

10 CFR 50.90

RS-12-010  
RA-12-007  
TMI-12-004

July 6, 2012

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

Clinton Power Station, Unit 1  
Facility Operating License No. NPF-62  
NRC Docket No. 50-461

Dresden Nuclear Power Station, Units 2 and 3  
Renewed 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

Limerick Generating Station, Units 1 and 2  
Facility Operating License Nos. NPF-39 and NPF-85  
NRC Docket Nos. 50-352 and 50-353

Oyster Creek Nuclear Generating Station  
Renewed Facility Operating License No. DPR-16  
NRC Docket No. 50-219

Peach Bottom Atomic Power Station, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-44 and DPR-56  
NRC Docket Nos. 50-277 and 50-278

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

Three Mile Island Nuclear Station, Unit 1  
Renewed Facility Operating License No. DPR-50  
NRC Docket No. 50-289

Subject: License Amendment Request to Change Technical Specification Unit Staff Qualifications Education and Experience Eligibility Requirements for Licensed Operators

- References:
1. Letter from K. R. Jury (Exelon Generation Company, LLC) to U.S. NRC, "Revision to Technical Specification Change Request - Clarification of Requirements for Licensed Operator Qualification and Training," dated June 19, 2002
  2. Letter from P. B. Cowan (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "License Amendment Request to Change Technical Specification Unit Staff Qualifications Education and Experience Eligibility Requirements for Licensed Operators," dated July 19, 2007

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC) is requesting changes to the Technical Specifications (TSs), Appendix A of the facility operating licenses listed above.

The proposed changes will change the licensed operator training and qualification education and experience eligibility requirements made originally in Reference 1 and revised in Reference 2 to the eligibility requirements specified in this license amendment request. The proposed eligibility requirements correspond to the eligibility requirements contained in the current National Academy for Nuclear Training (NANT) Academy Document, ACAD 10-001, "Guidelines for Initial Training and Qualification of Licensed Operators."

Attachment 1 to this letter provides the evaluation of the proposed changes and the no significant hazards consideration determination. Attachment 2 provides the existing TS pages marked-up to show the proposed changes.

These proposed changes have been reviewed and approved by each station's Plant Operations Review Committee and by the Nuclear Safety Review Board.

There are no regulatory commitments contained within this letter. EGC requests approval of the proposed license amendment by July 6, 2013. Once approved, the amendments shall be implemented within 60 days.

The States of Illinois, New Jersey, and Pennsylvania are being notified of this request for changes to the TSs by transmitting a copy of this letter and its attachments to the designated State officials.

Should you have any questions concerning this letter, please contact Frank J. Mascitelli at (610) 765-5512.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 6<sup>th</sup> day of July 2012.

Respectfully,

A handwritten signature in dark ink, appearing to read 'Michael D. Jesse', is written over a horizontal line.

Michael D. Jesse  
Director - Licensing and Regulatory Affairs  
Exelon Generation Company, LLC

Attachments: 1. Evaluation of Proposed Changes  
2. Proposed Technical Specifications (Marked-Up Pages)

cc: Regional Administrator - NRC Region I  
Regional Administrator - NRC Region III  
J. S. Wiebe - NRC Project Manager, NRR - (Exelon Fleet)  
NRC Senior Resident Inspector - Braidwood Station  
NRC Senior Resident Inspector - Byron Station  
NRC Senior Resident Inspector - Clinton Power Station  
NRC Senior Resident Inspector - Dresden Nuclear Power Station  
NRC Senior Resident Inspector - LaSalle County Station  
NRC Senior Resident Inspector - Limerick Generating Station  
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station  
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station  
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station  
NRC Senior Resident Inspector - Three Mile Island Nuclear Station Unit 1  
NRC Project Manager, NRR - Braidwood Station  
NRC Project Manager, NRR - Byron Station  
NRC Project Manager, NRR - Clinton Power Station  
NRC Project Manager, NRR - Dresden Nuclear Power Station  
NRC Project Manager, NRR - LaSalle County Station  
NRC Project Manager, NRR - Limerick Generating Station  
NRC Project Manager, NRR - Oyster Creek Nuclear Generating Station  
NRC Project Manager, NRR - Peach Bottom Atomic Power Station  
NRC Project Manager, NRR - Quad Cities Nuclear Power Station  
NRC Project Manager, NRR - Three Mile Island Nuclear Station Unit 1  
Illinois Emergency Management Agency - Division of Nuclear Safety  
Director, Bureau of Radiation Protection - Pennsylvania Department of  
Environmental Resources  
Director, Bureau of Nuclear Engineering, New Jersey Department of  
Environmental Protection  
Chairman, Board of County Commissioners of Dauphin County, PA  
Chairman, Board of Supervisors of Londonderry Township, PA  
Mayor of Lacey Township, Forked River, NJ  
S. T. Gray, State of Maryland  
R. R. Janati, Commonwealth of Pennsylvania

**Attachment 1**  
**Evaluation of Proposed Changes**

Technical Specification Unit Staff Qualification Changes for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Limerick Generating Station, Oyster Creek Nuclear Generating Station, Peach Bottom Atomic Power Station, Quad Cities Nuclear Power Station and Three Mile Island Nuclear Station

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## **Attachment 1 Evaluation of Proposed Changes**

### **1.0 DESCRIPTION**

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) is requesting that the Technical Specifications (TSs), Appendix A of the Facility Operating Licenses for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Limerick Generating Station, Oyster Creek Nuclear Generating Station, Peach Bottom Atomic Power Station, Quad Cities Nuclear Power Station, and Three Mile Island Nuclear Station under Facility Operating License Nos. NPF-72 and NPF-77; NPF-37 and NPF-66; NPF-62; DPR-19 and DPR-25; NPF-11 and NPF-18; NPF-39 and NPF-85; DPR-16; DPR-44 and DPR-56; DPR-29 and DPR-30; and DPR-50, respectively, be amended as proposed to permit changes to the Unit (or Facility) Staff Qualification education and experience eligibility requirements for licensed operators. The proposed education and eligibility requirements for licensed operators are the same requirements contained in the most current National Academy for Nuclear Training (NANT) Academy Document, ACAD 10-001, February 2010, "Guidelines for Initial Training and Qualification of Licensed Operators" (Reference 1). The proposal will bring EGC into alignment with current industry practices.

This proposed License Amendment Request (LAR) will replace the TS Sections 5.3.1/6.3.1, "Unit (or Facility) Staff Qualifications," exception to ANSI N18.1-1971 or ANSI/ANS 3.1-1978 for operator license applicant's education and experience eligibility requirement's reference to Exelon letter RS-07-078, dated July 19, 2007 (Reference 2) with a reference to licensed operators who shall comply only with the requirements of 10 CFR 55. EGC proposes to implement the operator education and experience eligibility requirements contained in NANT ACAD 10-001 and future changes thereto.

This LAR provides a discussion and description of the proposed TS changes, a safety assessment of the proposed TS changes, information supporting a finding of No Significant Hazards Consideration, and information supporting an Environmental Assessment.

### **2.0 PROPOSED CHANGE**

#### Proposed Typical Change to TS 5.3.1/6.3.1

Delete:

"...education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure."

Insert:

"...licensed operators who shall comply only with the requirements of 10 CFR 55."

Limerick Generating Station only:

Insert the word "only" after the word "comply:"

"...and the licensed operators who shall comply only with the requirements of 10 CFR 55."

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### **Evaluation of Proposed Changes**

#### **3.0 BACKGROUND**

The existing TS requirements for Unit (or Facility) Staff Qualifications and licensed operator personnel training programs are based on NRC endorsed industry standards to ensure that a licensee's staff is appropriately qualified and trained for their respective positions. These requirements were developed based on the pre-1987 revision of 10 CFR 55 and prior to the 1993 edition of 10 CFR 50.120. Current licensed operator qualifications and the licensed operator retraining and replacement programs must also comply with the requirements of 10 CFR 55 and 10 CFR 50.120.

Apart from exceptions noted in the TSs, Clinton Power Station, Limerick Generating Station, Oyster Creek Nuclear Generating Station, and Three Mile Island Nuclear Station, Unit 1, Unit (or Facility) Staff meet the qualifications of ANSI/ANS 3.1-1978, "Selection and Training of Nuclear Power Plant Personnel;" and Braidwood Station, Byron Station, Dresden Nuclear Power Station, LaSalle County Station, Peach Bottom Atomic Power Station, and Quad Cities Nuclear Generating Station Unit (or Facility) Staff meet the requirements of ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel."

#### **Background (from NUREG-1021, "Operator Licensing Examination Standards For Power Reactors," Revision 9)**

*"In accordance with Title 10, Section 55.31(a)(4), of the Code of Federal Regulations (10 CFR 55.31(a)(4)), as amended by a rule change dated March 25, 1987, a license applicant must provide evidence that he or she has successfully completed the facility licensee's requirements to be licensed as an RO or SRO. An authorized representative of the facility licensee shall certify this evidence on the license application; the required certification must include the details of the applicant's qualifications, training, and experience. In lieu of these details, the Commission may accept certification that the applicant has successfully completed a Commission-approved training program that is based on a systems approach to training (SAT) and uses a simulation facility that is acceptable to the Commission.*

*Revision 2 of Regulatory Guide (RG) 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," which was published in conjunction with the 1987 rule change, provided guidance on an acceptable method of implementing this regulation. However, the NRC staff had reviewed the industry's licensed operator training program experience guidelines in effect at the time of the 1987 rule change and determined that they were equivalent to the baseline experience criteria of RG 1.8, Revision 2. Consequently, as indicated in the statement of consideration for the 1987 rule change, a facility licensee's training program would be considered approved by the NRC when it is accredited by the National Nuclear Accrediting Board (NNAB)."*

