

RA-16-058

June 8, 2016

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

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket Nos. 50-219 and 72-15

Subject: Response to Request for Additional Information Regarding Approval of
Certified Fuel Handler Training Program

- References:
- 1) Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Request for Approval of Certified Fuel Handler Training Program,"* dated January 29, 2016 (ML16029A387)
 - 2) Electronic Mail Request from John Lamb (U.S. Nuclear Regulatory Commission) to David Helker and Richard Gropp (Exelon Generation Company, LLC) – Draft Request for Addition Information Regarding the Oyster Creek Request for Approval of a Certified Fuel Handler Training and Retraining Program, dated April 30, 2016
 - 3) Letter from U.S. Nuclear Regulatory Commission to Bryan C. Hanson (Exelon Generation Company, LLC) – Oyster Creek Nuclear Generating Station - Request for Additional Information Regarding Request for Approval of a Certified Fuel Handler Training and Retraining Program, dated May 16, 2016 (ML16125A245)

By letter dated January 29, 2016 (Reference 1), Exelon Generation Company, LLC (Exelon) submitted a request for approval of a Certified Fuel Handler (CFH) Training Program and Retraining Program for Oyster Creek Nuclear Generating Station (OCNGS). This request was submitted in accordance with 10 CFR 50.2, which stipulates that a CFH is *"a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the Commission."* Exelon requested U.S. Nuclear Regulatory Commission (NRC) approval of an OCNGS CFH training program that would be implemented to facilitate activities associated with decommissioning and irradiated fuel handling and management once OCNGS has permanently ceased operations, which is scheduled to occur no later than December 31, 2019.

In an NRC electronic mail message dated April 30, 2016 (Reference 2), the NRC indicated that it had reviewed the information submitted in the Reference 1 letter pertaining to the CFH Training and Retraining for OCNGS and requested additional clarifying information to support its continued review. The Reference 2 electronic mail message identified draft NRC questions, which were further discussed during a May 11, 2016, teleconference between Exelon and NRC representatives.

Subsequently, by letter dated May 16, 2016 (Reference 3), the NRC formally issued the Request for Additional Information (RAI) containing clarifying information that was discussed during the May 11, 2016, teleconference. The NRC is requesting that Exelon respond to the RAI within 30 days of the date of the Reference 3 letter.

Accordingly, Attachment 1 to this letter provides Exelon's response to the RAI and Attachment 2 includes an updated CFH Training and Retraining Program procedure addressing the issues from the Reference 3 letter.

There are no regulatory commitments contained in this submittal.

If you have any questions concerning this submittal, please contact Paul Bonnett at (610) 765-5264.

Respectfully,



Michael P. Gallagher
Vice President, License Renewal & Decommissioning
Exelon Generation Company, LLC

Attachments: 1) Response to Request for Additional Information Regarding Approval of
Certified Fuel Handler Training Program
2) Exelon Generation Certified Fuel Handler Training and Retraining Program –
Updated

cc: w/ Attachments
Regional Administrator - NRC Region I
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station
NRC Project Manager - Oyster Creek Nuclear Generating Station
Director, Bureau of Nuclear Engineering, New Jersey Department of Environmental
Protection
Mayor of Lacey Township, Forked River, New Jersey

U.S. Nuclear Regulatory Commission
Response to Request for Additional Information
OCNGS Certified Fuel Handler Training Program
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bcc: w/o Attachments

Sr. Vice President and COO CENG
Site Vice President - OCNGS
Plant Manager - OCNGS
Director, Operations - OCNGS
Director, Site Engineering - OCNGS
Director, Engineering - KSA
Director, Licensing and Regulatory Affairs - KSA

w/ Attachments

Director, Training Strategic Development - NMP
Manager, Regulatory Assurance - OCNGS
Manager, Licensing
C. Wilson - KSA
J. Dostal - OCNGS
Commitment Coordinator - KSA
Records Management - KSA

ATTACHMENT 1

Response to Request for Additional Information Regarding Approval of Certified Fuel Handler Training Program

Oyster Creek Nuclear Generating Station
Docket Nos. 50-219 and 72-15

ATTACHMENT 1

**Response to Request for Additional Information Regarding
Approval of Certified Fuel Handler Training Program**

Oyster Creek Nuclear Generating Station
Docket Nos. 50-219 and 72-15

By letter dated January 29, 2016 (Reference 1), Exelon Generation Company, LLC (Exelon) submitted a request for approval of a Certified Fuel Handler (CFH) Training Program and Retraining Program for Oyster Creek Nuclear Generating Station (OCNGS). This request was submitted in accordance with 10 CFR 50.2, which stipulates that a CFH is *"a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the Commission."* Exelon requested U.S. Nuclear Regulatory Commission (NRC) approval of an OCNGS CFH training program that would be implemented to facilitate activities associated with decommissioning and irradiated fuel handling and management once OCNGS has permanently ceased operations, which is scheduled to occur no later than December 31, 2019.

In an NRC electronic mail message dated April 30, 2016 (Reference 2), the NRC indicated that it had reviewed the information submitted in the Reference 1 letter pertaining to the CFH Training and Retraining for OCNGS and requested additional clarifying information to support its continued review. The Reference 2 electronic mail message identified draft NRC questions, which were further discussed during a May 11, 2016, teleconference between Exelon and NRC representatives.

Subsequently, by letter dated May 16, 2016 (Reference 3), the NRC formally issued the Request for Additional Information (RAI) containing clarifying information that was discussed during the May 11, 2016, teleconference. The NRC is requesting that Exelon respond to the RAI within 30 days of the date of the Reference 3 letter.

Accordingly, this attachment provides Exelon's response to the RAI questions contained in the May 16, 2016, NRC letter. The specific questions are identified below followed by Exelon's response. Attachment 2 of this submittal includes an updated CFH Training and Retraining Program procedure addressing, as necessary, the issues identified in this RAI. This updated version of the CFH Training and Retraining Program document supersedes the version previously provided in the Reference 1 submittal.

The NRC's questions from the May 16, 2016, letter are reiterated below followed by Exelon's response.

RAI-1

In the abovementioned letter, Exelon requested NRC approval of the CFH Training and Retraining Program for OCNGS. Section 1, "Purpose," of the Exelon Generation CFH Training and Retraining Program states that the purpose of the document is to "outline development of a certified fuel handler training and qualification program for an Exelon Generation nuclear facility that is permanently shutdown and permanently defueled."

Clarify if the CFH Training and Retraining Program is applicable to all Exelon facilities that have transitioned to a permanently defueled status or if it is specific to OCNGS.

