UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 28, 2019

Mr. Don Moul
Vice President, Nuclear Division and
Chief Nuclear Officer
NextEra Energy Duane Arnold, LLC
Mail Stop: NT3/JW
15430 Endeavor Drive
Jupiter, FL 33478

SUBJECT: DUANE ARNOLD ENERGY CENTER - APPROVAL OF A CERTIFIED FUEL HANDLER TRAINING AND CONTINUING TRAINING PROGRAM (EPID L-2019-LLL-0003)

Dear Mr. Moul:

By letter dated January 18, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19023A196), NextEra Energy Duane Arnold, LLC (NextEra, the licensee) submitted a Notification of Permanent Cessation of Power Operations for the Duane Arnold Energy Center (DAEC). In this letter, the licensee provided notification to the U.S. Nuclear Regulatory Commission (NRC, the Commission) of its intent to permanently cease power operations at DAEC in the fourth quarter of 2020.

By letter dated January 29, 2019 (ADAMS Accession No. ML19037A016), as supplemented by letter dated May 30, 2019 (ADAMS Accession No. ML19150A296), NextEra submitted its Certified Fuel Handler (CFH) Training and Continuing Training Program for DAEC to the NRC for approval.

After certifications of permanent cessation of operations and of permanent removal of fuel from the reactor vessel for DAEC are submitted in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Sections 50.82(a)(1)(i) and (ii), pursuant to10 CFR 50.82(a)(2), the 10 CFR Part 50 license no longer authorizes operation of the reactor or placement or retention of fuel in the reactor vessel. As a result, licensed reactor operators will no longer be required to support plant operating activities. Instead, approval of a CFH Training and Continuing Training Program is needed to facilitate activities associated with decommissioning and irradiated fuel handling and management.

The proposed CFH Training and Continuing Training Program is to be used to satisfy training requirements for the plant personnel responsible for supervising and directing the monitoring, storage, handling, and cooling of irradiated fuel in a manner consistent with ensuring the health and safety of the public. As defined in 10 CFR 50.2, a CFH is a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the NRC. Non-licensed personnel are trained in accordance with 10 CFR 50.120.

The NRC has reviewed the submittal and based on the enclosed safety evaluation approves the CFH Training and Continuing Training Program as requested.

If you have any questions, please contact me at 301-415-8371 or by e-mail at Mahesh.Chawla@nrc.gov.

Sincerely,

/RA/

Mahesh L. Chawla, Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure:
Safety Evaluation

cc ListServ

SUBJECT: DUANE ARNOLD ENERGY CENTER - APPROVAL OF A CERTIFIED FUEL HANDLER TRAINING AND CONTINUING TRAINING PROGRAM (EPID L-2019-LLL-0003) DATED AUGUST 28, 2019

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REGARDING CERTIFIED FUEL HANDLER TRAINING AND CONTINUING TRAINING PROGRAM

NEXTERA ENERGY DUANE ARNOLD, LLC

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By letter dated January 18, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19023A196), NextEra Energy Duane Arnold, LLC (NextEra, the licensee) submitted a Notification of Permanent Cessation of Power Operations for the Duane Arnold Energy Center (DAEC). In this letter, the licensee provided notification to the U.S. Nuclear Regulatory Commission (NRC, the Commission) of its intent to permanently cease power operations at DAEC in the fourth quarter of 2020.

By letter dated January 29, 2019 (ADAMS Accession No. ML19037A016), NextEra submitted its Certified Fuel Handler (CFH) Training and Continuing Training Program for DAEC to the NRC for approval. In an email dated May 9, 2019 (ADAMS Accession No. ML19130A076), the NRC staff sent a request for additional information to the licensee. The licensee provided supplemental information in a letter dated May 30, 2019 (ADAMS Accession No. ML19150A296).

After certifications of permanent cessation of operations and of permanent removal of fuel from the reactor vessel for DAEC are submitted in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Sections 50.82(a)(1)(i) and (ii), pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license no longer authorizes operation of the reactor or placement or retention of fuel in the reactor vessel. As a result, licensed reactor operators will no longer be required to support plant operating activities. Instead, approval of a CFH Training and Continuing Training Program is needed to facilitate activities associated with decommissioning and irradiated fuel handling and management.

The proposed CFH Training and Continuing Training Program is to be used to satisfy training requirements for the plant personnel responsible for supervising and directing the monitoring, storage, handling, and cooling of irradiated fuel in a manner consistent with ensuring the health and safety of the public. As defined in 10 CFR 50.2, a CFH is a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the NRC. Non-licensed personnel are trained in accordance with 10 CFR 50.120.

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.120(b), each holder of an operating license shall establish, implement, and maintain a training program derived from a systems approach to training (SAT) (as defined in 10 CFR 55.4), providing for the training and qualification of, among other nuclear power plant personnel, non-licensed operators. As stated 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 Commission."

Under 10 CFR 50.54(y), at a nuclear power reactor facility for which the licensee has certified that operations have permanently ceased and fuel has been permanently removed from the reactor vessel, a CFH is authorized to approve taking reasonable action that departs from a license condition or a technical specification (TS) in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and TSs that can provide adequate or equivalent protection is immediately apparent. In its Proposed Rule, "Decommissioning of Nuclear Power Reactors," published in the *Federal Register* on July 20, 1995 (60 FR 37374), the Commission explained that a CFH at a permanently shutdown and defueled nuclear power reactor undergoing decommissioning has the requisite knowledge and experience to evaluate plant conditions and make such judgements. The Final Rule, published in the *Federal Register* on July 29, 1996 (61 FR 39278), adopted the definition of "Certified Fuel Handler" in 10 CFR 50.2.

The regulatory framework concerning operator and fuel handler staffing was discussed by the NRC staff in SECY-00-145, "Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning," Attachment 1, "Integrated Rulemaking Plan for Emergency Planning, Insurance, Safeguards, Staffing and Training, and Backfit at Decommissioning Nuclear Power Plants," dated June 28, 2000 (ADAMS Accession No. ML003721626), which states, in part:

> The certified fuel handler is intended to be the on-shift licensee representative who is not only responsible for safe fuel handling operations at a decommissioning plant, but is always present on shift to ensure the safe maintenance and storage of spent fuel and the overall safety of any decommissioning-related activities at the facility.
>
> …
>
> In addition, the certified fuel handler must be qualified in accordance with a certified fuel handler training program approved by the Commission. However, there are no regulations besides the definition that specifies the training requirements for the certified fuel handler.

Considering the definition of CFH in 10 CFR 50.2 and the background provided by the Final Rule, "Decommissioning of Nuclear Power Reactors," published in the *Federal Register* on July 29, 1996 (61 FR 39278), which added the definition, plus the insights provided in SECY-00-145, the NRC staff determined that an acceptable CFH training program should ensure that the trained individual has requisite knowledge and experience in spent fuel handling and storage and reactor decommissioning, and is capable of evaluating plant conditions and exercising prudent judgment for emergency action decisions. In addition, since the CFH is defined as a

non-licensed operator, the NRC staff also used the criteria in 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," and assessed the program against the elements of an SAT provided in the definitions section of 10 CFR 55.4.

Following the issuance of the 1996 decommissioning rule, the NRC commenced the review and approval of CFH training programs for permanently shutdown and defueled reactors consistent with the requirements in the rule. Nuclear power plants that are permanently shut down and defueled would reassess their staffing plans related to decommissioning organization structure; retaining, re-assigning, or releasing staff; and meeting minimum staffing requirements in TSs and regulatory required programs (e.g., emergency response organizations, fire brigade, security, etc.). The effort balanced personnel and plant status commensurate with the reduced risk once the certifications associated with permanent cessation of operations and permanent defueling had been submitted. Included in the effort was the transition from licensed operators to CFHs. With a simplified operating configuration in the permanently shutdown and defueled condition, licensed operators were replaced with CFHs following NRC approval of the CFH training program. Consistent with these changes, the training and requalification programs required by 10 CFR Part 55, "Operators' Licenses," were modified to reflect the reduced staffing levels and responsibilities of the operations staff.

Past practice of the NRC staff included reviewing the proposed CFH training program to confirm that the program was based on an SAT as defined in 10 CFR 55.4. Examples of such precedents include NRC safety evaluations for Maine Yankee Atomic Power Plant, dated November 26, 1997 (Legacy Library Accession No. 9712040233) and for Zion Nuclear Power Station, Units 1 and 2, dated July 20, 1998 (Legacy Library Accession No. 9807240263).

In more recent years, the NRC staff has approved CFH training programs for Kewaunee Power Station, dated May 12, 2014 (ADAMS Accession No. ML14104A046), Crystal River Unit 3 Nuclear Generating Plant, dated June 26, 2014 (ADAMS Accession No. ML14155A181), San Onofre Nuclear Generating Station, Units 2 and 3, dated August 1, 2014 (ADAMS Accession No. ML13268A165), Vermont Yankee Nuclear Power Station, dated October 1, 2014 (ADAMS Accession No. ML14162A209), Oyster Creek Nuclear Generating Station, Clinton Power Station, Unit No. 1, and Quad Cities Nuclear Power Station, Units 1 and 2, dated September 6, 2016 (ADAMS Accession No. ML16222A787), James A. FitzPatrick Nuclear Power Plant, dated October 17, 2016 (ADAMS Accession No. ML16259A347), Pilgrim Nuclear Power Station, dated April 12, 2017 (ADAMS Accession No. ML17058A325), Three Mile Island Nuclear Station, Unit 1, dated December 29, 2017 (ADAMS Accession No. ML17228A729), and Beaver Valley Power Station, Unit Nos. 1 and 2, Davis-Besse Nuclear Power Station, Unit No. 1, and Perry Nuclear Power Plant, Unit No. 1, dated April 11, 2019 (ADAMS Accession No. ML19028A030).

The regulatory requirements and guidance that the NRC staff used in its review of the proposed CFH Training and Continuing Training Program for DAEC are as follows:

- 10 CFR 50.2, which states, in part, that 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 Commission.

- 10 CFR 50.120(b), which states, in part, that:

  > (2) The training program must be derived from a systems approach to training as defined in 10 CFR 55.4, and must provide for the training and qualification of the following categories of nuclear power plant personnel:

(i) Non-licensed operator.

(3) The training program must incorporate the instructional requirements necessary to provide qualified personnel to operate and maintain the facility in a safe manner in all modes of operation. The training program must be developed to be in compliance with the facility license, including all technical specifications and applicable regulations. 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. The training program must be periodically reviewed by licensee management for effectiveness. Sufficient records must be maintained by the licensee to maintain program integrity and kept available for NRC inspection to verify the adequacy of the program.

- 10 CFR 55.4, "Definitions," which states, in part, that "Systems approach to training" means a training program that includes the following five elements:

  (1) Systematic analysis of the jobs to be performed.
  (2) Learning objectives derived from the analysis 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.

3.0 TECHNICAL EVALUATION

The NRC staff reviewed the specific elements of the proposed CFH Training and Continuing Training Program for DAEC against the regulatory requirements of 10 CFR 50.120, consistent with previous NRC staff reviews and approvals of decommissioning reactor CFH training programs, together with the elements of an SAT as defined in 10 CFR 55.4.

3.1 CFH Training and Continuing Training Program Broad-Scope Objectives

Based on the discussion of the applicable regulatory requirements in Section 2.0 of this safety evaluation, the NRC staff used the following three broad-scope objectives as criteria for an acceptable CFH Training and Continuing Training Program:

(1) Safe conduct of decommissioning activities.
(2) Safe handling and storage of spent fuel.
(3) Appropriate response to plant emergencies.

The NRC staff reviewed the proposed DAEC CFH Training and Continuing Training Program, as provided in the Attachment to NextEra's submittal dated January 29, 2019. In its submittal, the licensee stated, in part, that the approval of a CFH Training and Continuing Training Program is needed to facilitate activities associated with decommissioning and irradiated fuel handling and management.

Section 3.2, "Initial Training," Subsection 3.2.2, "Fundamentals Training," of the CFH Training and Continuing Training Program states that the fundamentals training phase of the program consists of lecture and/or self-study of topics appropriate to the monitoring, handling, storage,

and cooling of spent nuclear fuel. The selection of topics will be based on a job analysis for the CFH tasks and functions and will include, among others, 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.

Further, as described in Subsection 3.2.3, "On-the-Job Training (OJT)," the OJT phase of the CFH Training and Continuing Training Program will include hands-on training of shift operations such as shift turnover, shift recordkeeping, removal and return of equipment to service, and specified watch standing activities. The OJT phase will also include training on the facility license, emergency plan, and the content, bases, and importance of the facility's TS. The NRC staff finds the inclusion of these topics in the initial training program to appropriately address objective (1), above, the safe conduct of decommissioning activities.

The proposed CFH initial training program also includes lectures and/or self-study of topics appropriate to the monitoring, handling, storage, and cooling of spent nuclear fuel, including topics on thermodynamics, heat transfer, fluid mechanics, radiological safety principles and monitoring, electrical theory, and mechanical components operation. The OJT phase of the program includes watch-standing activities, such as operation of systems/components used to provide handling, storage, cooling, and monitoring of fuel. The NRC staff finds the inclusion of this information to appropriately address objective (2), above, the safe handling and storage of spent fuel.

Further, the OJT phase of the proposed CFH initial training program includes training on normal, abnormal, and emergency procedures, accident analysis, and the facility's emergency plan. The NRC staff finds the inclusion of this information to appropriately address objective (3), above, the appropriate response to plant emergencies.

Section 3.3, "Continuing Training Program," of the CFH Training and Continuing Training Program states that the Continuing Training Program shall be administered in a biennial training cycle. This cycle will include annual operating examinations and biennial written examinations. This section also states that all CFHs will participate in the Continuing Training Program. The CFH continuing training phase will consist of lectures and/or self-study of topics appropriate to the monitoring, handling, storage, and cooling of nuclear fuel. The content of the Continuing Training Program will be based upon the tasks selected during program development for the continuing training cycle. Continuing training 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. The NRC staff finds the inclusion of these topics in the Continuing Training Program to be consistent with the broad-scope objectives.

Based on the above, the NRC staff concludes that the proposed CFH Training and Continuing Training Program for DAEC addresses the three broad-scope objectives of the safe conduct of decommissioning activities, the safe handling and storage of spent fuel, and the appropriate response to plant emergencies.

3.2 CFH Training and Continuing Training Program Evaluation

The NRC staff reviewed the specific elements of the proposed CFH Training and Continuing Training Program for DAEC against the regulatory requirements of 10 CFR 50.120(b)(2) and (b)(3), consistent with previous NRC staff reviews and approvals of decommissioning reactor

CFH training programs and has summarized the results of this review below.

3.2.1 Use of SAT

Section 50.120(b)(2) of 10 CFR, states, in part, that "[t]he training program must be derived from a systems approach to training as defined in 10 CFR 55.4…." The licensee stated in its submittal dated January 29, 2019, that the proposed CFH Training and Continuing Training Program "adheres to the guidelines of NUREG-1220, 'Training Review Criteria and Procedures,' Revision 1" and that an SAT process will be applied to the program.

Section 3, "Main Body," of the proposed CFH Training and Continuing Training Program states, in part, that:

> The Certified Fuel Handler Training and Continuing Training Program contained herein describes the training program to be implemented by DAEC 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 DAEC facilities that have transitioned to a permanently defueled status.

The 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 qualifications (e.g., medical).

The NRC staff reviewed the proposed CFH Training and Continuing Training Program to ensure that it includes all five of the required elements of an SAT-based program, which are:

(1) Systematic analysis of the jobs to be performed,
(2) Learning objectives derived from the analysis 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, and
(5) Evaluation and revision of the training based on the performance of trained personnel in the job setting.

Section 3.2, "Initial Training," of the proposed CFH Training and Continuing Training Program states that the selection of topics for the fundamentals training phase of the program will be based on a job analysis for the CFH tasks and functions. The job analysis will be conducted by an incumbent Senior Reactor Operator (SRO), a training Subject Matter Expert, and a site decommissioning Subject Matter Expert, in accordance with the requirements of TR-AA-230-1000, "Systematic Approach to Training Process," Revision 1. The procedure outlines a graded approach to evaluating job tasks and includes a difficulty, importance, and frequency ratings for each new job task. Training materials will be designed based on the learning objectives.

The NRC staff reviewed NextEra's May 30, 2019, RAI response, which references procedure TR-AA-230-1000, Revision 1. NextEra states that the initial objectives included in the training program description were taken from other CFH training program descriptions that were previously approved by the NRC. The DAEC staff reviewed these objectives for applicability to the proposed CFH Training and Continuing Training Program using Job Analysis and Task Analysis processes and found the objectives to be satisfactory as terminal objectives. Each terminal objective was evaluated by an experienced fuel

handler for the required knowledge, skills, and tasks that would be required to meet that terminal objective.

A task list and a list of enabling objectives were then generated. Many of the objectives are duplicated in the Operations Training Program and were evaluated and imported into the CFH program. Once all of the enabling objectives are defined, they will be reviewed by the Operations Department line supervisors and adjusted as necessary. In summary, DAEC is following an SAT as prescribed by TR-AA-230-1000. The objectives are being developed by an experienced fuel handler and will be reviewed by operations management. In addition, DAEC utilized training objectives from the Operations Department Training Program where duplication of objectives and tasks were deemed applicable to the CFH program. The NRC staff finds the licensee's plan to use this process to conduct a systematic analysis of jobs to be performed and to derive learning objectives from that analysis to be consistent with SAT elements 1 and 2.

Section 3.3, "Continuing Training Program," of the proposed CFH Training and Continuing Training Program states that all CFHs will participate in the continuing training program. The content of the continuing training program will be based upon the tasks selected during program development for the continuing training cycle. A continuing training plan will be developed and approved by the Site Director (or designee). The training plan will be developed utilizing the SAT process. The NRC staff finds this approach to be consistent with SAT elements 1 and 2.

Section 3.2.2 of the proposed CFH Training and Continuing Training Program states that training materials will be designed based on the learning objectives. The NRC staff finds this to be consistent with SAT element 3.

Section 3.2 of the proposed CFH Training and Continuing Training Program states that a comprehensive exam at the end of the initial training program course will provide assurance of mastery of the skills, knowledge, and abilities required for successful performance of the CFH job and associated tasks. Further, Subsection 3.2.4, "Candidate Evaluation," states that a comprehensive final examination shall be administered at the end of the initial training cycle. The comprehensive examination will include a written and an operating examination. The written examination requires a minimum score of 80 percent to pass. The operating examination will consist of Job Performance Measures (JPMs) and each JPM will be scored on a pass/fail basis. Passing criteria for an individual JPM are that the examinee successfully completes the assigned task in accordance with the governing procedure without missing any critical tasks. The critical tasks for each JPM will be pre-identified as defined in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11, or later. The operating examination requires passing a minimum of 80 percent of the administered JPMs to pass.

Section 3.3.1.4 of the proposed CFH Training and Continuing Training Program states that participants in the CFH Continuing Training Program must pass a biennial written examination and an annual operating examination to maintain their qualification. The written examination requires a minimum score of 80 percent to pass. The operating examination will consist of JPMs and each JPM will be scored on a pass/fail basis. The operating examination requires passing a minimum of 80 percent of the administered JPMs to pass. The NRC staff reviewed the licensee's process to evaluate trainee mastery of the objectives during training and continuing training and finds it to be consistent with SAT element 4.

Section 3.4, “Program Evaluation,” of the proposed CFH Training and Continuing Training Program states that routine assessments of the effectiveness and accuracy of the training program are conducted by appropriate management personnel during and at the end of each 2-year training cycle. