

Commonwealth Edison Company
1400 Opus Place
Downers Grove, IL 60515-5701

cc: D. Hells
H. Peterson (Braidwood & Byron)
A. M. Stone (Dresden, Gasbilly & C)
10 CFR 50.4

ComEd

RS-00-96

October 6, 2000

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Dresden Nuclear Power Station, Units 2 and 3
Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Response to Regulatory Issue Summary 2000-14, "Preparation and Scheduling of Operator Licensing Examinations"

Reference: NRC Regulatory Issue Summary 2000-14, "Preparation and Scheduling of Operator Licensing Examinations," dated September 6, 2000

This letter provides our voluntary response to the request for information contained in the referenced Regulatory Issue Summary (RIS). The NRC requested a voluntary response to the RIS be submitted within 30 days of receipt of the RIS. We received RIS 2000-14 on September 6, 2000. Accordingly, this response is due to be submitted by October 6, 2000.

ML00376054

As requested, the Attachment, "Completed NRC Form 536s," contains a separate NRC Form 536 [August 2000], "Operator Licensing Examination Data," for each of our facilities addressed by the RIS. The information provided for each facility includes: the proposed examination preparation schedule for calendar years (CYs) 2001 through 2004; the estimated number of applicants and proposed dates for each of the initial operator license examinations through CY 2004; and the estimated number of candidates that plan to take the Generic Fundamentals Examination in CYs 2001 and 2002.

The CY 2001 license examination for Dresden Nuclear Power Station is already scheduled with NRC Region III as specified in a NRC letter dated September 6, 1999. Therefore, the attachment reflects only information related to proposed operator license examination dates and applicant numbers which is not included in previously agreed to examination schedules.

If you have any questions about this letter, please contact K. A. Ainger at (630) 663-7350.

Respectfully,



R. M. Krich
Vice President – Regulatory Services

Attachment

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Braidwood Station
NRC Senior Resident Inspector – Byron Station
NRC Senior Resident Inspector – Dresden Nuclear Power Station
NRC Senior Resident Inspector – LaSalle County Station
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

**OPERATOR LICENSING
EXAMINATION DATA**

Estimated burden per response to comply with this voluntary information collection request: 1 hour. This information collection is used to plan, budgets and resources for operator examinations. Send comments regarding burden estimate to the Records Management Branch (T-6 E6) U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001 or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0131), Office of Management and Budget Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

NRC REGION

III

A. PROPOSED EXAMINATION PREPARATION SCHEDULE

PROPOSED NUMBER	CY <u>01</u>	CY <u>02</u>	CY <u>03</u>	CY <u>04</u>
ESTIMATED NUMBER OF LICENSEE-PREPARED EXAMINATIONS	0	1	1	1
ESTIMATED NUMBER OF NRC-PREPARED EXAMINATIONS	0	0	0	0

B. INITIAL OPERATOR LICENSING EXAMINATIONS

PROPOSED NUMBER	CY <u>01</u>	CY <u>02</u>	CY <u>03</u>	CY <u>04</u>
NUMBER OF REACTOR OPERATORS	0	5	4	4
NUMBER OF SENIOR REACTOR OPERATORS-INSTANT	0	8	5	2
NUMBER OF SENIOR REACTOR OPERATORS-UPGRADE	0	0	2	3
NUMBER OF SENIOR REACTOR OPERATORS-LIMITED	0	0	0	0
PROPOSED DATES				
PRIMARY DATE	-	04/08/02 – 04/19/02	03/31/03 – 04/11/03	04/12/04 – 04/23/04
ALTERNATE DATE	-	04/15/02 – 04/26/02	04/07/03 – 04/18/03	04/19/04 – 04/30/04

C. PROPOSED GENERIC FUNDAMENTALS EXAMINATION (GFE) SCHEDULE

PROPOSED NUMBER	CY <u>01</u>		CY <u>02</u>	
	FIRST	SECOND	FIRST	SECOND
ESTIMATED NUMBER OF CANDIDATES	20	0	13	0

Commonwealth Edison Company
LaSalle Generating Station
2601 North 21st Road
Marseilles, IL 61341-9757
Tel 815-357-6761

cc: H. Peterson



May 12, 2000

United States Nuclear Regulatory Commission
Attention: NRC Region III Administrator
801 Warrenville Road
Lisle, IL 60532-4351


LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Request for Initial License Examination

Pursuant to 10 CFR 55.5(a), this letter is to request an Initial License Examination for the weeks of April 15, 2002 and April 22, 2002. LaSalle County Station is beginning an initial license course in January, 2001 that will contain 18 Reactor Operator and Senior Reactor Operator candidates. This course is scheduled for completion in March, 2002.

Please confirm the availability of this date by contacting Mr. Frank A. Spangenberg, III, Regulatory Assurance Manager, at (815) 357-6761, extension 2383.