Exelon's Response to RAI-1

The submittal of the CFH Training and Retraining Program is only applicable to the OCNGS facility at this time. The CFH Training and Retraining Program document submitted for OCNGS, as updated in response to this RAI, describes a training program that will ensure the monitoring, handling, storage, and cooling of spent nuclear fuel is performed in a manner consistent with ensuring the public health and safety for facilities that have transitioned to a permanently defueled status. The training program will implement the requirements of 10 CFR 50.120, such that it will apply a Systems Approach to Training (SAT) and will provide training and qualification for a CFH. The SAT includes the following elements:

- Systematic analysis of the jobs to be performed.
- Learning objectives derived from the analyses which describe desired performance after training.
- Training design and implementation based on the learning objectives.
- Evaluation of trainee mastery of the objectives during training.
- Evaluation and revision of the training based on the performance of trained personnel in the job setting.

The training program will be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements. Exelon will periodically review the program for effectiveness. Records will be retained in order to maintain program integrity and kept for NRC inspection to verify program adequacy.

In addition, the program will adhere to the guidelines of NUREG-1220, Revision 1, *"Training Review Criteria and Procedures,"* and was developed based on the draft Nuclear Energy Institute (NEI) guidance document NEI 15-04, Revision 0, *"Guidelines for a Certified Fuel Handler Training and Retraining Program,"* which has been submitted to the NRC for review.

Exelon maintains and uses fleet-wide training procedures and guidance and the CFH Training and Retraining Program document submitted for OCNGS is structured in such a way that would help facilitate adopting a standardized process. Therefore, once the CFH Training and Retraining Program has been approved by the NRC for use at OCNGS, Exelon would consider the approved training program easily adaptable for use at other Exelon facilities to support decommissioning efforts once a facility has permanently shutdown and defueled. However, Exelon does recognize that in order for this training program to be adopted at another facility it will be necessary to request NRC approval for the specific facility pursuant to 10 CFR 50.2.

RAI-2

Section 2, "Terms and Definitions," of the Exelon CFH Training and Retraining Program, Subsection 2.3 defines an NRC-Licensed Operator as: "An individual who possesses an active or inactive NRC operator license or senior operator license pursuant to 10 CFR 55 [Title 10 of the Code of Federal Regulations, Part 55], "Operators' Licenses." Further, Section 3.2.4, "Candidate

Evaluation," Subsection 3.2.4.7 states, in part: "Training of current NRC-licensed Operators (i.e., individuals who hold a current NRC issued Reactor Operator or Senior Reactor Operator License) may be evaluated to determine if they satisfy all of the requirements of this training program..."

Clarify the definition of an "NRC-Licensed Operator" and explain the differences between an active and inactive operator license (or senior operator license), as used in the definition. Further, clarify what a "current NRC-licensed Operator" is, as used in Subsection 3.2.4.7, and discuss how the distinction of a "current" licensed operator is important in the context of the candidate evaluation process. In addition, clarify if the abovementioned statement in Subsection 3.2.4.7 refers to licensed Reactor Operators and Senior Reactor Operators only at OCNGS or from any NRC-regulated commercial nuclear power reactor in the U.S.

Exelon's Response to RAI-2

The definition of "NRC-Licensed Operator," as updated in response to this RAI, will describe an individual licensed pursuant to 10 CFR 55, "Operators' License" to manipulate the controls of a facility. The difference between a Reactor Operator (RO) and Senior Reactor Operator (SRO) is that an SRO is an individual licensed under Part 55 to manipulate the controls of a facility and to direct the licensed activities of licensed operators. The term "active" was meant to confer a licensed individual who is actively performing the functions of an RO or SRO, and whose qualifications are current and valid. This definition applies to a "current" licensed operator referenced in Subsection 3.2.4.7 of the procedure. An "inactive" license is an individual who had been previously licensed at the facility entering a permanently shutdown and permanently defueled condition. The license was terminated because the facility determined the individual no longer needed to maintain a license. The definition was revised to eliminate the terms "active" and "inactive." Subsection 3.2.4.7 was updated to include a reference to an individual who was "previously" licensed at the facility entering a permanently shutdown and permanently defueled condition.

Exelon reviewed the definition of "NRC-Licensed Operator" in Section 2.3, which stated:

"An individual who possesses an active or inactive NRC operator license or senior reactor operator license pursuant to 10 CFR 55, "Operators' Licenses.""

The definition was revised to state:

"An individual who possesses an NRC-issued operator license or senior reactor operator license pursuant to 10 CFR 55, "Operators' Licenses" to manipulate the controls of a facility or to direct the licensed activities of licensed operators."

Subsection 3.2.4.7 discusses a "current" and "previously" license operator. These terms apply only to a licensed operator who is actively performing or who had performed the functions of an operator or senior operator at the facility entering a permanently shutdown and permanently defueled condition. This is important to the evaluation process in order to determine if exemptions may be granted for equivalent training or demonstrated job knowledge. The reference to "current" or "previously" licensed operators does not apply former licensed individuals from any NRC-regulated commercial nuclear power reactor in the United States.

Exelon reviewed Subsection 3.2.4.7, which stated:

"Training of current NRC-licensed Operators (i.e., individuals who hold a current NRC issued Reactor Operator or Senior Reactor Operator License) may be evaluated to determine if they satisfy all of the requirements of this training program, or if they only need to complete portions of this program to qualify as a Certified Fuel Handler. This evaluation will focus on the differences between the requirements of a Certified Fuel Handler and an NRC-licensed Operator to identify any additional training required to become a Certified Fuel Handler. Examples may include an examination on TS, fuel handling, and administrative controls required to perform the Certified Fuel Handler function. The Certified Fuel Handler Training and Retraining Program allows for the evaluation of other facility personnel to determine if portions of the required training have already been completed and therefore may be exempted. The evaluation will concentrate on required areas to determine if the previous training and qualification/examination were equivalent to that required for a Certified Fuel Handler."

Subsection 3.2.4.7 was revised as follows:

"Training of current or previous NRC-licensed Operators at the facility entering a permanently shutdown and permanently defueled condition may be evaluated to determine if they satisfy all of the requirements of this training program, or if they only need to complete portions of this program to qualify as a Certified Fuel Handler. This evaluation will focus on the differences between the requirements of a Certified Fuel Handler and an NRC-licensed Operator to identify any additional training required to become a Certified Fuel Handler. Examples may include an examination on TS, fuel handling, and administrative controls required to perform the Certified Fuel Handler function.

1. The Certified Fuel Handler Training and Retraining Program allows for the evaluation of other facility personnel to determine if portions of the required training have already been completed and therefore may be exempted. The evaluation will concentrate on required areas to determine if the previous training and qualification/examination were equivalent to that required for a Certified Fuel Handler."

RAI-3

The following questions apply to Section 3.1, "General Guidelines," of the Exelon CFH Training and Retraining Program, Subsection 3.1.7, which states: "Changes to the Certified Fuel Handler Training and Retraining Program may be made without prior NRC approval provided the changes are appropriately evaluated in accordance with applicable change processes and the program continues to comply with the specified ANSI [American National Standards Institute] /ANS [American Nuclear Society] standard requirements, or equivalent."

