

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-373/88020(DRS)

Docket No. 50-373

License No. NPF-11

Licensee: Commonwealth Edison Company
P. O. Box 767
Chicago, IL 60690

Facility Name: LaSalle County Station, Unit 1

Inspection At: LaSalle Site, Marseilles, Illinois

Inspection Conducted: July 18 through 27, 1988

Inspector: *Beth A. Wetzel*
Beth A. Wetzel

8/11/88
Date

Approved By: *Mauro for*
Monte P. Phillips, Chief
Operational Programs Section

8/11/88
Date

Inspection Summary

Inspection on July 17 through 27, 1988 (Report No. 50-373/88020(DRS))

Areas Inspected: Routine, unannounced safety inspection of licensee action on previous inspection findings (92701), calibration of nuclear instrumentation systems (61705), shutdown margin and reactivity anomaly surveillances (61707), core thermal power evaluation (61706), core power distribution limits (61702), and control rod performance testing (72700).

Results: No violations or deviations were identified.

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DETAILS

1. Persons Contacted

- *G. J. Diederich, Station Manager
- *J. W. Geiseker, Technical Staff Supervisor
- *W. R. Huntington, Services Superintendent
- *D. E. Jones, NRC, Project Inspector
- *P. F. Manning, Assistant Superintendent, Technical Services
- E. A. McVey, Assistant Lead Nuclear Engineer
- *J. A. Miller, Lead Nuclear Engineer
- *D. R. Keif, Regulatory Assurance

The inspector also interviewed other licensee personnel during the course of the inspection including members of the operations and technical staff.

*Denotes persons attending the exit meeting of July 27, 1988.

2. Licensee Action on Previous Inspection Findings (92701)

- a. (Closed) Open Item (373/86036-01(DRS)): During Unit 1, Cycle 2 startup testing, procedure LOP-RD-04, "Control Rod Drive Timing," Revision 2, was performed using the incorrect data sheet thereby precluding strict adherence to the procedure. The correct data sheet could not be found at the start of the test; therefore, Attachment C of LOS-AA-W1 was modified and used to document the test. Procedure LOP-RD-04 was replaced by surveillance LOS-RD-SR5, "Control Rod Drive Timing." The change from an operating procedure to a surveillance placed stricter controls on test performance, documentation and record retention requirements. LOS-RD-SR5, Revision 2 was performed satisfactorily during Unit 1, Cycle 3 startup testing between June 25 and July 1, 1988. The surveillance was adhered to and documented properly on the appropriate data sheets. The inspector has no further concerns in this area.
- b. (Closed) Violation (373/88010-01(DRS)): During defueling activities two Intermediate Range Monitors (IRMs) on the same trip system were declared inoperable which is one more than allowed by Technical Specification 3.3.1. However, 'D' IRM was probably never technically inoperable because it passed both a functional test and an instrument calibration without any adjustments made to the IRM. The main concern with this incident was that of procedural and administrative errors that resulted in a Mode change without the required instrumentation operable and, more importantly, operating personnel not aware that they were in noncompliance with Technical Specifications (TS) for eight days.

The licensee performed the following immediate corrective actions prior to commencing defueling operations:

- (1) Core alterations were suspended and a half scram was initiated which satisfied the action statements required by TS 3.3.1.
- (2) A functional surveillance was performed on all nuclear instrumentation which indicated that all IRMs were operable.
- (3) All outstanding entries in the degraded Equipment Log (DEL) were reviewed and determined to be acceptable for refueling operations.
- (4) All TS requirements for Mode 5 as well as requirements which are applicable to all Modes were verified.

The inspector verified that the licensee completed and implemented the following corrective actions taken to avoid further violation:

- (1) The following revisions were made to Procedure, LAP-220-4, "Degraded Equipment Log," Revision 3, to improve the documentation and tracking of safety related degraded and inoperable equipment:
 - A requirement was added to place red tags on all safety related/TS equipment located in the control room that is inoperable.
 - Attachment B of LAP-220-4 was revised to require documentation of changes in equipment status and the date and time red tags were placed on inoperable equipment.
 - Attachment F was reformatted to clearly indicate the status of equipment.
 - A new Attachment I, "Degraded Equipment Change History," was developed to clearly track status changes of equipment and provide reliable information to the operating staff concerning the status of equipment.
 - The Operating Engineer's weekly DEL review was expanded to allow other off-shift personnel, who were not responsible for maintaining the log, to review the DEL for compliance with TS requirements.
- (2) Procedure, LOP-AA-03, "Reactor Mode Change," Revision 2, has been revised to incorporate a checklist which identifies all the requirements necessary to enter Mode 5 (Refueling) from Mode 4 (Cold Shutdown), including the requirement to have 3 IRMs per trip system operable.
- (3) The event was reviewed with members of the operating staff.

The inspector has no further concerns in this area.

3. Calibration of Nuclear Instrumentation Systems (61705)

The inspector reviewed the following completed procedures concerning nuclear instrumentation systems, and verified adherence to the procedures and compliance with TS requirements:

- LTP-1600-22, "SRM Performance Check," Revision 6, performed June 2 through 7, 1988.
- LTP-1600-23, "Intermediate Range Monitor Performance Check," Revision 5, performed July 5-6, 1988.
- LIS-NR-102, "Unit 1 Intermediate Range Monitor Rod Block and Reactor Scram Calibration," Revision 1, performed May 21 through 23, 1988.
- LIS-NR-302, "Unit 1 Intermediate Range Monitor Rod Block and Reactor Scram Functional Test," Revision 5, performed July 2, 1988.
- LTP-1600-6, "TIP System Calibration," Revision 4, completed July 16, 1988.
- LAP-100-29, "Whole Core LPRM Calibration," Revision 5, performed July 13 through 15, 1988.
- LTP-1600-8, "Nuclear Engineer's Method for APRM Calibration," Revision 2, performed July 6 and July 13, 1988.

No violations or deviations were identified.

4. Shutdown Margin and Reactivity Anomaly Surveillances (61707)

The inspector reviewed completed surveillances and confirmed that shutdown margin and reactivity anomaly calculations complied with TS and were consistent with cycle specific data supplied by General Electric Company. The following documents were utilized during the review:

- "Cycle Management Report and Prestartup Cycle Operation Plan for LaSalle Unit 1, Cycle 3," dated May 13, 1988.
- LTS-1100-14, "Shutdown Margin Subcritical Demonstration," Revision 1, completed July 4, 1988.
- LTS-1100-1, "Shutdown Margin Test," Revision 6, performed July 4, 1988.
- LTS-1100-2, "Checking for Reactivity Anomalies," Revision 10, completed July 4, 1988.

No violations or deviations were identified.

5. Core Thermal Power Evaluation (61706)

The inspector reviewed LTP-1600-10, "Calculating Core Thermal Power," Revision 6, and several samples of the completed Attachment A, "Heat Balance Calculation Sheet," performed at various power levels. Attachment A is a worksheet used by the nuclear engineers to perform a hand heat balance when the process computer is inoperable or to verify the process computer calculations. The inspector identified one concern with the procedure. Steps 6 and 7 of the worksheet require the engineer to record the current of the recirculation pumps when they are operating at high speed only. A constant is used for the recirculation pumps energy when they are operating in low speed. However, some of the engineers were recording the current in low speed and inserting that into the heat balance calculation which could create a small error in the resultant core thermal power. The inspector noted that in the two cases where this error was made on the worksheet the resultant core thermal power was not used to calibrate the Average Power Range Monitors or verify the computer code, but was for information only.

The licensee responded to the inspector's concern by revising the worksheet to clarify Steps 6 and 7, to prevent errors in recording the pump currents. The worksheet will also be reprinted because some of the steps were not very legible. The procedure revision adequately resolved the inspector's concern.

No violations or deviations were identified.

6. Core Power Distribution Limits (61702)

The inspector reviewed one week's sample of LTS-1200-4, "Nuclear Engineer's Daily Surveillance," Revision 7, completed for July 13 through 20, 1988 and verified that power distribution limits were in compliance with TS Section 3/4.2. The inspector also reviewed LAP-100-29, "Unit 1 Shiftly Surveillance," Revision 2, performed on July 15, 1988. The inspector verified that the thermal limits recorded on the procedure were consistent with those output by the process computer and complied with TS limits. No violations or deviations were identified.