Respectfully,


Charles G. Pardee
Site Vice President
LaSalle County Station

cc: NRC Document Control Desk
NRC Senior Resident Inspector - LaSalle County Station

MAY 13 2000

April 2, 2001

Mr. Oliver D. Kingsley, President
Exelon Nuclear
Exelon Generation Company, LLC
1400 Opus Place, Suite 500
Downers Grove, IL 60515

Dear Mr. Kingsley:

In response to your facility letters dated May 12, 2000, and October 6, 2000, we have tentatively scheduled an initial licensing examination for your operator license applicants at the LaSalle County Station during the weeks of April 8 and April 15, 2002. Validation of the examination will occur at the station during the week of March 18, 2002. In the unlikely event that we are unable to support the examination during the scheduled weeks, we will inform you immediately upon discovery of such conditions and make arrangements to administer the examination at a mutually acceptable date.

As stated in your letters and confirmed in telephone conversations between D. O'Rourke, LaSalle, and A. M. Stone, NRC, on January 3, 2001, and February 23, 2001, your staff will develop the examination. To support the examination administration date, we have tentatively scheduled the date of January 14, 2002, to begin our review of your submitted examination.

Your letters and conversations indicated you are training approximately 13-19 candidates for the examination. Please inform us if the number of candidates declines below 10 as this will impact the examination schedule. Please also inform us at your earliest opportunity if you discover you are unable to support the examination on the scheduled dates.

Once your staff has determined a schedule for examination development, please have them contact the Chief Examiner to arrange for a suitable examination outline submittal date for NRC review. The intent is for the examination outline to be submitted early in the examination development process. This is to preclude the need to make significant changes to developed examination material as a result of the NRC review of the outline. Mrs. Ann Marie Stone has been tentatively assigned as the Chief Examiner and can be reached at 630-829-9729.

A supplementary letter will be sent to the training department approximately 120 days prior to the examination outlining examination security expectations, listing the materials required by the NRC to conduct the examination, reconfirming the examination dates, and reconfirming the number of candidates you have in the training program. If you have any questions concerning this information, please contact Mrs. Ann Marie Stone of my staff at 630-829-9729.

ML 010950112

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly 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/index.html> (the Public Electronic Reading Room).

Sincerely,



David E. Hills, Chief
Operations Branch
Division of Reactor Safety

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

cc: W. Bohlke, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President - Mid-West Regional
J. Cotton, Senior Vice President - Operations Support
J. Benjamin, Vice President - Licensing and Regulatory Affairs
H. Stanley, Operations Vice President
J. Skolds, Chief Operating Officer
R. Krich, Director - Licensing
R. Helfrich, Senior Counsel, Nuclear
DCD - Licensing
C. Pardee, Site Vice President
M. Schiavoni, Station Manager
W. Riffer, Regulatory Assurance Supervisor
M. Aguilar, Assistant Attorney General
Illinois Department of Nuclear Safety
State Liaison Officer
Chairman, Illinois Commerce Commission
G. Kaegi, Training Department

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SRI LaSalle

C. Ariano (hard copy)

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BAH3

M. A. Bies (Correspondence Copy)

July 25, 2001

Mr. Oliver D. Kingsley, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Dear Mr. Kingsley:

This is to notify you of a change from our letter dated April 2, 2001, in which we confirmed that your staff would develop the LaSalle County Station initial licensing examinations tentatively scheduled for the weeks of April 8 and April 15, 2002. As discussed during a telephone conversation between Mr. D. O'Rourke, LaSalle, and Mr. D. Pelton, Principal Examiner, on July 11, 2001, the examination will now be developed by the NRC staff. This change is to facilitate certification of an NRC examiner.

The NRC will prepare the examinations based on the guidelines in Revision 8, Supplement 1, of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." Your staff will be given the opportunity to review the examinations the week of March 18, 2002.

To meet the above schedule, it will be necessary for your staff to furnish the reference materials identified in Attachment 2 of ES-201 by October 1, 2001. Any delay in receiving the required reference materials, or the submittal of inadequate or incomplete materials, may cause the examinations to be rescheduled.

This letter contains information collections that are subject to the *Paperwork Reduction Act of 1995* (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget, approval number 3150-0018, which expires on April 30, 2003.

The public reporting burden for this collection is estimated to average 50 hours per response, including the time for reviewing instructions, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments on any aspect of this collection of information, including suggestions for reducing the burden, to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, or by Internet electronic mail at BJS1@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0018), Office of Management and Budget, Washington, D.C. 20503.

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

ML012110184

O. Kingsley

-2-

Thank you for your cooperation in this matter. Mr. D. O'Rourke has been advised of the policies and guidelines referenced in this letter. If you have any questions regarding the NRC's examination procedures and guidelines, please contact Mr. D. Pelton at 630-829-9732, or me at 630-829-9733.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly 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/index.html> (the Public Electronic Reading Room).