- a. *Provide additional information regarding what "applicable change processes" are being referred to in the abovementioned statement. In your response, clarify if evaluation of changes to the CFH Training and Retraining Program will be conducted in such manner that ensures that: (1) suitable proficiency in the performance of the program's activities is maintained, and (2)*

changes are documented in an accessible manner that will allow the NRC to verify the adequacy of the program in accordance with 10 CFR, Part 50, Section 120, "Training and qualification of nuclear power plant personnel."

Exelon's Response to RAI-3a

Subsection 3.1.7 of the procedure, as updated in response to this RAI, will reference Section 3.6 and eliminate reference to "applicable change processes."

Exelon reviewed Subsection 3.1.7, which stated:

"Changes to the Certified Fuel Handler Training and Retraining Program may be made without prior NRC approval provided the changes are appropriately evaluated in accordance with applicable change processes and the program continues to comply with the specified ANSI/ANS standard requirements, or equivalent."

Subsection 3.1.7 was revised as follows:

"Changes to the Certified Fuel Handler Training and Retraining Program may be made without prior NRC approval provided changes are appropriately evaluated in accordance with the conditions specified in Section 3.6 and the program continues to comply with the specified ANSI/ANS standard requirements as specified in the facility's TS."

Exelon added Section 3.6 "Evaluating Changes to the Certified Fuel Handler Training and Retraining Program," to the procedure.

Section 3.6 states:

"The Certified Fuel Handler Training and Retraining Program is based on SAT; therefore, Exelon may change elements without NRC approval as long as the following are applicable:

1. suitable proficiency in the performance of the program's activities is maintained; and
2. changes are documented in an accessible manner that will allow the NRC to verify the adequacy of the program in accordance with the systems approach to training."

- b. *Provide additional information regarding what requirements may be considered to be equivalent to ANSI/ANS-3.1-1978, "American National Standard for Selection and Training of Nuclear Power Plant Personnel," which is the standard identified in Section 6.3.1 of the OCNGS Technical Specifications, and how such equivalency would be determined.*

Exelon's Response to RAI-3b

The Certified Fuel Handler Training and Retraining Program procedure was written as a standardized training program that could be implemented at other Exelon facilities (as needed, following NRC approval on the facility's docket) recognizing that some plants were committed to different ANSI standard's (i.e., ANSI/ANS-3.1-1978 or ANSI N18.1-1971). The words "or equivalent" were removed from the procedure in Subsections 3.1.2, 3.1.7 (see response to RAI-3a above), 3.2.1.1, and 3.2.1.3.

Subsection 3.1.2 was revised as follows:

"The Certified Fuel Handler Training and Retraining Program describes the personnel to whom the program applies, the areas in which training is provided, what constitutes certification, how certification is maintained, and required qualification (e.g., medical). The program shall comply with the applicable American National Standards Institute (ANSI)/American Nuclear Society (ANS) standard requirements for the qualification and training of plant personnel, as specified in the facility's Technical Specifications (TS) and be consistent with level of hazard at the facility and to ensure the facility is maintained in a safe and stable condition. Based on the permanently defueled status, as committed to under 10 CFR 50.82(a)(1), the Certified Fuel Handlers will not be trained as NRC-licensed operators; however, candidates in the training program will meet minimum operator experience requirements of the applicable ANSI/ANS standards as specified in the facility's TS."

Subsection 3.2.1.1 was revised as follows:

"Candidates for enrollment in the Certified Fuel Handler Initial Training program shall meet the applicable ANSI/ANS standard requirements for the qualification and training of plant personnel, as specified in the facility's TS."

Subsection 3.2.1.3 was revised as follows:

"For the purposes of the Certified Fuel Handler training program the definition of nuclear power plant experience listed in the applicable ANSI/ANS standard, as specified in the facility's TS, is amended to include nuclear power plant experience acquired at a defueled reactor site which has spent nuclear fuel stored in its Spent Fuel Pool (SFP)."

RAI-4

The following questions apply to Section 3.1, "General Guidelines," of the Exelon CFH Training and Retraining Program, Subsection 3.1.8:

- a. *The first sentence of Subsection 3.1.8 states, in part: "Exemption for an individual from specific training requirements other than medical examination can be processed in accordance with Exelon Generation training exemption process..." No specific statement is provided regarding whether or not the requirement for medical examination may be exempted.*

Clarify if Exelon CFH Training and Retraining Program for OCNGS allows exemption from the requirement for medical examination.

Exelon's Response to RAI-4a

The CFH Training and Retraining Program as updated will not allow an exemption for the medical examination requirement.

Exelon reviewed Subsection 3.1.8, which stated:

"Exemption for an individual from specific training requirements other than medical examination can be processed in accordance with Exelon Generation training exemption process defined in TQ-AA-224, "Exelon Nuclear Training – Implementation Phase." The Plant Manager (or designee) may exempt an individual from a specific training requirement based upon the individual's depth of experience and previous training. Such exemptions, including the basis, shall be documented. No individual may be exempted from any two consecutive annual operating or two consecutive biennial written examinations."

Subsection 3.1.8 was revised as follows:

"The Plant Manager (or designee) may exempt an individual from specific training or retraining requirements as specified in Subsections 3.2.4.6 and 3.3.2.3. The requirement for a medical examination shall not be exempted."

Subsection 3.2.4.6 was revised as follows:

"The Plant Manager (or designee) may exempt an individual from specific training requirements based upon the individual's depth of experience and previous training. Any exemptions granted shall be based on an evaluation of the candidate's training and/or work history to ensure that the intent of the exempted training objectives are satisfied. Such exemptions, including the basis, shall be documented using a process similar to the Exelon Generation training exemption process defined in TQ-AA-224, "Exelon Nuclear Training – Implementation Phase." The requirement for a medical examination shall not be exempted."

Subsection 3.3.2.3 was revised as follows:

"The Plant Manager (or designee) may exempt an individual from a specific retraining requirement. Such exemptions, including the basis, shall be documented using a process similar to the Exelon Generation training exemption process defined in TQ-AA-224. The requirement for a biennial medical examination shall not be exempted. An individual shall not be exempted from the annual operating or biennial written examinations unless that individual prepared the examination. No individual may be exempted from any two consecutive annual operating exams. No individual may be exempted from any two consecutive biennial written examinations."

- b. *The second sentence of Subsection 3.1.8 states: "The Plant Manager (or designee) may exempt an individual from a specific training requirement based upon the individual's depth of experience and previous training."*

Provide additional information if any such exemptions granted by the Plant Manager (or designee) would be based on an evaluation of the individual's training and/or work history, to ensure that the intent of the exempted training objectives is satisfied.

Exelon's Response to RAI-4b

The Plant Manager (or designee) will grant exemptions that are based on an evaluation of the individual's training and/or work history to ensure that the intent of the exempted training objectives is satisfied. See revised Subsection 3.2.4.6 as discussed in response to RAI-4a.

- c. *The third sentence of Subsection 3.1.8 states: "Such exemptions, including the basis, shall be documented."*

Provide additional information regarding what process (or procedure) will be used for documenting exemptions from training requirements.

Exelon's Response to RAI-4c

Exemptions, including the basis, shall be documented through an approved training program. Such exemptions, including the basis, shall be documented using a process similar to the Exelon Generation training exemption process defined in TQ-AA-224, "Exelon Nuclear Training – Implementation Phase." See revised Subsection 3.2.4.6 as discussed in response to RAI-4a.

RAI-5

The following questions apply to Section 3.2.4, "Candidate Evaluation," of the Exelon CFH Training and Retraining Program:

- a. *Subsection 3.2.4.3 states, in part: "Critical tasks for a JPM [Job Performance Measure] will be pre-identified as defined in Supplement 1 to NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." (Note that Section 3.1, "Course Schedule," Subsections 3.3.1.1 and 3.3.1.6 also invoke Supplement 1 to NUREG-1021.)*

Clarify which revision of the abovementioned NUREG will be used. Confirm that the same revision of the document is being referred to in Section 3.1.

Exelon's Response to RAI-5a

Exelon confirmed and revised Subsections 3.2.4.3, 3.3.1.2, and 3.3.1.7 of the procedure to align with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.

- b. *Subsection 3.2.4.7 states, in part: "Training of current NRC-licensed Operators <...> may be evaluated to determine if they satisfy all of the requirements of this training program, or if they only need to complete portions of this program to qualify as a Certified Fuel Handler."*

Provide additional information regarding whether training to address any identified gaps between the individual's training history and the CFH training program requirements will be

completed prior to certification of the individual as a Certified Fuel Handler. Further, clarify if the Plant Manager (or designee) shall be responsible for approving the basis for evaluations qualifying an individual as a Certified Fuel Handler.

Exelon's Response to RAI-5b

Exelon reviewed of NEI 15-04 concluded that further guidance exists that would apply to this question. As a result, Exelon added Subsection 3.2.4.9 and 3.2.4.10 of the procedure.

Subsection 3.2.4.9 states:

"Training to address any identified gaps between the individual's training history and the Certified Fuel Handler training program requirements will be completed prior to certification as Certified Fuel Handler."

Subsection 3.2.4.10 states:

"The Plant Manager (or designee) shall approve the basis for evaluations qualifying an individual as a Certified Fuel Handler."

RAI-6

Section 3.3, "Retraining Program," of the Exelon CFH Training and Retraining Program, does not expressly address the eligibility requirements for enrollment of candidates in the CFH retraining program.

Clarify if the candidates for enrollment in the CFH retraining program are required to have had successfully completed the initial CFH training program. Further, provide additional information indicating if all Certified Fuel Handlers are required to participate in the CFH retraining program.

Exelon's Response to RAI-6

Exelon reviewed NEI 15-04 and determined that further guidance exists that would apply to this question. As a result, Exelon added a subsection to the procedure to address CFH candidates who have successfully completed the initial CFH training program and renumbered the subsection as Subsection 3.3.1.1.

Subsection 3.3.1.1 states:

"Candidates for enrollment in the Certified Fuel Handler Retraining Program (aka: requalification training program) shall have successfully completed the initial Certified Fuel Handler Training Program."

All CFHs are required to participate in the CFH retraining program. Subsection 3.3.1.3 was revised to include "All Certified Fuel Handlers will participate in the retraining program." See revised Subsection 3.3.1.3 as discussed in response to RAI-7 below.

RAI-7

Section 3.3, "Retraining Program," of the Exelon CFH Training and Retraining Program, Subsection 3.3.1.2 states, in part: "A retraining plan will be developed."

Provide additional information regarding who will be responsible for developing and approving the abovementioned retraining plan.

Exelon's Response to RAI-7

The Exelon Training Department will be responsible for developing the CFH retraining plan and the Plant Manager (or designee) will approve the retraining plan. As a result of adding a revised Subsection 3.3.1.1 to the procedure in the response to RAI-6, Subsection 3.3.1.2 was revised and renumbered to 3.3.1.3.

Subsection 3.3.1.2 stated:

"The Certified Fuel Handler retraining phase consists of lecture and/or self-study of topics appropriate to the monitoring, handling, storage, and cooling of nuclear fuel. The content of the retraining program will be based upon the tasks selected during program development for the retraining cycle. A retraining plan will be developed. The training plan will be developed utilizing the SAT process described in Section 2.3. Retraining will typically include a review of changes associated with the facility and procedures, as well as problem areas associated with the monitoring, handling, storage, and cooling of nuclear fuel, and selected topics from the initial training program."

Subsection 3.3.1.3 was renumbered and revised as follows:

"All Certified Fuel Handlers will participate in the retraining program. The Certified Fuel Handler retraining phase consists of lecture and/or self-study of topics appropriate to the monitoring, handling, storage, and cooling of nuclear fuel. The content of the retraining program will be based upon the tasks selected during program development for the retraining cycle. A retraining plan will be developed and will be approved by the Plant Manager (or designee). The training plan will be developed utilizing the SAT process described in Section 2.4. Retraining will typically include a review of changes associated with the facility and procedures, as well as problem areas associated with the monitoring, handling, storage, and cooling of nuclear fuel, and selected topics from the initial training program."

RAI-8

Section 3.3, "Retraining Program," of the Exelon CFH Training and Retraining Program, does not expressly address how missed training or examination of the retraining program will be addressed.

Clarify how missed training or examination of retraining program will be handled (i.e., the specific time frame within which a Certified Fuel Handler would have to make up any missed training or examination). Further, clarify if a CFH would be suspended from his/her duties if the required

training or evaluation is not completed within the specified makeup period, pending successful completion of the missed training or evaluation.

Exelon's Response to RAI-8

Exelon reviewed and revised Subsection 3.2.4.9 of the procedure. The revised subsection was renumbered to Subsection 3.2.4.11 and is stated below.

Subsection 3.2.4.9 stated:

"Missed training will be handled in accordance with TQ-AA-305, "Exelon Nuclear Training Fleet-Wide Administration," which defines the processes, programs, and policies to administer the fleetwide portions of the Exelon Nuclear Training Programs."

Subsection 3.2.4.11 was renumbered and revised as follows:

"Any missed training or examination shall be made up not later than prior to taking the next annual examination. If required training or evaluation is not completed within the specified makeup period, the Certified Fuel Handler shall be suspended from Certified Fuel Handler duties, pending successful completion of the missed training or evaluation."

RAI-9

Section 3.3, "Retraining Program," of the Exelon CFH Training and Retraining Program, Subsection 3.3.1.6 states, in part: "Passing criteria for an individual JPM is that the examinee successfully completes the assigned task in accordance with the governing procedure without missing any critical steps." This subsection does not specifically address the minimum required score (as a percentage of the total number of administered JPMs) required to successfully pass the operating examination.

Provide additional information indicating the minimum percentage of the administered JPMs that the examinee would be required to pass, in order to successfully pass the operating examination.

Exelon's Response to RAI-9

Exelon reviewed this question and added Subsection 3.3.1.8 to the procedure.