7. Control Rod Performance Testing (727900)

The inspector reviewed the following surveillances used for startup testing of the control rod drives and verified that the data was properly recorded and results were acceptable:

- LTP-700-2, "Control Rod Friction and Settle Testing," Revision 3, performed June 8 through 11, 1988.
- LOS-RD-SR5, "Control Rod Drive Timing," Revision 2, performed June 25 through July 1, 1988.

- LTS-1100-3, "Control Rod Following and LPRM Operability Verification," Revision 4, performed July 6 through 12, 1988.
- LOS-RD-SR1, "Control Rod Drive Mechanical Coupling Verification," Revision 3, performed May 27 through 29, 1988.
- LTS-1100-4, "Scram Insertion Times," Revision 9, completed July 8, 1988.

The inspector identified one concern with LTS-1100-4. Step C.3 read, in part, "The Rod Scram Sequence should be consistent with current operating recommendations and written such that successive rods are separated radially by at least two control cells." After plotting the scram sequence on a core map it was evident that successive rods were not separated radially by at least two control cells, as stipulated in the procedure. However, the sequence was consistent with Procedure LTP-1600-2, "Guidelines for Control Rod Sequence Development," Revision 7 and coincided with the predicted rod pattern at the time of the scram timing. The rod sequencing was also written to maintain power greater than 20% (to avoid Rod Drop Accident concerns) and less than 25% (to avoid thermal limit concerns). The licensee revised LTS-1100-4 Step C.3 to reflect the way rod scram sequences currently are being written, which adequately resolved the inspector's concern.

No violations or deviations were identified.

8. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on July 27, 1988, and summarized the scope and findings of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee acknowledged statements made by the inspector and stated that no material reviewed by the inspector was considered proprietary.

INSPECTOR'S REPORT
(Continuation)
Office of Inspection and Enforcement

NO.	SEQ.	VIOLATION SEVERITY OR DEVIATION						D	RE.		U
		1	2	3	4	5	6		A	C	
	A										
	B										
	C										
	D										

VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 80 characters each.)

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MA

DRAFT YELLOW/GRAY BOOK INPUT FORM

Facility: LaSalle Unit 1

Report No: 50-373/88020

OTHER SIGNIFICANT ITEMS

1. Systems and Components

~~N/A~~

2. Facility Items

~~N/A~~

3. Managerial Items

~~N/A~~

Submitted by: B. Wetzel

Sec. Chief Approval _____

Item No.	Type Code	Func. Area	Date Entered
<u>373186036-D1 (Unit 1)</u>	<u>OPN</u>	<u>07</u>	<u> / / </u>
<u> / - - - (Unit 2)</u>			

Original Inspector	Resp. Sec.	Note
<u>RESCHESKE</u>	<u>OPS</u>	<u> - - -</u>

Responsible Inspector	Closed	Final Report
<u>WEIZEL</u>	<u>08105188</u>	<u>88020</u>

Interim Insp. Reports - - - - - - - - -

Followup Date	Remarks:
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Status Code	<u> - - - - - - - - -</u>
<u>C</u>	

TYPE CODE

- AEO - ABNORM. ENVIR. OCC.
- ALG - ALLEGATION
- BUL - BULLETIN
- CAL - CONFIR. ACTION LTR.
- CIR - CIRCULAR
- DEV - DEVIATION
- GLR - GENERIC LETTER
- IAL - IMMEDIATE ACTION LETTER
- INF - INFORMATION NOTICE
- LER - LICENSEE EVENT REPORT
- NC - NON-COMPLIANCE (1-2-3-4-5)
- NOV - NO VIOLATION 10 CFR 2,
- APP. C SEC. V.A
- OPN - OPEN ITEM

- ORD - ORDERS TO LICENSEE
- OTH - OTHER
- P20 - 10 CFR PART 20
- P21 - 10 CFR PART 21
- R3R - REGION III REQUESTS
- REC - RECOMMENDATIONS
- RIP - REGULATORY IMPROVEMENT PROGRAM
- SEP - SAFETY EVAL. PROGRAM
- SER - SAFETY EVAL. REPORT
- SGR - 73.71 SAFEGUARDS REPORTS
- SSF - SIGNIFICANT SAFETY FINDING
- TMI - THREE-MILE ISLAND ACTION ITEMS
- UNR - UNRESOLVED ITEMS
- WDM - WITHDRAWN
- 55E - 10 CFR 50.55(*) ITEMS

FUNCTIONAL AREA

- 1. OPERATIONS
- 2. RAD - CHEM
- 3. MAINTENANCE
- 4. SURVEILLANCE
- 5. EMERGENCY PREP
- 6. SEC/SAFEGUARDS
- 7. OUTAGES
- 8. TRAINING
- 9. LICENSING
- 10. QUALITY ASSURANCE
- 11. OTHER
- 12. FIRE PROT/H-K

REGIONS

- EPS P1
- FRP P1
- ML3 P2
- MOS P2
- MPS P3
- MM1 P3
- MM2 P3
- OL1 REC
- OL2 SC
- OPS TSS

Attachment 1 to RP 1201
Revised 12/04/87

Submitted by: B. Wetzel

Sec. Chief Approval _____

Item No.	Type Code	Func. Area	Date Entered
373100010-01 (Unit 1)	NC4	07	__ / __ / __
___ / ___ - ___ (Unit 2)			

Original Inspector	Resp. Sec.	Note
WEITZEL	OPS	

Responsible Inspector	Closed	Final Report
WEITZEL	08105188	88020

Interim Insp. Reports _____

Followup Date	Remarks:
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Status Code C

TYPE CODE		FUNCTIONAL AREA	SECTION
AEO - ABNORM. ENVIR. OCC.	ORD - ORDERS TO LICENSEE	1. OPERATIONS	EPS P1A
ALG - ALLEGATION	OTH - OTHER	2. RAD - CHEM	FRP P1B
BUL - BULLETIN	P20 - 10 CFR PART 20	3. MAINTENANCE	MLS P2A
CAL - CONFIR. ACTION LTR.	P21 - 10 CFR PART 21	4. SURVEILLANCE	NOS P2B
CIR - CIRCULAR	R3R - REGION III REQUESTS	5. EMERGENCY PREP	MPS P3A
DEV - DEVIATION	REC - RECOMMENDATIONS	6. SEC/SAFEGUARDS	NM1 P3B
GLR - GENERIC LETTER	RIP - REGULATORY IMPROVEMENT PROGRAM	7. OUTAGES	NM2 P3C
IAL - IMMEDIATE ACTION LETTER	SEP - SAFETY EVAL. PROGRAM	8. TRAINING	OL1 REC
INF - INFORMATION NOTICE	SER - SAFETY EVAL. REPORT	9. LICENSING	OL2 SCS
LER - LICENSEE EVENT REPORT	SGR - 73.71 SAFEGUARDS REPORTS	10. QUALITY ASSURANCE	OPS T&E
NC - NON-COMPLIANCE (1-2-3-4-5)	SSF - SIGNIFICANT SAFETY FINDING	11. OTHER	
NOV - NO VIOLATION 10 CFR 2, APP. C SEC. V.A	TMI - THREE-MILE ISLAND ACTION ITEMS	12. FIRE PROT/H-K	
OPN - OPEN ITEM	UNR - UNRESOLVED ITEMS		
	WDR - WITHDRAWN		
	55E - 10 CFR 50.55(*) ITEMS		

Attachment 1 to RP 1201
Revised 12/04/87

INSPECTION PLAN

FACILITY: LaSalle 1, 50-373/88020

SCHEDULED DATE(→): July 18-22, 1988

INSPECTOR(→): B. A. Wetzel

MODULE NO.	% COMP	INSPECTION FOCUS	ASSIGNED TO
30703B		Entrance / Exit	
61702		Surveillance of Core Power Distribution Limits (thermal limits)	
61705		Calibration of Nuclear Instrumentation Systems	
61706		Core Thermal Power Eval.	
61707		Determination of Rx Shutdown Margin	
72700		Additional Startup Testing	
92701		Followup of Open Item #50-373/86036-01 (review new CRD timing procedure) Non-Licensed Training (as appropriate)	
—		QA (as appropriate)	
92701		Followup of Violation # 373/88010-01 (Required No. of IRMs not operable)	

PLAN PREPARED BY: Beth A. Wetzel DATE: 7/12/88

PLAN APPROVED BY: [Signature] DATE: 7/12/88

PLAN REVIEWED BY: [Signature] DATE: 7/12/88

(PROJECT SECTION CHIEF)