Sincerely,



David E. Hills, Chief
Operations Branch
Division of Reactor Safety

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

cc: W. Bohlke, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President - Mid-West Regional
J. Cotton, Senior Vice President - Operations Support
J. Benjamin, Vice President - Licensing and Regulatory Affairs
H. Stanley, Operations Vice President
J. Skolds, Chief Operating Officer
R. Krich, Director - Licensing
R. Helfrich, Senior Counsel, Nuclear
DCD - Licensing
C. Pardee, Site Vice President
M. Schiavoni, Station Manager
W. Riffer, Regulatory Assurance Supervisor
M. Aguilar, Assistant Attorney General
Illinois Department of Nuclear Safety
State Liaison Officer
Chairman, Illinois Commerce Commission
G. Kaegi, Training Department

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cc: D. Lett

December 5, 2001

Mr. Oliver D. Kingsley, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Dear Mr. Kingsley:

In a telephone conversation on December 3, 2001, between Mr. Entwistle, Operations Training Manager, and Mr. M. Bielby, Chief Examiner, arrangements were made for the administration of licensing examinations at the LaSalle County Station the weeks of April 8, 2002 and April 15, 2002. In addition, the NRC will make an examination validation visit to your facility the week of March 18, 2002.

The NRC will prepare the examinations based on the guidelines in Revision 8, Supplement 1, of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." Your staff will be given the opportunity to review the examinations the week of March 18, 2002.

To meet the above schedule, it will be necessary for your staff to furnish the reference materials identified in Attachment 2 of ES-201 by December 17, 2001. Any delay in receiving the required reference materials, or the submittal of inadequate or incomplete materials, may cause the examinations to be rescheduled.

In order to conduct the requested written examinations and operating tests, it will be necessary for your staff to provide adequate space and accommodations in accordance with ES-402, and to make the simulation facility available on the dates noted above. In accordance with ES-302, your staff should retain the original simulator performance data (e.g., system pressures, temperatures, and levels) generated during the dynamic operating tests until the examination results are final.

Appendix E of NUREG-1021 contains a number of NRC policies and guidelines that will be in effect while the written examinations and operating tests are being administered.

To permit timely NRC review and evaluation, your staff should submit preliminary reactor operator and senior reactor operator license applications (Office of Management and Budget (OMB) approval number 3150-0090), medical certifications (OMB approval number 3150-0024), and waiver requests (if any) (OMB approval number 3150-0090) at least 30 days before the first examination date. If the applications are not received at least 30 days before the examination date, a postponement may be necessary. Signed applications certifying that all training has been completed should be submitted at least 14 days before the first examination date.

ML 013390622

This letter contains information collections that are subject to the *Paperwork Reduction Act of 1995* (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget, approval number 3150-0018, which expires on April 30, 2003.

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Thank you for your cooperation in this matter. Mr. Entwistle has been advised of the policies and guidelines referenced in this letter. If you have any questions regarding the NRC's examination procedures and guidelines, please contact M. Bielby at 630-829-9762, or me at 630-829-9733.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly 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/index.html> (the Public Electronic Reading Room).

Sincerely,



David E. Hills, Chief
Operations Branch
Division of Reactor Safety

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

See Attached Distribution

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cc: W. Bohlke, Senior Vice President, Nuclear Services
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J. Cotton, Senior Vice President - Operations Support
J. Benjamin, Vice President - Licensing and Regulatory Affairs
R. Hovey, Operations Vice President
J. Skolds, Chief Operating Officer
R. Krich, Director - Licensing
R. Helfrich, Senior Counsel, Nuclear
DCD - Licensing
C. Pardee, Site Vice President
M. Schiavoni, Station Manager
W. Riffer, Regulatory Assurance Supervisor
M. Aguilar, Assistant Attorney General
Illinois Department of Nuclear Safety
State Liaison Officer
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Exelon Generation
LaSalle Generating Station
2601 North 21st Road
Marseilles, IL 61341-9757
Tel 815-357-6761

www.exeloncorp.com

April 26, 2002

United States Nuclear Regulatory Commission
Attention: NRC Region III Administrator
801 Warrenville Road
Lisle, IL 60532-4351

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: 2002 LaSalle NRC Initial License Exam

In accordance with NUREG 1021, ES 402 Section E, LaSalle County Station has completed a facility review of the 2002 LaSalle NRC Initial License Exam, administered between April 8, 2002 and April 19, 2002.

During the review, facility representatives identified the issues listed in Attachment 1. Please consider these comments in the grading of the written examinations.

Should you have any questions concerning this letter, please contact Mr. Glen T. Kaegi, Regulatory Assurance Manager, at (815) 415-2800.