Subsection 3.3.1.8 states:

"Each JPM will be scored on a pass/fail basis. The candidate shall pass at least 80 percent of the administered JPMs to successfully pass the operating examination."

RAI-10

Section 3.3.2, "Maintenance of Certified Fuel Handler Qualifications," of the Exelon CFH Training and Retraining Program, Subsection 3.3.2.1 lists four requirements that must be satisfied in order to maintain the CFH qualification.

Clarify if the requirement to stand the designated CFH watch for a minimum of 8 hours per calendar quarter, as described in Subsection 3.3.2.2, should be included as the fifth requirement under Subsection 3.3.2.1, instead of being separated into a stand-alone paragraph.

Exelon's Response to RAI-10

Exelon revised Subsection 3.3.2.1 of the procedure to include the requirement to stand the designated CFH watch for a minimum of 8 hours per calendar quarter. As a result of moving Subsection 3.3.2.2 to be number 5 under Subsection 3.3.2.1, Subsection 3.3.2.3 was renumbered to Subsection 3.3.2.2.

Subsection 3.3.2.1 states:

"To maintain the Certified Fuel Handler qualification, the following requirements must be satisfied or they may be exempted per Section 3.2.4.6.

1. Complete all required Certified Fuel Handler retraining.
2. Score \geq 80 percent on the biennial written examination.
3. Pass \geq 80 percent of the administered JPMs on the annual operating examination.
4. Pass a biennial medical examination by a physician to determine that the Certified Fuel Handler's medical condition is not such that it might cause operational errors that could endanger other plant personnel or the public health and safety.
5. Stand the designated Certified Fuel Handler watch for a minimum of eight (8) hours per calendar quarter. A Certified Fuel Handler who fails to meet this time requirement can regain qualified status by serving eight (8) hours of watch under the instruction of a qualified Certified Fuel Handler. The time under instruction should include a review of the spent fuel pool cooling system and shift turnover procedures."

RAI-11

The regulations in 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," paragraph (b)(3) states, in part: "The training program must be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements."

Section 3.4, "Program Evaluation," of the Exelon CFH Training and Retraining Program states, in part: "These assessments will also evaluate applicability of industry operating experience." Provide additional information regarding whether changes to the facility, procedures, regulations, and quality assurance requirements will be included in the periodic evaluation of the Exelon CFH Training and Retraining Program at OCNGS.

Exelon's Response to RAI-11

Exelon reviewed and revised Section 3.4 of the procedure.

Section 3.4 stated:

"As part of the training process, routine assessments of the effectiveness and accuracy of training are conducted by appropriate management personnel at the facility during and at the end of each two (2) year training cycle. These assessments will also evaluate applicability of industry operating experience. Evaluation results shall be reviewed by a station oversight board as defined in site procedures. The station oversight board will verify the resolution of any discrepancies identified by the evaluation. Any required changes to the program determined by the station oversight board, shall be incorporated into the program."

Section 3.4 was revised as follows:

"The training program must be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements. As part of the training process, routine assessments of the effectiveness and accuracy of the training program are conducted by appropriate management personnel at the facility in a permanently defueled condition biennially. Evaluation results shall be reviewed by a station oversight board as defined in site procedures. The station oversight board will verify the resolution of any discrepancies identified by the evaluation. Any required changes to the program determined by the station oversight board, shall be incorporated into the program."

RAI-12

Section 3.5, "Record Retention," of the Exelon CFH Training and Retraining Program states: "Records associated with the Certified Fuel Handler Training and Retraining Program will be retained in retrievable format for the duration of the plant license."

Provide additional information regarding what is being referred to as "the duration of the plant license," since OCNGS will no longer have an operating plant license after certifications of permanent cessation of power operations and of removal of fuel from the reactor vessel will have been submitted, in accordance with 10 CFR 50.82(a)(1)(i) and 10 CFR 50.82(a)(1)(ii). In your response, clarify if records associated with the CFH Training and Retraining Program will be retained until there is no longer a need for a Certified Fuel Handler position at the facility (i.e., all fuel permanently transferred to a dry fuel storage facility).

Exelon's Response to RAI-12

Exelon reviewed and revised Section 3.5 of the procedure.

Subsection 3.5.1 stated:

"Records associated with the Certified Fuel Handler Training and Retraining Program will be retained in retrievable format for the duration of the plant license."

Subsection 3.5.1 was revised as follows:

"Records associated with the Certified Fuel Handler Training and Retraining Program will be retained in retrievable format until there is no longer a need for a Certified Fuel

Handler position at the facility (i.e., all fuel permanently transferred to a dry fuel storage facility)."

RAI-13

For questions 1 through 13 above, consider revising the Exelon CFH Training and Retraining Program, as appropriate, to make any necessary changes or include the information provided by your response, if needed. In your response, state if such changes were or will be made, and identify which Section(s) of the document were or will be revised, as appropriate.

Exelon's Response to RAI-13

Attachment 2 of this submittal includes an updated CFH Training and Retraining Program procedure addressing, as necessary, the specific issues identified in this RAI.

References

1. Letter from James Barstow (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – "Request for Approval of Certified Fuel Handler Training Program," dated January 29, 2016 (ML16029A387)
2. Electronic Mail Request from John Lamb (U.S. Nuclear Regulatory Commission) to David Helker and Richard Gropp (Exelon Generation Company, LLC) – Draft Request for Addition Information Regarding the Oyster Creek Request for Approval of a Certified Fuel Handler Training and Retraining Program, dated April 30, 2016
3. Letter from U.S. Nuclear Regulatory Commission to Bryan C. Hanson (Exelon Generation Company, LLC) – Oyster Creek Nuclear Generating Station - Request for Additional Information Regarding Request for Approval of a Certified Fuel Handler Training and Retraining Program, dated May 16, 2016 (ML16125A245)

ATTACHMENT 2

**Exelon Generation Certified Fuel Handler
Training and Retraining Program - Updated**

Exelon Generation Certified Fuel Handler Training and Retraining Program

1. PURPOSE

To outline development of a Certified Fuel Handler Training and Retraining Program for an Exelon Generation nuclear facility that is permanently shutdown and permanently defueled.

2. TERMS AND DEFINITIONS

- 2.1 Certified Fuel Handler – As defined in 10 CFR 50.2, certified fuel handler means, for a nuclear power reactor facility, a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the U.S. Nuclear Regulatory Commission (NRC).
- 2.2 Non-Licensed Operator – An operator who works in the plant under the direction and supervision of control room and/or operations management personnel in support of plant operations. Non-licensed operators operate, control, and monitor plant equipment outside the control room and may also be assigned auxiliary duties such as fire brigade member, medical response team member, or radiological emergency team member.
- 2.3 NRC-Licensed Operator – An individual who possesses an NRC-issued operator license or senior reactor operator license pursuant to 10 CFR 55, “Operators’ Licenses” to manipulate the controls of a facility or to direct the licensed activities of licensed operators.
- 2.4 Systems Approach to Training (SAT) - The SAT process contains the following elements:
1. Systematic analysis of the jobs to be performed.
 2. Learning objectives derived from the analyses which describe desired performance after training.
 3. Training design and implementation based on the learning objectives.
 4. Evaluation of trainee mastery of the objectives during training.
 5. Evaluation and revision of the training based on the performance of trained personnel in the job setting.