#### **4.0 TECHNICAL ANALYSIS**

On March 20, 1985, the NRC issued the Commission Policy Statement on Training and Qualification of Nuclear Power Plant Personnel, which endorsed the training accreditation program developed by INPO, in association with its National Academy for Nuclear Training (NANT). The NRC has documented discussion, approval and acceptance of NANT guidelines in RIS 2001-01, "Eligibility of Operator License Applicants," NUREG-1021, Revision 9, "Operator Licensing Examination Standards For Power Reactors," and Regulatory Guide

## Attachment 1 Evaluation of Proposed Changes

(RG) 1.8, Revision 3, "Qualification and Training of Personnel for Nuclear Power Plants." These documents state that a facility licensee's training program would be considered approved by the NRC when it is accredited by the National Nuclear Accrediting Board and that NANT guidelines for education and experience outline acceptable methods for implementing the NRC's regulation in this area.

The TS Unit (or Facility) Staff Qualifications requirements are being revised from the NANT ACAD 00-003, Revision 1, education and experience eligibility requirements to the most current revision (and changes thereafter), NANT ACAD 10-001, and therefore, is consistent with 10 CFR 55.31(a)(4).

NUREG-1021, Revision 9 states:

*"When a facility licensee's licensed operator training program description and/or licensing-basis documents contain education and experience requirements that are more restrictive than either Revision 3 of RG 1.8 or the current NANT guidelines, the most restrictive requirements will continue to apply pending the initiation of action by the licensee to amend these requirements; any required TS changes would be considered administrative in nature."*

Some of the current TS operator education and experience eligibility requirements as defined in Exelon Letter RS-07-078 (Reference 2), as supplemented by RS-08-078 (Reference 3) and based on NANT ACAD 00-003, Revision 1 (Reference 4) are more restrictive than the current NANT guidelines (i.e., ACAD 10-001, Revision 0), hence, the basis for this administrative license amendment request.

Below is a comparison of the existing education and experience eligibility requirements between ACAD 00-003, Revision 1 and ACAD 10-001, Revision 0:

### Comparison of ACAD 00-003, Revision 1 and ACAD 10-001, Revision 0, Education and Experience Eligibility Requirements for Operator License Applicants

	ACAD 00-003, R1	ACAD 10-001, R0
RO - Education	High School Diploma or equivalency	High School Diploma or equivalency
RO - Experience	6 months as an NLO on site <b>AND</b>	6 months as an NLO on site <b>OR</b> 12 months as NLO at comparable facility <b>OR</b> 24 months at military reactor in RO equivalent qualification** <b>AND</b>
	3 years power plant exp (PPE)* <b>AND</b>	36 months power plant exp (PPE)## <b>AND</b>
	1 year on site	6 months on site
SRO - Education (RO Upgrade or Direct SRO)	High School Diploma or equivalency	High School Diploma or equivalency
SRO - Experience (RO Upgrade or Direct SRO)	6 months on site <b>AND</b>	6 months on site <b>AND</b>
	1 year as RO at the site <b>OR</b>	1 year as RO at the site <b>OR</b>
	1 year as active RO at comparable facility <b>OR</b>	1 year as active RO at facility (same vendor & vintage) <b>OR</b>

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	<b>ACAD 00-003, R1</b>	<b>ACAD 10-001, R0</b>
	1.5 years as active RO at non-comparable facility <b>OR</b>	1.5 years as active RO at comparable facility or non-comparable commercial power reactor facility <b>OR</b>
	2 years at military reactor in RO equivalent qualification**	2 years at military reactor in RO equivalent qualification**
SRO – Education/ Experience (Degreed Plant Staff Engineer)	6 months on site <b>AND</b>	6 months on site <b>AND</b>
	BS degree, or equivalent in Eng., Eng Tech, or Physical Sciences, or PE license <b>AND</b>	BS degree, or equivalent in Eng., Eng Tech, or related Sciences, or PE license <b>AND</b>
	3 years responsible nuclear power plant exp (RNPE)#	18 months RNPE###
SRO - Education/ Experience (Degreed Manager or NLO)	6 months on site <b>AND</b>	6 months on site <b>AND</b>
	BS degree or equivalent in Eng., Eng Tech, or Physical Sciences, or PE license <b>AND</b>	BS degree, or equivalent in Eng., Eng Tech, or related Sciences, or PE license <b>AND</b>
	3 years in responsible position (NLO or supervisor/ manager+)	18 months RNPE###
SRO - Education/ Experience (SRO Certified Instructor)	High School Diploma or equivalency	High School Diploma or equivalency
	6 months on site <b>AND</b>	6 months on site <b>AND</b>
	SRO Cert Training with GF completed <b>AND</b>	SRO Cert Training with GF completed <b>AND</b>
	Certified at the SRO level by utility or NSSS vendor <b>AND</b>	Certified at the SRO level by utility or NSSS vendor <b>AND</b>
	SRO Cert Instructor experience for 4 years++	SRO Cert Instructor experience for 4 years++