Respectfully,



George P. Barnes
Site Vice President
LaSalle County Station

Attachment

cc: NRC Document Control Desk
NRC Senior Resident Inspector - LaSalle County Station

APR 30 2002

Attachment 1

1. The following question was identified to contain no correct answers:

SRO Question 86

The correct answer per the Answer Key was 'C'. The stem of the question was looking at a failure of the LPCS Low Pressure Injection Line pressure switch. Per Technical Specification Table 3.3.5.1, Table 3.3.5.1-1 (Page 3.3.5.1-8), this is Function 1.g.

Looking at the applicability of Required Action D.2, there is a NOTE that states:

“Only applicable for Functions 1.d and 2.d.”

Therefore answer C is not correct, as it contains Required Action (RA) D.2, which does not apply to Function 1.g.

The reason for distracter B not being correct is that it states Technical Specifications 3.3.5.1 RA D.1 and D.3 only. This is not correct, as Technical Specifications 3.5.1 RA A.1 also applies. Allowing B to stand as a correct answer would be negative training since it would essentially be stating that actions for an inoperable ECCS pump would not be required.

2. The following three questions were identified to contain two correct answers:

RO Question 36 / SRO Question 11

Per the Answer Key, answer A is correct. Facility representatives believe that distracter 'C' is also correct. LGA-VR-01 contains a note at the top of Page 7 of 27 that states:

“Since an isolation signal from either Unit will isolate both Unit 1 and Unit 2 VR systems (with the exception of tunnel dP), it may be necessary to defeat the Group 1 isolation signals for both Units.”

Since the question is not written to be unit-specific, if the event occurred on Unit 1 with the Unit 2 MSIVs open, bypassing the Unit 2 Main Steam Line Delta-T trips would be a correct action for the startup of the Unit 2 Reactor Building Ventilation System.

RO Question 84 / SRO Question 59

Per the Answer Key, answer A is correct. Facility representatives believe that distracter 'C' is also correct. LOP-RT-02, REACTOR WATER CLEANUP SYSTEM (RWCU)-STARTUP AND PUMP TRANSFER, Prerequisite B.8, states:

“Radiation Protection notified of pending startup of RWCU to evaluate for additional surveys in affected areas.”

Since procedural guidance is provided to notify RP, answer 'C' is also correct.

SRO Question 79

Per the Answer Key, answer A is correct. Facility representatives believe that distracter 'C' is also correct. The use of the ADS Division 1 Keylock switches in the AEER will work to carryout pressure control three hours after a SBO and would be available regardless of the procedure used. LGA-004 is a pressure control procedure. By performing an RPV Blowdown, pressure is being manually lowered (i.e. controlled).

3. The following four questions were identified to have only one correct answer, but require some enhancement.

RO Question 6

For an enhancement, recommend changing answer 'A' to read "no additional actions." There was some confusion with the students over the term "same logic string." Although 'A' is the only correct answer, this would clear up any confusion.

RO Question 29 / SRO Question 4

The question assumes flow to the Reactor Pressure Vessel since the only choices were flow increasing or decreasing and not remains as-is. Recommend stating that RCIC is injecting to the Reactor Pressure Vessel to the stem to eliminate the assumption that all flow is returning to the Cycled Condensate Storage Tank, which is an allowable flowpath in the Pressure Control Mode.

RO Question 59 / SRO Question 34

Comments from the students mentioned that the Hydrogen Recombiner Gas Inlet Valve could be positioned locally at the skid. This is only true from the fact that ALL valves may be positioned locally, however there is no procedure guidance for this specific valve. Facility representatives agree that only correct answer is 'B'. Recommend rewording the question for future use to state "...may be positioned IAW station procedures from..."

RO Question 85 / SRO Question 60

Recommend changing the stem from "NRC Exposure Limits" to "Federal Exposure Limits." This would be consistent with station procedure terminology.

4. Identified Security Issue During Validation

Facility representatives identified a security issue pertaining to Digital Feedwater/Reactor Recirculation Trending during the validation period. The Initial License Exam materials were revised prior to the administration period.

A review of the 2001 Licensed Operator Requalification Annual Operating Exam indicates that there was no use of Digital Feedwater software or controls. The Digital Feedwater and Recirculation software was installed, but separate from the simulator software used at the time of the exam.

5. Keith Walton asked for feedback on the following exam questions:

RO Question #1, 21, 29, 36, 72, 93 and SRO question #86.

RO Question 1

Facility representatives reviewed this question and believe that the question is correct as written and no enhancements are required. The question was missed by 2 of the 6 Reactor Operator Candidates. The training material on the topic was reviewed for accuracy. Lesson Plan "LGA-010, Failure to Scram", page 23 of 47 states:

"Lowering level reduces natural circulation driving head and core flow, thereby reducing reactor power and the heat rate to the Suppression Pool."

RO Question 21

Facility representatives reviewed this question and believe that the question is correct as written and no enhancements are required. The question was missed by 4 of the 6 Reactor Operator Candidates. Training material was reviewed. Lesson Plan 063, "Low Pressure Core Spray System," Page 24 of 34 states:

- "1. Improved Technical Specification 3.3.5.1 Emergency Core Cooling System (ECCS) Instrumentation
2. Improved Technical Specification 3.5.1 ECCS - Operating
3. Improved Technical Specification 3.5.2 ECCS - Shutdown

For ILT instruction, provide a copy of the applicable Improved Technical Specifications to facilitate discussion and review."

RO Question 72

Facility representatives reviewed this question and believe that the question is correct as written and no enhancements are required. The question was missed by 13 of the 17. Training materials were reviewed. Lesson Plan 050, "Process Computer System," page 15 of 54 states:

"Power to the Annunciator System (previously referred to as the Hathaway SOE Recorder) is supplied from ESS Divisions 1 and 2. Each portion of the power supply is fed from an AC and a DC source to provide maximum reliability.

The AC and DC sources supply power to a regulated power supply. The AC is from MCC 135X-3 (division 1) MCC 136X-3 (division 2). This 480 VAC power is stepped down to 120 VAC by a transformer located in the respective MCC. The AC power is rectified to DC and is in parallel with the DC Battery Supply. DC power is provided from 111Y."

Also reviewed was Lesson Plan 012, "TSC/Security DG and UPSs," page 19 of 34 states:

"The following is a listing of the supplies and loads to/from the various UPS/inverters.

Process Computer UPS:	Process Computers and Support Equipment
TSC UPS	Prime Computer and Support"

RO Question 93

Facility representatives reviewed this question and believe that the question is correct as written and no enhancements are required. The question was missed by 12 of the 17. Training materials were reviewed. Lesson Plan 022, "Reactor Recirculation System," page 46 of 53 states:

- "1. Reactor Power operation with one Recirculation Pump is permitted, provided all of the following conditions are met:
 - a. INITIATE required actions of Tech Spec 3.4.1 for Single Loop Operation.
 - 1) INCREASE MCPR
 - 2) REDUCE APLHGR"

REACTOR BUILDING VENTILATION STARTUP

FOLLOWING SYSTEM ISOLATION

A. PURPOSE

To allow the operator to restart the Reactor Building Ventilation System (VR) on both units by defeating MSL high delta temperature isolations and reactor building ventilation isolations on high drywell pressure and low-low RPV level.

B. PREREQUISITES

1. Entry Conditions:

a. INITIATE LGA/LSAMG Support Procedure actions as directed by: |

1) LGA-02, Secondary Containment Control.

2) LSAMG-102, RPV, Containment and Radioactivity Release Control. |

3) LSAMG-202, RPV, Containment and Radioactivity Release Control. |

b. Radiological conditions have been evaluated and allow access to areas and equipment designated by this emergency procedure, or arrangements have been made to determine radiological conditions and accessibility.

2. Personnel:

a. 1 NSO.

b. 1 Equipment Attendant.

c. 1 NLO or Electrical Maintenance person for Temporary Modifications. |

C. (continued)

NOTES

1. Since an isolation signal from either Unit will isolate both Unit 1 and Unit 2 VR systems (with the exception of tunnel dP), it may be necessary to defeat the Group 1 isolation signals for both Units.
2. LGA-MS-01 defeats Main Steam Tunnel Isol Logic in an effort to establish the condenser as a heat sink. The requirements of both LGA-MS-01 and this procedure must be considered.

- [] 5. IF MSIVs are open, at CR
Panel 1(2)H13-P601,

AND

LGA-MS-01, Main Steam
Isolation Heat Sink, has not
defeated Steam Tunnel Diff
Temp Isol Logic,

THEN:

- a. Verify Steam Tunnel DIFF
Temp Isol Logic Bypass
Keys inserted and turned
to Bypass at CR Panel
1(2)H13-P632/P642:

- | | | |
|-----|---|---|
| [] | • | DIV 1 MS PIP TUNNEL
DIFF TEMP BYPASS SIG
A, 1(2)E31A-S750. |
| [] | • | DIV 1 MS PIPE TUNNEL
DIFF TEMP BYPASS SIG
C, 1(2)E31A-S752. |
| [] | • | DIV 2 MS PIPE TUNNEL
DIFF TEMP BYPASS SIG
B, 1(2)E31A-S751. |
| [] | • | DIV 2 MS PIPE TUNNEL
DIFF TEMP BYPASS SIG
D, 1(2)E31A-S753. |

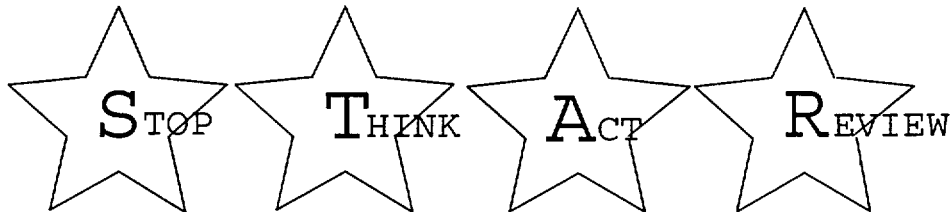
LaSalle Station

UNIT 1, 2 AND COMMON

OPERATING DEPARTMENT PROCEDURE

REACTOR WATER CLEAN-UP SYSTEM (RWCU) - STARTUP AND PUMP TRANSFER

**LOP-RT-02
Revision 27
February 1, 2002**



Procedure Responsibility/Review/Approval Requirements	
Responsible Department Head:	SOS
Minimum Review Type:	TR
Required Cross-Discipline Review(s):	N/A
Approval Position Required:	SOS
Specific Requirements:	
1. Review/Approval requirements apply to non-editorial procedure revisions.	

Level of Use
Reference

RWCU System pressures verified to be approximately equal to Reactor/Feedwater pressure using local instruments **and**

No section of the system was isolated or had work performed that could affect fill and vent except where that section or component can be independently filled, vented and pressurized by an approved procedure or Work Package.

- B.4 RWCU system is lined up per Electrical Checklist LOP-RT-01E(02E).
- B.5 RWCU system is lined up per Mechanical Checklist LOP-RT-01M(02M).
- B.6 For system startup and shutdown, Filter/Demineralizers are shutdown and isolated (AIR 373-200-96-00042).
- B.7 Control Rod Drive System in operation, if available.
- B.8 Radiation Protection notified of pending startup of RWCU to evaluate for additional surveys in affected areas.

C. **PRECAUTIONS**

- C.1 To prevent pump run out, maintain RWCU System flow less than 360 gpm.
- C.2 Minimize time in vicinity of RWCU piping, pumps, and Heat Exchangers to minimize radiation exposure.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. As required by Required Action A.1 and referenced in Table 3.3.5.1-1.	D.1 -----NOTES----- 1. Only applicable in MODES 1, 2, and 3. 2. Only applicable for Functions 1.d, 1.e, 1.f, 1.g, 2.d, 2.e, and 2.f. -----	
	Declare supported feature(s) inoperable when its redundant feature ECCS initiation capability is inoperable.	1 hour from discovery of loss of initiation capability for feature(s) in both divisions
	<u>AND</u>	
	D.2 -----NOTE----- Only applicable for Functions 1.d and 2.d. ----- Declare supported feature(s) inoperable.	24 hours from discovery of loss of initiation capability for feature(s) in one division
	<u>AND</u>	
		(continued)

Table 3.3.5.1-1 (page 1 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Low Pressure Coolant Injection-A (LPCI) and Low Pressure Core Spray (LPCS) Subsystems					
a. Reactor Vessel Water Level - Low Low Low, Level 1	1,2,3, 4(a),5(a)	2 ^(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ -147.0 inches
b. Drywell Pressure - High	1,2,3	2 ^(b)	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 1.77 psig
c. LPCI Pump A Start - Time Delay Relay	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5	≤ 5.5 seconds
d. Reactor Steam Dome Pressure - Low (Injection Permissive)	1,2,3 4(a),5(a)	2 2	D B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6 SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490 psig and ≤ 522 psig ≥ 490 psig and ≤ 522 psig
e. LPCS Pump Discharge Flow - Low (Bypass)	1,2,3, 4(a),5(a)	1	D	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5	≥ 1240 gpm and ≤ 1835 gpm
f. LPCI Pump A Discharge Flow - Low (Bypass)	1,2,3, 4(a),5(a)	1	D	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5	≥ 1330 gpm and ≤ 2144 gpm
g. LPCS and LPCI A Injection Line Pressure - Low (Injection Permissive)	1,2,3 4(a),5(a)	1 per valve 1 per valve	D B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6 SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490 psig and ≤ 522 psig ≥ 490 psig and ≤ 522 psig
h. Manual Initiation	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.5	NA

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, "ECCS - Shutdown."

(b) Also required to initiate the associated diesel generator (DG).

Course/Program:	LaSalle LGA Training	Module/LP ID:	510
Title:	© LGA-010, Failure to Scram	Course Code:	01OSim2
Author:	M. Johnson	Revision/Date:	5 / October, 2001
Prerequisites:	Appropriate Program Description	Revision By:	John Cannon
		Est. Teach Time:	4 Hours

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Content/Skills

- b. If instead high radiation interlocks are not bypassed, the condenser vacuum goes away when OG isolates. Now steam is discharged through the SRVs into the suppression pool, radionuclides not scrubbed in the pool will accumulate in the containment atmosphere, from which they are vented to keep primary containment pressure below 60 psig.
 - 1) Even if processed prior to release by the Standby Gas Treatment System, the public dose will be higher than if these radionuclides were retained in or processed by the Offgas System.
- c. Further, discharging steam containing long-lived radioactivity to the containment instead of to the main condenser and Offgas System may complicate recovery from the event by limiting or precluding access to systems and locations within the reactor building, thereby increasing the overall risk to the health and safety of the public.

D. Theory For Lowering Level To Lower Reactor Power

- 1. Lowering level reduces natural circulation driving head and core flow, thereby reducing reactor power and the heat rate to the Suppression Pool. This process occurs as follows:
 - a. The reactor is in a natural recirculation mode following the recirc pump trip. The natural circulation driving head is a function of the fluid density difference between the regions inside and outside the shroud and the height of the fluid columns.
 - b. As RPV water level is lowered, the height of the fluid columns is reduced, thereby reducing the natural circulation driving head.
 - c. As the natural circulation driving head is reduced, the natural circulation flow through the core is reduced.
 - d. The reduced core flow results in a reduced steam removal rate from the core.
 - e. The reduced steam removal rate results in an increased void fraction inside the shroud.
 - f. The increased void fraction adds negative reactivity to the reactor.

Course/Program:	Operations Training Program - Initial and Continuing Training	Module/LP ID:	Chapter 063
Title:	® Low Pressure Core Spray (LPCS)	Course Code:	01ODSL
Author:	J Rivers Walsh	Revision/Date:	3, 04/19/2001
Prerequisites:	Appropriate Program Description	Revision By:	J. E. Ross
		Est. Teach Time:	2 Hours

VII. TECHNICAL SPECIFICATIONS**A. Safety Limits and Limiting Conditions For Operation (LCOs)**

Low Pressure Core Spray is an Improved Technical Specification required system. The Specifications that apply to the LP System are as follows:

1. Improved Technical Specification 3.3.5.1 Emergency Core Cooling System (ECCS) Instrumentation
2. Improved Technical Specification 3.5.1 ECCS - Operating
3. Improved Technical Specification 3.5.2 ECCS - Shutdown

Objective 063.00.22

For ILT instruction, provide a copy of the applicable Improved Technical Specifications to facilitate discussion and review.

Course/Program:	Operations Training Program – Initial and Continuing Training	Module/LP ID:	050
Title:	© Process Computer System	Course Code:	01OSDL
Author:	J. Connon	Revision/Date:	2 03/21/01
Prerequisites:	Appropriate Program Description	Revision By:	Don Puckett
		Est. Teach Time:	2 Hours

12. 100 Window Matrix Display

This matrix on the operator's console provides alarm and status indication to the operator. It aids the operator in the selection of demandable functions. The windows are arranged in a ten by ten array. There are ten windows across the top row which display computer status and alarm indications. Of the ninety remaining windows, fourteen are not used and the other seventy six windows are used to display the operator demandable programs and functions.

There is a number located in the lower left corner of each window. This number represents the FUNCTION number that should be selected to demand this function. When a particular function is selected, the appropriate window will light up on this display.

There may be letters located in the lower right corner of the window. These letters will indicate other panel thumbwheel, keylock or pushbuttons to be operated to call up the appropriate demandable function represented by this window. The letters will normally be the first letter of the thumbwheels name (i.e. (N)umber, (I)nterval, (V)alue, (P)lant Identification, Point (C)oordinate, (M)emory Change, and (A)ction).

Use Figure 50-05, Process Computer 100 Window Display

B. Alarms and Trips

1. Horn and Chime

There is also a buzzer and a chime, both located inside the operators panel. The buzzer is used to signal when an alarming condition for a computer point or calculated value exists. The chime sounds when the point returns to a normal condition.

C. Power Supplies

1. Annunciator System Power Supplies

Power to the Annunciator System is supplied from ESS Divisions 1 and 2. Each portion of the power supply is fed from an AC and a DC source to provide maximum reliability.

The AC and DC sources supply power to a regulated power supply. The AC is from MCC 135X-3 (division 1) MCC 136X-3 (division 2). This 480 VAC power is stepped down to 120 VAC by a transformer located in the respective MCC. The AC power is rectified to DC and is in parallel with the DC Battery Supply. DC power is provided from 111Y

(division 1) and 112Y (division 2). If the normal AC supply fails, the DC supply will automatically provide power to the annunciator system. The regulated power supply filters and provides a constant source of power to the inverter. In the event of an inverter failure, the inverted AC supply can be bypassed manually to provide the system with an unfiltered AC supply.

2. Process Computer Power Supplies

The Process Computer uses an uninterruptable power supply (UPS) located in the RPS M/G and distribution room (Auxiliary Building, 749' Elevation). Operation of the UPS is detailed in LOP-CX-101. Rectified AC from 135X-3 is fed in parallel with a DC supply from 250 VDC MCC 121Y, to an inverter which then supplies AC to the system. Upon failure of the normal AC supply, the DC supply will automatically pick up the load. The computer system's power supply will automatically shift over to the alternate source (MCC 235X-2) if the normal AC and DC sources fail via the static switch or a manual bypass switch.

If an inverter failure occurs the Alarm Printer of the unit that had the inverter failure will give I/O error messages and system failure messages. All digital indications will fail in their alarmed condition, so the Alarm Printer will be flooded with alarm messages.

When power is restored the plant digitals will automatically indicate normally. To regain analog indications, however, the computer must be reinitialized after power is restored. If the computer cannot be reinitialized, the analog points can be individually restored to scan via the operators console.

NOTE: This could take quite a while, there are over 1200 digital points and over 900 analog computer points per unit.

For a detailed explanation of UPS operation, see Chapter 12 of the LaSalle License System Descriptions.

3. GSEP, Point History & CMSS Power Supplies

The Technical Support Center Uninterruptable Power Supply is used to power these computers. For a detailed explanation of their UPS operation, see Chapter 12 of the LaSalle System Descriptions.

Use Figure 50-08, Process Computer Uninterruptable Power Supply

Course/Program:	Operations Training Program – Initial and Continuing Training	Module/LP ID:	012
Title:	© TSC/Security DG and UPS's	Course Code:	01OSDL
Author:	G. Bisbee	Revision/Date:	1, 12/12/00
Prerequisites:	Appropriate Program Description	Revision By:	Jeff Barker
		Est. Teach Time:	2 hours

- c. Ambient temp. cannot exceed 104 degrees F. In fact, a CECo task force report, dated February 1, 1989 concludes that sustained operation at elevated temperatures is the single-most contributing factor in UPS inverter failures. It is therefore very important that any ventilation problems that arise be addressed quickly to maintain a favorable environment for the UPS.

F. Loads

The following is a listing of the supplies and loads to/from the various UPS/inverters.

1. Process Computer UPS

Input:

DC MCC 121Y(221Y)

AC Normal MCC 135(235)X-3

AC Alternate MCC 235(135)X-2

Loads:

Process Computers and Support Equipment:

Bulk Core Memory

Central System Unit

Analog and Digital Input Cabinets

On Demand Log Typewriter

Alarm Typer

Periodic Log Typewriter

I/O Typewriter

B.O.P. Periodic Typewriter

Video Display Controller

Color CRT#3

R001A & B Pen Recorders

Line Printer

Objective 012.00.18

Mag Tape Handlers

1(2)IP02E UPS Panel

Digital I/O Cabinets

Aux. System Unit

Disc Memory Storage Drives

Card Readers

2. TSC UPS

Input:

DC TSC 125 VDC Battery panel 0DC22E

AC Normal MCC 231B-7 Comp. A6 (Comp. B1)

AC Alternate MCC 132Y-2(232Y-2)

Loads:

Prime Computer and Support:

Prime CPU

Disc Storage Units and Modules

Magnetic Tape Units

Users Terminal

Processor Modem

Line Printers

3rd Radio Frequency Communication System Panel
0CQ15E Cubicles 1, 2 and 4.

Course/Program:	Operations Training/Initial & Continuing Training	Module/LP ID:	Chapter 022-1
Title:	© Reactor Recirculation System	Course Code:	01OSDL
Author:	F. Hogue	Revision/Date:	0 12/17/01
Prerequisites:	Appropriate Program Description	Revision By:	G. Beale
		Est. Teach Time:	3 Hours

Content/Skills

Activities/Notes

2. During pump upshift the position of the Reactor Recirc Flow Control Valve will be reduced to the minimum position. As a result, FW Flow may fall below the 20% FW Flow Interlock. If desired, it is permissible to momentarily bypass the Low FW Flow Interlock and the Low Power Interlock.

D. Off-Normal Operation

1. If the LFMG Motor Drive Breaker trips, then the control switch must be taken to STOP or PTL in order to reset the trip.
2. Reactor Power operation with one Recirculation Pump is permitted, provided all of the following conditions are met:
 - a. INITIATE required actions of Tech Spec 3.4.1 for Single Loop Operation.
 - 1) • INCREASE MCPR
 - 2) • REDUCE APLHGR
 - 3) • PERFORM LIP-NR-519A/B, Unit 1 APRM Channel A, B, C, D, E, and F and RBM Channel A/B Single Recirculation Loop Setpoint Entry and Exit.
 - 4) NOTIFY IMD to perform LIS-NR-107, Unit 1 APRM/RBM Flow Converter to Total Core Flow Adjustment.
 - 5) DECREASE FCV position to minimum for tripped Recirc pump.
 - 6) When less than 350 rpm, PLACE all breakers for tripped RECIRC pump in PTL.
 - 7) INSERT control rods to reduce core thermal power to less than or equal to 30%.
 - 8) • ISOLATE Condensate Polishers one at a time to maintain >1560 gpm flow through each operating demineralizer (this step will be accomplished throughout entire unit shutdown).
 - 9) MAINTAIN Condensate System Flow between 5000-8000 gpm (as measured through the condensate polishers) for each running CD/CB pump.