3. MAIN BODY

3.1 GENERAL GUIDELINES

- 3.1.1 The Certified Fuel Handler Training and Retraining Program contained herein describes the training program to be implemented by Exelon Generation to ensure the monitoring, handling, storage, and cooling of spent nuclear fuel is performed in a manner consistent with ensuring the public health and safety for Exelon Generation facilities that have transitioned to a permanently defueled status.
- 3.1.2 The Certified Fuel Handler Training and Retraining Program describes the personnel to whom the program applies, the areas in which training is provided, what constitutes certification, how

certification is maintained, and required qualification (e.g., medical). The program shall comply with the applicable American National Standards Institute (ANSI)/American Nuclear Society (ANS) standard requirements for the qualification and training of plant personnel, as specified in the facility's Technical Specifications (TS) and be consistent with level of hazard at the facility and to ensure the facility is maintained in a safe and stable condition. Based on the permanently defueled status, as committed to under 10 CFR 50.82(a)(1), the Certified Fuel Handlers will not be trained as NRC-licensed operators; however, candidates in the training program will meet minimum operator experience requirements of the applicable ANSI/ANS standards as specified in the facility's TS.

- 3.1.3 The Certified Fuel Handler Training and Retraining Program will become effective upon:
1. NRC approval of the Certified Fuel Handler Training and Retraining Program; and
 2. NRC approval of an amendment to the facility operating license eliminating requirements for NRC Licensed Senior Reactor Operators and Reactor Operators, and the requirement for the associated 10 CFR 55 Training Program.
- 3.1.4 Training of personnel can be conducted prior to the Certified Fuel Handler Training and Retraining Program being approved by the NRC or prior to the training program effective date.
- 3.1.5 The Certified Fuel Handler Training and Retraining Program is not accredited with the National Academy for Nuclear Training in accordance with ACAD 02-002, "The Process for Accreditation of Training in the Nuclear Power Industry." Although the program is not accredited, a SAT process will be applied to the Certified Fuel Handler Training and Retraining Program. The program adheres to the guidelines of NUREG-1220, "Training Review Criteria and Procedures," Revision 1.
- 3.1.6 A SAT process will be applied to the Certified Fuel Handler Training and Retraining Program. The SAT process contains the elements as described in Section 2.4.
- 3.1.7 Changes to the Certified Fuel Handler Training and Retraining Program may be made without prior NRC approval provided the changes are appropriately evaluated in accordance with the conditions specified in Section 3.6 and the program continues to comply with the specified ANSI/ANS standard requirements as specified in the facility's TS.
- 3.1.8 The Plant Manager (or designee) may exempt an individual from specific training or retraining requirements as specified in Subsections 3.2.4.6 and 3.3.2.3. The requirement for a medical examination shall not be exempted.
- 3.1.9 The Certified Fuel Handler Training and Retraining Program consists of an initial training program and a requalification training program.

3.2 INITIAL TRAINING

3.2.1 ELIGIBILITY REQUIREMENTS

3.2.1.1 Candidates for enrollment in the Certified Fuel Handler Initial Training program shall meet the applicable ANSI/ANS standard requirements for the qualification and training of plant personnel, as specified in the facility's TS.

3.2.1.2 Specifically, at the time of appointment to the Certified Fuel Handler position, the candidate shall have:

1. High school diploma or equivalent.
2. A minimum of two years power plant experience, in which one year is nuclear power plant experience. At least 6 months of the nuclear experience shall be at the facility.
3. Possess a high degree of manual dexterity and mature judgment.

3.2.1.3 For the purposes of the Certified Fuel Handler training program the definition of nuclear power plant experience listed in the applicable ANSI/ANS standard, as specified in the facility's TS, is amended to include nuclear power plant experience acquired at a defueled reactor site which has spent nuclear fuel stored in its Spent Fuel Pool (SFP).

3.2.2 FUNDAMENTALS TRAINING

3.2.2.1 The fundamentals training phase of the Certified Fuel Handler Training and Retraining Program consists of lecture, and/or self-study of topics appropriate to the monitoring, handling, storage, and cooling of spent nuclear fuel. The lecture method of instruction is the training of individual topics by classroom presentation. Self-study is training accomplished by the student through the independent study of texts, handouts, and other materials. Selection of topics will be based on a job analysis for the Certified Fuel Handler tasks and functions. The job analysis will be conducted by an incumbent SRO, training Subject Matter Expert and Site Decommissioning Transition Planning Organization Operations Lead, in accordance with the requirements of TQ-AA-221, "Exelon Nuclear Training – Analysis Phase." The procedure outlines a graded approach to evaluating job tasks and includes Difficulty, Importance, and Frequency (DIF) ratings for each new job task. Depending on an analysis of the candidate's background, self-study may be used for up to 100% of the course material. A comprehensive exam at the end of the course will provide assurance of mastery of the skills, knowledge, and abilities required for successful performance of Certified Fuel Handler job and associated tasks.

3.2.2.2 Fundamental topics will include thermodynamics, heat transfer, fluid mechanics, radiological safety principles and monitoring, electrical theory, mechanical components operation, facility/system design and function, and facility administrative and safety procedures, as appropriate for the current plant status.

3.2.3 ON-THE-JOB TRAINING (OJT)

- 3.2.3.1 The on-the-job training phase of the Certified Fuel Handler Training and Retraining Program includes hands-on training of shift operations such as shift turnover, shift record keeping, removal and return of equipment to service, and specified watch standing activities. Watch standing activities include on-the-job training in operation of systems/components used to provide handling, storage, cooling, and monitoring of the fuel; normal, abnormal, and emergency procedures; accident analysis; Emergency Plan; facility license; and the content, bases, and importance of Technical Specifications. On-the-job training will be conducted in accordance with the requirements of TQ-AA-203, "On-The-Job Training and Task Performance Evaluations," which provides the requirements for the development, implementation, and evaluation of, and qualification requirements for, OJT, Task Performance Evaluation (TPE), and Job Performance Measure (JPM) administration.
- 3.2.3.2 A minimum of 40 hours of on-shift watches under the instruction of a Certified Fuel Handler must be completed as part of the qualification process.