**NOTE:**  
ACAD 10-001 combined these two into one eligibility requirement

RNPE = Responsible Nuclear Power Plant Experience  
PPE = Power Plant Experience

- \* PPE is credited via a combination of nuclear or fossil commercial experience (1:1 basis) and military experience (2:1 basis).
- \*\* RO equivalent qualification is: Propulsion Plant Watch Officer, Engineering Watch Supervisor, Reactor Operator, Engineering Officer of the Watch, or Propulsion Plant Watch Supervisor.
- # RNPE is credited via a combination of Plant Staff Engineer Experience (1:1 basis) and Academic Equivalence (max 2 years, 1:1 basis)
- + Supervisor or manager in: work control, operations, engineering, outage management, maintenance, radiation protection, chemistry, or training.
- ++ Experience is credited via a combination of SRO certification at current or comparable facility (1:1 basis) and SRO certification at a non-comparable nuclear facility (1.5:1 basis)



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## PPE is credited via a combination of nuclear or fossil commercial experience (1:1 basis) and military experience (2:1 basis) **AND** Academic equivalence (max of 18 months credit for BS degree and 9 months credit for AS degree)

### RNPE is credited via a combination of Power Plant Staff (manager or supervisor in specific work groups, or staff engineer at current or comparable facility (1:1 basis; non-comparable facility at 1.5:1 basis) and Qualified NLO (1:1 basis for current or comparable facility).

The more significant differences between the two ACAD documents are the experience requirements for RO and SRO. RO on-site experience requirements have been reduced from one year to six months and SRO RNPE has been reduced from three years to 18 months. The new requirements provide additional flexibility in selecting license candidates under an accredited program.

NRC has found this reduction to not be a significant issue as evidenced in previous similar precedence. NRC granted Prairie Island Nuclear Generating Plant a license amendment (Reference 5) to remove their TS reference to specific education and experience requirements for operator license applicants and update to NANT ACAD 10-001. In that amendment, the NRC Safety Evaluation found in regards to the proposed changes to TS 5.3, "Plant Staff Qualifications":

*...." This proposed change is consistent with 10 CFR 55(a)(4). In addition, this change will not affect the 10 CFR 50.36(c)(5) requirement to ensure the licensee maintains administrative controls that assure the operation of the facility in a safe manner. Therefore, the NRC staff concludes that the proposed change to TS 5.3.1 is acceptable."*

The NRC Safety Evaluation for a similar Wolf Creek Generating Station license amendment (Reference 6) found in regards to the proposed changes to TS 5.3, "Unit Staff Qualifications":

*"Since 10 CFR 55.31(a)(4) allows the NRC to accept an application for an operator's license if the facility licensee certifies that the applicant has successfully completed a Commission-approved training program that is based on a SAT in lieu of details of operators license applicant's education and experience, this change meets the 10 CFR 55.31(a)(4) requirements to apply for an operator's license and ensures the facility licensee maintains administrative controls that assure the operation of the facility in a safe manner by properly qualified licensed operators. Therefore, the NRC staff concludes that removal of the education and experience requirements from the TS is acceptable."*

EGC's education and experience requirements are administratively controlled through each station's Updated Final Safety Analysis Report (UFSAR), accredited licensed operator training program, TQ-AA-150, "Operator Training Programs," or training procedures that ensure the operation of the facility in a safe manner. The EGC Operator Training Programs are accredited by NANT and are based on a Systems Approach to Training (SAT).

In addition, this change is consistent with 10 CFR 55.31(a)(4) in that a station authorized representative will continue to document and certify evidence that a license applicant meets the education and experience requirements outlined by the NANT in its current guidelines for initial

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training and qualification of licensed operators per NRC Form-398, "Personal Qualification Statement-Licensee." Also, the removal of the specific TS reference to a letter referencing an industry standard does not affect the 10 CFR 50.36(c)(5) requirement to ensure the licensee maintains administrative controls that assure the operation of the facility in a safe manner.

In the annual 2009 INPO/NRC meeting (Reference 7), participants discussed guidelines for Initial Training and Qualification of Licensed Operators and the proposed changes that would eventually be incorporated into NANT ACAD 10-001. The NRC did not provide any significant objections to the proposed eligibility requirement changes for reactor operators and senior reactor operators. No final positions were taken during the meeting, but the NRC did agree to consider the need for possible clarifications to NUREG-1021 or other regulatory documents to endorse and implement the revised eligibility criteria.

At a 2010 Industry Focus Group (FG) meeting (Reference 8), the group discussed the license eligibility requirements being revised in ACAD 09-001 (which evolved into ACAD 10-001) and the NRC did not provide any significant objections to the proposed eligibility requirement changes for reactor operators and senior reactor operators and documented the following:

### "License eligibility (ACAD 09-001)

*The NRC staff informed the FG that there was a meeting in November 2009 with the Institute of Nuclear Power Operations (INPO) regarding licensed operator eligibility and INPO's proposed revision to ACAD 09-001. The senior INPO representative then indicated that the revision to ACAD 09-001 was undergoing final INPO concurrence, with final approval expected to occur by February 2010. The INPO representative further described the implementation of the revision to ACAD 09-001, including communications with the nuclear industry, allowing both the revision and current version of ACAD 09-001 to be used for eligibility during all of 2010 (transition year), and then retiring the current version of ACAD 09-001 in January 2011. The FG and the NRC staff discussed possible licensing class scenarios and which ACAD would apply, and the NRC staff emphasized that eligibility should not be determined by the selective use of parts of the current version of ACAD 09-001 and parts of the revision to ACAD 09-001, but instead eligibility should be determined by the use of either the current version of ACAD 09-001 in its entirety or the revision to ACAD 09-001 in its entirety."*

EGC will use the ACAD 10-001 in its entirety with regards to licensed operator education and experience eligibility requirements.

In the Operator Licensing Program Feedback (Reference 9), the NRC considers the eligibility guidelines for education and experience at existing nuclear power plants promulgated by the NANT including those that were issued in February 2010 - ACAD 10-001 as acceptable methods for meeting 10 CFR 55.31(a)(4) with the exception of the Direct SRO for SRO-Certified Instructor eligibility criteria listed in Figure 2-4 (which is no different than the previously stated exception to ACAD 00-003).

The proposed TS wording is consistent with the Limerick Generating Station's TS (Reference 10). The word "only" has been added to the Limerick TS wording to clarify that licensed operator education and experience eligibility requirements will comply only with the current NANT ACAD 10-001 requirements. By maintaining the exception to the ANSI standards in regards to licensed operator education and eligibility requirements, as embodied in the revised wording referencing 10 CFR 55, EGC maintains that implementing an SAT training

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program, as permitted under 10 CFR 55, allows the use of the current NANT ACAD 10-001 in lieu of the ANSI standards as endorsed in Regulatory Guide 1.8. EGC's licensee training program is considered acceptable by the NRC when it was accredited by the National Nuclear Accrediting Board (NNAB.)

#### **5.0 REGULATORY ANALYSIS**

##### **5.1 No Significant Hazards Consideration**

Exelon Generation Company, LLC (EGC) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

**1. Will operation of the facility in accordance with the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No.

The NRC considered the impact of previously evaluated accidents during the rulemaking process, and by promulgation of the revised 10 CFR 55 rule, determined that this impact remains acceptable when licensees have an accredited licensed operator training program which is based on a systems approach to training (SAT). EGC maintains an Institute of Nuclear Power Operations (INPO) National Academy for Nuclear Training (NANT) accredited program which is based on a SAT. The NRC has concluded in RIS 2001-01, "Eligibility of Operator License Applicants," and NUREG-1021, "Operator Licensing Examination Standards For Power Reactors," that standards and guidelines applied by INPO in their accredited training programs are equivalent to those put forth by or endorsed by the NRC. Therefore, maintaining an INPO accredited SAT- based licensed operator training program is equivalent to maintaining an NRC approved licensed operator training program which conforms to applicable NRC Regulatory Guidelines or NRC endorsed industry standards. The proposed changes conform to NANT ACAD 10-001 licensed operator education and experience eligibility requirements.

Based on the above, EGC concludes that the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

**2. Will operation of the facility in accordance with the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No.

The proposed amendment involves changes to the licensed operator training programs, which are administrative in nature. The EGC licensed operator training programs have been accredited by National Nuclear Accrediting Board (NNAB) and are based on a SAT, which the NRC has previously found to be acceptable.

Based on the above discussion, EGC concludes that the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

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**3. Will operation of the facility in accordance with the proposed amendment involve a significant reduction in a margin of safety?**

Response: No.

The proposed TS changes are administrative in nature. The proposed TS changes do not affect plant design, hardware, system operation, or procedures for accident mitigation systems. The proposed changes do not significantly impact the performance or proficiency requirements for licensed operators. As a result, the ability of the plant to respond to and mitigate accidents is unchanged by the proposed TS changes. Therefore, these changes do not involve a significant reduction in a margin of safety.

Based on the above, EGC concludes that the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above evaluation of the three criteria, EGC concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

**5.2 Applicable Regulatory Requirements/Criteria**

**10 CFR 50**

10 CFR 50, "Domestic Licensing of Production and Utilization Facilities," Section 120, "Training and Qualification of Nuclear Power Plant Personnel," requires that each nuclear power plant licensee or applicant for an operator license establish, implement, and maintain the training and qualification programs that are derived from a systems approach to training as defined in 10 CFR 55.4. The proposed license amendment conforms to 10 CFR 50 requirements.

