that this is acceptable as determined by the Office of NRR review team.

No items of noncompliance were identified in this area.

8. Inspection Requirements for Verifying License Application

Submittals for Licensee Training Staff Personnel (TI-2515/36). The licensee has identified five training instructors who will be involved in training on systems, integrated plant response, transients and simulator courses for the LaSalle County Nuclear Station. The inspector has determined that one of these instructors has taken the examination for a Cold Senior Reactor Operator's License, that license applications have been submitted for a Cold Senior Reactor Operator's License for three of these instructors, and that the remaining instructor should have an application for a Hot Senior Reactor Operator's License submitted by May of 1981.

No items of noncompliance were identified in this area.

9. Response to Headquarters Request

The inspector followed up on a Temporary Instruction concerning location of certain load centers issued by the Division of Reactor Operations Inspection, Office of Inspection and Enforcement. The temporary instruction requested followup to assure compliance with an NRR technical position that motor operated valves inside the primary containment that are required to be locked in position via positioning of the breaker powering the motor on the valve must have the breaker being positioned outside of the primary containment. The inspector found that the licensee was in compliance with this NRR technical position.

No items of noncompliance were identified in this area.

10. Inspection Activities Preparatory to License Issuance (Status of Licensee Procedures and Preoperational Testing Program

a. Operating, Maintenance, Surveillance, Abnormal and Emergency Procedure Status

The licensee projects 4858 procedures to be required in these areas. Currently the licensee has approved 4372 procedures, 424 procedures have been drafted but not reviewed, and 62 procedures remain to be drafted.

b. Preoperational Testing Program Status

The licensee projects a total of 125 Preoperational Tests/System Demonstrations required for Unit #1 operation, of which 115 of these are specific to Unit #1 and the remaining 10 are specific to Unit #2.

The licensee reported that 111 systems have been turned over for preoperational testing, that 107 Preoperational Tests and System

Demonstrations have been started, that 30 Preoperational Tests and System Demonstrations have been completed, and that the preoperational testing program is approximately 63% complete at this time. The licensee stated that final Preoperational Test or System Demonstration results for 1 test are ready for NRC review, i.e., the entire test is complete and the results have been reviewed and accepted by the licensee.

c. Deficiency Status

The licensee is currently listing 1508 Station Operations deficiencies and 6173 Station Construction deficiencies as outstanding items. The licensee is still attempting to segregate these deficiencies into those that will impact fuel load and those that won't. The licensee has reviewed approximately 1566 of these deficiencies for segregation and preliminary assessment is that 548 of those reviewed would need to be cleared prior to fuel load. The inspector will continue to review this matter.

No items of noncompliance were identified in this area.

11. Plant Walkthrough/Operational Status Review

The inspector conducted walkthroughs and reviewed the plant operations status including examinations of control room log books, routine patrol sheets, shift engineers log books, equipment outage logs, special operating orders, and jumper tagout logs for the period of July 28, 1980 through September 5, 1980.

The inspector observed the operations status during 4 off-shifts during the same period as above. The inspector also made visual observations of the routine surveillance, functional, and preoperational tests in progress during this period. This review was conducted to verify that facility operations were in conformance with the requirements established under 10 CFR and administrative procedures. The inspector conducted tours of Units 1 and 2 reactor, auxiliary, and turbine buildings throughout the period and noted the status of construction and plant housekeeping/cleanliness. With respect to housekeeping/cleanliness, conditions appear to be adequate. The inspector observed that fire hazards were being minimized.

The inspector observed shift turnovers to verify that plant component status and problem areas were being turned over to a relieving shift.

No items of noncompliance were identified in this area.

12. Other Significant Events Involving the Resident Site Staff

a. Suport of Regional Office Staff Familiarization

The inspectors supported a Region III program for familiarizing noninspector personnel on the regional office staff with actual

field conditions at the LaSalle County Nuclear Station. This involved lectures and tours of the station on August 19, 26, and September 4, 1980.

b. Support of Other Federal Agency

The Senior Resident Inspector spent six days in Rock Island, Illinois supporting Department of Justice activities during this inspection period.

c. Support of Other NRC Offices

The Senior Resident Inspector spent 3 days at NRC Headquarters attending meetings conducted by the Office of NRR in which various open items on the LaSalle County Nuclear Station Unit #1 docket were discussed with licensee representatives.

d. Support of Other IE Activities

The Senior Resident Inspector spent 2 days at Dresden Nuclear Station witnessing Control Rod Drive System Testing requirements defined in IE Bulletin 80-17.

13. Management Interview

The inspector met with licensee representatives (Denoted in Paragraph 1) at the conclusion of the inspection period. The inspector summarized the scope and findings of the inspection activities.