3.2.4 CANDIDATE EVALUATION

- 3.2.4.1 A comprehensive final examination shall be administered at the end of the initial training program. Areas examined are described in Appendices A and B for the written and operating examinations respectively.
- 3.2.4.2 The written examination requires a minimum score of 80 percent to pass.
- 3.2.4.3 The operating examination will consist of JPMs. Passing criteria for an individual JPM is that the examinee successfully completes the assigned task in accordance with the governing procedure without missing any critical steps. Missed or incorrectly performed critical steps are the bases for JPM failure. Critical tasks for a JPM will be pre-identified as defined in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.
- 3.2.4.4 Each JPM will be scored on a pass/fail basis. The candidate must pass at least 80 percent of the administered JPMs to successfully pass the operating examination.
- 3.2.4.5 An individual who fails to pass either the written or operating examination shall not perform Certified Fuel Handler duties until the individual has completed a remedial training program and passes an appropriate re-examination. Only those portions of the original examination that were failed need to be re-examined (i.e., written or operating exam).
- 3.2.4.6 The Plant Manager (or designee) may exempt an individual from specific training requirements based upon the individual's depth of experience and previous training. Any exemptions granted shall be based on an evaluation of the candidate's training and/or work history to ensure that the intent of the exempted training objectives are satisfied. Such exemptions, including the basis, shall be documented using a process similar to the Exelon Generation training exemption

process defined in TQ-AA-224, "Exelon Nuclear Training – Implementation Phase." The requirement for a medical examination shall not be exempted.

- 3.2.4.7 Training of current or previous NRC-licensed Operators at the facility entering a permanently shutdown and permanently defueled may be evaluated to determine if they satisfy all of the requirements of this training program, or if they only need to complete portions of this program to qualify as a Certified Fuel Handler. This evaluation will focus on the differences between the requirements of a Certified Fuel Handler and an NRC-licensed Operator to identify any additional training required to become a Certified Fuel Handler. Examples may include an examination on TS, fuel handling, and administrative controls required to perform the Certified Fuel Handler function.
1. The Certified Fuel Handler Training and Retraining Program allows for the evaluation of other facility personnel to determine if portions of the required training have already been completed and therefore may be exempted. The evaluation will concentrate on required areas to determine if the previous training and qualification/examination were equivalent to that required for a Certified Fuel Handler.
- 3.2.4.8 In general, the training of holders of Senior Reactor Operator licenses who are also qualified as Fuel Handling Supervisors will meet the qualification requirements for a Certified Fuel Handler. However, it is expected that some additional training requirements may arise as the plant transitions to a permanently shutdown and defueled configuration. These additional training requirements may arise from changes to plant systems or procedures associated with SFP operations. Therefore, the training requirements will be specifically identified and enumerated using the SAT process prior to permanent defueling. The training history of each currently licensed Senior Reactor Operator who is identified as a candidate for a Certified Fuel Handler qualification will be separately evaluated to ensure that all the specific training requirements of the Certified Fuel Handler Training and Retraining Program are met.
- 3.2.4.9 Training to address any identified gaps between the individual's training history and the Certified Fuel Handler Training Program requirements will be completed prior to certification as Certified Fuel Handler.
- 3.2.4.10 The Plant Manager (or designee) shall approve the basis for evaluations qualifying an individual as a Certified Fuel Handler.
- 3.2.4.11 Any missed training or examination shall be made up not later than prior to taking the next annual examination. If required training or evaluation is not completed within the specified makeup period, the Certified Fuel Handler shall be suspended from Certified Fuel Handler duties, pending successful completion of the missed training or evaluation.

3.2.5 QUALIFICATIONS

3.2.5.1 All candidates shall satisfy the following requirements:

1. Complete the Initial Training and Retraining Program or have the requirement exempted per Subsection 3.2.4.6.
2. Score \geq 80 percent on a written examination.
3. Pass \geq 80 percent of the administered JPMs on the operating examination.
4. Pass a medical examination by a physician to determine that the candidate's medical condition is not such that it might cause operational errors that could endanger other plant personnel or the public health and safety.

3.3 RETRAINING PROGRAM

3.3.1 COURSE SCHEDULE

3.3.1.1 Candidates for enrollment in the Certified Fuel Handler Retraining Program (aka: requalification training program) shall have successfully completed the initial Certified Fuel Handler Training Program.

3.3.1.2 The retraining phase of the Certified Fuel Handler Training and Retraining Program shall be administered in a biennial training cycle. This cycle includes annual operating examinations and biennial written examination. Biennial and annual are as defined in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors", Revision 9, Supplement 1.

3.3.1.3 All Certified Fuel Handlers will participate in the retraining program. The Certified Fuel Handler retraining phase consists of lecture and/or self-study of topics appropriate to the monitoring, handling, storage, and cooling of nuclear fuel. The content of the retraining program will be based upon the tasks selected during program development for the retraining cycle. A retraining plan will be developed and will be approved by the Plant Manager (or designee). The training plan will be developed utilizing the SAT process described in Section 2.4. Retraining will typically include a review of changes associated with the facility and procedures, as well as problem areas associated with the monitoring, handling, storage, and cooling of nuclear fuel, and selected topics from the initial training program.

3.3.1.4 Participants in the Certified Fuel Handler retraining phase of the program must pass a biennial written examination and an annual operating examination to maintain their qualification. Areas examined are described in Appendices A and B for the written and operating examinations, respectively.

3.3.1.5 The written examination requires a minimum score of 80 percent to pass.

3.3.1.6 The operating examination will consist of JPMs and each JPM will be scored on a pass/fail basis.

- 3.3.1.7 Passing criteria for an individual JPM is that the examinee successfully completes the assigned task in accordance with the governing procedure without missing any critical steps. Missed or incorrectly performed critical steps are the bases for JPM failure. Critical tasks for a JPM should be pre-identified as defined in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.
- 3.3.1.8 Each JPM will be scored on a pass/fail basis. The candidate shall pass at least 80 percent of the administered JPMs to successfully pass the operating examination.
- 3.3.1.9 Periodic written and/or operating exams may be administered during the retraining cycle to assess student knowledge and training effectiveness.
- 3.3.1.10 An individual who fails to pass either the comprehensive biennial written or annual operating examination shall not perform Certified Fuel Handler duties until a remedial training program is completed and an appropriate re-examination is passed. Only those portions of the examination that were originally failed need to be successfully re-examined prior to restoring qualifications (i.e., written or operating exam).

3.3.2 MAINTENANCE OF CERTIFIED FUEL HANDLER QUALIFICATIONS

- 3.3.2.1 To maintain the Certified Fuel Handler qualification, the following requirements must be satisfied or they may be exempted per Subsection 3.2.4.6.
1. Complete all required Certified Fuel Handler retraining.
 2. Score \geq 80 percent on the biennial written examination.
 3. Pass \geq 80 percent of the administered JPMs on the annual operating examination.
 4. Pass a biennial medical examination by a physician to determine that the Certified Fuel Handler's medical condition is not such that it might cause operational errors that could endanger other plant personnel or the public health and safety.
 5. Stand the designated Certified Fuel Handler watch for a minimum of eight (8) hours per calendar quarter. A Certified Fuel Handler who fails to meet this time requirement can regain qualified status by serving eight (8) hours of watch under the instruction of a qualified Certified Fuel Handler. The time under instruction should include a review of the spent fuel pool cooling system and shift turnover procedures.
- 3.3.2.2 An individual who fails to meet any of the requirements for maintaining the Certified Fuel Handler qualification shall be removed from all duties associated with that position until such time as the discrepancies can be resolved. Shift Operations shall be notified of the individual's removal and subsequent status.
- 3.3.2.3 The Plant Manager (or designee) may exempt an individual from a specific retraining requirement. Such exemptions, including the basis, shall be documented using a process similar to the Exelon Generation training exemption process defined in TQ-AA-224. The requirement for a biennial medical examination shall not be exempted. An individual shall not be exempted from the annual operating or biennial written examinations unless that individual

prepared the examination. No individual may be exempted from any two consecutive annual operating exams. No individual may be exempted from any two consecutive biennial written examinations.

3.4 PROGRAM EVALUATION

The training program must be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements. As part of the training process, routine assessments of the effectiveness and accuracy of the training program are conducted by appropriate management personnel at the facility in a permanently defueled condition biennially. Evaluation results shall be reviewed by a station oversight board as defined in site procedures. The station oversight board will verify the resolution of any discrepancies identified by the evaluation. Any required changes to the program determined by the station oversight board, shall be incorporated into the program.

3.5 RECORD RETENTION

- 3.5.1 Records associated with the Certified Fuel Handler Training and Retraining Program will be retained in retrievable format until there is no longer a need for a Certified Fuel Handler position at the facility (i.e., all fuel permanently transferred to a dry fuel storage facility)..

3.6 EVALUATING CHANGES TO THE CERTIFIED FUEL HANDLER TRAINING AND RETRAINING PROGRAM

- 3.6.1 The Certified Fuel Handler Training and Retraining Program is based on SAT; therefore, Exelon may change elements without NRC approval as long as the following are applicable:
1. suitable proficiency in the performance of the program's activities is maintained; and
 2. changes are documented in an accessible manner that will allow the NRC to verify the adequacy of the program in accordance with the systems approach to training.

4. REFERENCES

- 4.1 10 CFR 50.2, "Definitions"
- 4.2 10 CFR 50.120, "Training and qualification of nuclear power plant personnel"
- 4.3 SECY-00-145, "Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning," dated June 28, 2000
- 4.4 Statements of Consideration for the "Decommissioning of Nuclear Power Reactors," Proposed Rule (60FR37374, dated July 20, 1995) and Final Rule (61FR39278, dated July 29, 1996)
- 4.5 NUREG-1220, "Training Review Criteria and Procedures"
- 4.6 NUREG-1021, "Operator Licensing Examination Standards for Power Reactor," Revision 10
- 4.7 NUREG-1021, "Operator Licensing Examination Standards for Power Reactor," Revision 9, Supplement 1

- 4.8 ANSI/ANS 3.1 - (1978) (1981), Selection and Training of Nuclear Power Plant Personnel
- 4.9 ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel"
- 4.10 Regulatory Guide 1.8, "Qualification and Training of Personnel for Nuclear Power Plants"
- 4.11 NRC Safety Evaluation, "Crystal River Unit 3 – Review of Certified Fuel Handler Training and Retraining Program," June 26, 2014 (ADAMS Accession No. ML14155A181)
- 4.12 NRC Safety Evaluation, "Kewaunee Power Station – Approval of Shift Manager/Certified Fuel Handler Training Program," May 12, 2014 (ADAMS Accession No. ML14104A046)
- 4.13 NRC Safety Evaluation, "San Onofre Nuclear Generating Station, Units 2 and 3 – Approval of Safe Storage Shift Manager/Certified Fuel Handler Training Program," August 1, 2014 (ADAMS Accession No. ML13268A165)
- 4.14 NRC Safety Evaluation, "Vermont Yankee Nuclear Power Station – Review of Certified Fuel Handler Training and Retraining Program," October 1, 2014 (ADAMS Accession No. ML14162A209)
- 4.15 NRC Safety Evaluation for Amendment 160 to License DPR-36, Maine Yankee, November 26, 1997 (ADAMS Accession No. 9712040233)
- 4.16 NRC Safety Evaluation for Certified Fuel Handlers Training and Retraining Program for Zion Nuclear Power Station Units 1 and 2, July 20, 1998 (ADAMS Accession No. 9807240263)
- 4.17 NRC Safety Evaluation, "Millstone Nuclear Power Station, Unit 1 – Approval of Certified Fuel Handler Training Program," February 11, 1999
- 4.18 TQ-AA-203, "On-The-Job Training and Task Performance Evaluations"
- 4.19 TQ-AA-221, "Exelon Nuclear Training – Analysis Phase."
- 4.20 TQ-AA-224, "Exelon Nuclear Training – Implementation Phase"
- 4.21 TQ-AA-224-F040, "Training Exemption Form"
- 4.22 ACAD 02-002, "The Process for Accreditation of Training in the Nuclear Power Industry"
- 4.23 ACAD 07-001, "Guidelines for the Continuing Training of Licensed Personnel"
- 4.24 NEI 15-04, Rev. 0, "Guidelines for a Certified Fuel Handler Training and Retraining Program" – (Draft 11/3/15)

APPENDIX A**WRITTEN EXAMINATION AREAS****CERTIFIED FUEL HANDLER TRAINING AND RETRAINING PROGRAM**

The written examination shall include a sample of the following aspects of the Certified Fuel Handler position:

- (1) Design, function, and operation of systems used in handling, storage, cooling, monitoring of nuclear fuel, and auxiliary support systems.
- (2) Purpose and operation of the radiation monitoring systems.
- (3) Radiological safety principles and procedures including radiation hazards that may arise during normal, maintenance, and abnormal activities.
- (4) Principles of heat transfer, thermodynamics, and fluid mechanics as they apply to fuel handling, storage, cooling, and monitoring.
- (5) Conditions and limitations of facility license, including content, basis and importance of Technical Specifications.
- (6) Assessment of facility condition and selection of appropriate procedures during normal, abnormal and emergency situations.
- (7) Fuel handling facilities and procedures.

APPENDIX B**OPERATING EXAMINATION AREAS****CERTIFIED FUEL HANDLER TRAINING AND RETRAINING PROGRAM**

The operating examination will consist of Job Performance Measures and shall include a sample of the following aspects of the Certified Fuel Handler duties and tasks:

- (1) Evaluate annunciators; valve, pump, and breaker status indicators; and instrument readings as necessary to determine/perform appropriate remedial actions.
- (2) Evaluate the ability to manipulate the controls required to obtain desired operating results during normal, abnormal, and emergency conditions. This includes the spent fuel pool cooling system and those auxiliary and emergency systems that could affect the release of radioactive material to the environment.
- (3) Evaluate radiation monitoring system readings, including alarm conditions, to determine appropriate actions. Such actions may include setting an alarm setpoint to monitor a release or determine appropriate remedial actions for an alarm condition.
- (4) Evaluate abnormal or emergency conditions to determine if the emergency plan for the facility should be implemented and, if implemented, evaluate performance of duties as required by the emergency plan.