**10 CFR 55**

10 CFR 55, "Operators' Licenses," Subpart D, "Applications," requires that operator license applications include information concerning an individual's education, experience, and other related matters to provide evidence and certification that the applicant has successfully completed the facility licensee's training program that is based on a systems approach to training. The proposed license amendment conforms to 10 CFR 55 requirements.

**NUREG-1021, Revision 9**

NUREG-1021, "Operator Licensing Examination Standards For Power Reactors," Section ES-202, "Preparing and Reviewing Operator Licensing Applications," states, in part, that *"the fact that every facility licensee has voluntarily obtained and periodically renewed the accreditation of its licensed operator training program suggests that every facility licensee is implementing the education and experience guidelines endorsed by the NNAB. Specifically, the NRC staff has stated that the current version of those guidelines are outlined in the NANT 'Guidelines for Initial Training and Qualification of Licensed Operators,' which were issued in January 2000 (NANT 2000 guidelines). Consequently, unless otherwise informed by a facility licensee, the NRC staff has stated that the education and experience guidelines described in the NANT 2000*

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*guidelines constitute the facility licensee's education and experience requirements to be licensed as an RO or SRO."* The proposed license amendment conforms to the NANT ACAD 10-001, and changes thereafter, to implement the operator education and experience eligibility requirements. The changes in NANT guidelines from 2000 and 2010 that involve operator education and experience eligibility requirements have been reviewed and documented in a November 2009 public meeting in which the NRC did not provide any serious objections to the proposed eligibility requirement changes for reactor operators and senior reactor operators (Reference 7).

Follow-up discussions with the NRC on the status of future changes to operator eligibility requirements that will be eventually integrated in NUREG-1021, Revision 10 indicate that potential changes will be consistent with the current position stated on the NRC Website, Operator Licensing Program Feedback, Question ES-202.20, which considers NANT ACAD 10-001 as acceptable methods for meeting 10 CFR 55.31(a)(4) with the noted exception of the Direct SRO for SRO-Certified Instructor eligibility criteria.

The proposed license amendment conforms to NUREG-1021 requirements.

#### **Regulatory Guide (RG) 1.8, Revision 3**

RG 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," describes a method that the NRC staff finds acceptable for complying with the NRC's regulations regarding training and qualification of nuclear power plant personnel. Per NUREG-1021, the NRC staff revised NRC Form 398, "Personal Qualifications Statement: Licensee," to clarify that when a facility licensee certifies, pursuant to 10 CFR 55.31(a)(4), that an applicant has successfully completed a Commission-approved, SAT-based training program, it means that the applicant meets or exceeds the minimum education and experience guidelines currently outlined by the NANT (and, by extension, Revision 3 of RG 1.8). Facility licensees can use the revised NRC Form 398 to document any exceptions or waivers that the applicant has taken from the baseline education and experience guidelines outlined by the NANT. In addition, recognizing that the only significant difference between Revision 3 of RG 1.8 and the current accreditation guidelines pertains to certified instructors seeking an SRO license, those applicants can use the revised NRC Form 398 to document the details of their experience. This will minimize the potential for misunderstanding and the need to seek additional information. Since the proposed license amendment will meet the minimum education and experience guidelines currently outlined by NANT ACAD 10-001, the proposed license amendment meets, by extension, the regulatory requirements.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the NRC's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

## **6.0 ENVIRONMENTAL CONSIDERATION**

The proposed amendment does not change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR 20 and does not change surveillance requirements. The proposed amendment revises Technical Specifications

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for Facility/Unit Staff Qualification education and experience eligibility requirements for reactor and senior reactor operator applicants to current industry requirements as described in NANT ACAD 10-001. The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, in accordance with 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## **7.0 PRECEDENT**

A similar license amendment was approved, in part, for the removal of a specific TS reference to an NMC letter dated March 19, 2003 that contained the education and experience requirements for operator license applicants at the Prairie Island Nuclear Generating Plant, Units 1 and 2 on December 1, 2011 (ML112901115).

A similar license amendment was approved, in part, for the removal of specific TS reference to a WO 04-0031 letter, dated October 7, 2004 that contained the education and experience requirements for operator license applicants at the Wolf Creek Generating Station on April 2, 2012 (ML120540291).

## **8.0 REFERENCES**

1. National Academy for Nuclear Training (NANT) Academy Document, ACAD 10-001, Revision 0, "Guidelines for Initial Training and Qualification of Licensed Operators," dated February 2010
2. RS-07-078: Letter from P. B. Cowan (Exelon Generation Company, LLC/AmerGen Energy Company, LLC) to U.S. Nuclear Regulatory Commission, "License Amendment Request to Change Technical Specification Unit Staff Qualifications Education and Experience Eligibility Requirements for Licensed Operators," dated July 19, 2007 (ML072110212)
3. RS-08-078: Letter from Darin Benyak (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Supplement to: License Amendment Request to Change Technical Specification Unit Staff Qualifications - Education and Experience Eligibility Requirements for Licensed Operators," dated July 7, 2008 (ML081900267)
4. National Academy for Nuclear Training Academy Document ACAD 00-003, Revision 1, "Guidelines for Initial Training and Qualification of Licensed Operators," dated April 2004
5. Prairie Island Nuclear Generating Plant, Units 1 and 2 - Issuance of Amendment Re: Revision of Technical Specification 5.2.1, "Onsite and Offsite Organizations" and TS 5.3, "Plant Staff Qualifications" (TAC NOs. ME5447 and ME5448), dated December 1, 2011 (ML112901115)
6. Wolf Creek Generating Station - Issuance of Amendment Regarding Technical Specification 5.3, "Unit Staff Qualification" (TAC NO ME6151), dated April 2, 2012 (ML120540291).
7. NRC Memorandum: Frederick D. Brown to John McHale, "Summary of the November 23, 2009, Public Meeting with the Institute of Nuclear Power Operations to Discuss Guidelines for Initial Training and Qualification of Licensed Operators," dated December 4, 2009 (ML093290023)

**Attachment 1**  
**Evaluation of Proposed Changes**

8. NRC Memorandum: Frederick D. Brown to John McHale, "Summary of January 13, 2010, Meeting with Industry Focus Group on Operator Licensing Issues," dated February 12, 2010 (ML100330995)
9. Operator Licensing Program Feedback, NRC Website, Question 202.20 involving the use of NANT ACAD 10-001 revised in February 2010.
10. Limerick Generating Station, Units 1 and 2, Technical Specification 6.3, Unit Staff Qualifications (License Nos. NPF-39 and NPF-85)

**Attachment 2**  
**Proposed Technical Specifications (Marked-Up Pages)**

Technical Specification Unit (or Facility) Staff Qualification Changes for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Limerick Generating Station, Oyster Creek Nuclear Generating Station, Peach Bottom Atomic Power Station, Quad Cities Nuclear Power Station and Three Mile Island Nuclear Station

Braidwood Units 1 & 2 TS page 5.3-1  
Byron Units 1 & 2 TS page 5.3-1  
Clinton TS page 5.0-5  
Dresden Units 2 & 3 TS page 5.3-1  
LaSalle Units 1 & 2 TS page 5.3-1  
Limerick Unit 1 TS page 6-6  
Limerick Unit 2 TS page 6-6  
Oyster Creek TS page 6-2a  
Peach Bottom Unit 2 TS page 5.0-5  
Peach Bottom Unit 3 TS page 5.0-5  
Quad Cities Units 1 & 2 TS page 5.3-1  
Three Mile Island Unit 1 TS page 6-3



5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

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- 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, with the following exceptions:
- 1) either the senior health physics supervisor or lead health physicist, shall meet or exceed the qualifications for "Radiation Protection Manager" in Regulatory Guide 1.8, September 1975, and
  - 2) the education and experience eligibility requirements for operator license applicants, (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.

INSERT

LICENSED OPERATORS WHO SHALL COMPLY ONLY  
WITH THE REQUIREMENTS OF 10 CFR 55.

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5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

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- 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, with the following exceptions:  
1) either the senior health physics supervisor or lead health physicist, shall meet or exceed the qualifications for "Radiation Protection Manager" in Regulatory Guide 1.8, September 1975, and  
2) the education and experience eligibility requirements for operator license applicants, (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.

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LICENSED OPERATORS WHO SHALL COMPLY ONLY  
WITH THE REQUIREMENTS OF 10 CFR 55.

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5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978, with the following exception: the education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.

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LICENSED OPERATORS WHO SHALL COMPLY ONLY WITH THE REQUIREMENTS OF 10 CFR 55.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

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- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, with the following exceptions: 1) the radiation protection manager shall meet or exceed the qualifications for "Radiation Protection Manager" in Regulatory Guide 1.8, September 1975, and 2) the education and experience eligibility requirements for operator license applicants, (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.
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LICENSED OPERATORS WHO SHALL COMPLY ONLY  
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5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

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5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, with the following exceptions: 1) the radiation protection manager shall meet the requirements of "radiation protection manager" in Regulatory Guide 1.8, September 1975, and 2) the education and experience eligibility requirements for operator license applicants, (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure. Also, the ANSI N18.1-1971 qualification requirements for "radiation protection technician" may be met by either of the following alternatives:

- a. Individuals who have completed the radiation protection technician training program and have accrued one year of working experience in the specialty; or
  - b. Individuals who have completed the radiation protection technician training program, but have not yet accrued one year of working experience in the specialty, who are supervised by on-shift radiation protection supervision who meet the requirements of ANSI N18.1-1971, Section 4.3.2 or Section 4.4.4.
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LICENSED OPERATORS WHO SHALL COMPLY ONLY  
WITH THE REQUIREMENTS OF 10 CFR 55.

## ADMINISTRATIVE CONTROLS

6.2.1 DELETED. The information from this section is located in the HESAR.

### 6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall provide advisory technical support to Shift Supervision in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to safe operation of the unit. The Shift Technical Advisor shall meet the qualifications specified by the 1985 NRC Policy Statement on Engineering Expertise on Shift.

### 6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions, except for the Manager - Radiation Protection who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and the licensed operators who shall comply with the requirements of 10CFR55.

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## ADMINISTRATIVE CONTROLS

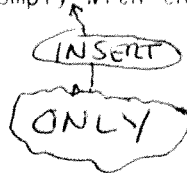
6.2.2 DELETED. The information from this section is located in the UFSAR.

### 6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall provide advisory technical support to Shift Supervision in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to safe operation of the unit. The Shift Technical Advisor shall meet the qualifications specified by the 1985 NRC Policy Statement on Engineering Expertise on Shift.

### 6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions, except for the Manager - Radiation Protection who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and the licensed operators who shall comply with the requirements of 10CFR55.



LICENSED OPERATORS WHO SHALL COMPLY ONLY  
WITH THE REQUIREMENTS OF 10 CFR 55,

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- j. The Senior Manager - Operations or an Operations Manager, and the Shift Manager require Senior Reactor Operators licenses. The licensed Nuclear Plant Operators require a Reactor Operators license.

6.2.2.3 Individuals who train the operating staff and those who carry out the health physics and quality assurance function shall have sufficient organizational freedom to be independent of operational pressures, however, they may report to the appropriate manager on site.

### 6.3 Facility Staff Qualifications

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1 of 1978 for comparable positions unless otherwise noted in the Technical Specifications, with the following exceptions: 1) the education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure, and 2) technicians and maintenance personnel who do not meet ANSI/ANS 3.1 of 1978, Section 4.5, are permitted to perform work for which qualification has been demonstrated.

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6.3.2 The management position responsible for radiological controls shall meet or exceed the qualifications of Regulatory Guide 1.8 (Rev. 1-R, 9/75). Each other member of the radiation protection organization for which there is a comparable position described in ANSI N18.1-1971 shall meet or exceed the minimum qualifications specified therein, or in the case of radiation protection technicians, they shall have at least one year's continuous experience in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations and shall have been certified by the management position responsible for radiological controls as qualified to perform assigned functions. This certification must be based on an NRC approved, documented program consisting of classroom training with appropriate examinations and documented positive findings by responsible supervision that the individual has demonstrated his ability to perform each specified procedure and assigned function with an understanding of its basis and purpose.

6.3.3 The Shift Technical Advisors shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, response and analysis of the plant for transients and accidents.



5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

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5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions described in the UFSAR, with the following exceptions: 1) the Manager-Radiation Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 2) the education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.

5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

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LICENSED OPERATORS WHO SHALL COMPLY ONLY  
WITH THE REQUIREMENTS OF 10CFR 55.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

---

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions described in the UFSAR, with the following exceptions: 1) the Manager-Radiation Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 2) the education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.

5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

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5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, with the following exceptions: 1) the radiation protection manager or lead radiation protection technician who shall meet or exceed the qualifications for "Radiation Protection Manager" in Regulatory Guide 1.8, September 1975, and 2) the education and experience eligibility requirements for operator license applicants, (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure.

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### 6.3 UNIT STAFF QUALIFICATIONS

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6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1 of 1978 for comparable positions unless otherwise noted in the Technical Specifications, with the following exceptions: 1) the education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-07-078, dated July 19, 2007), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure, and 2) individuals who do not meet ANSI/ANS 3.1 of 1978, Section 4.5, are not considered technicians or maintenance personnel for purposes of determining qualifications but are permitted to perform work for which qualification has been demonstrated.

6.3.2 The management position responsible for radiological controls shall meet or exceed the qualifications of Regulatory Guide 1.8 of 1977. Each radiological controls technician/supervisor shall meet or exceed the qualifications of ANSI-N 18.1-1971, paragraph 4.5.2/4.3.2, or be formally qualified through an NRC approved TMI-I Radiation Controls training program. All radiological controls technicians will be qualified through training and examination in each area or specific task related to their radiological controls functions prior to their performance of those tasks.

6.3.3 The Shift Technical Advisors shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in unit design, response and analysis of transients and accidents.

### 6.4 TRAINING

6.4.1 A training program for the Fire Brigade shall be maintained and shall meet or exceed the requirements of Section 600 of the NFPA Code.

### 6.5 DELETED

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LICENSED OPERATORS WHO SHALL COMPLY ONLY WITH THE REQUIREMENTS OF 10 CFR 55,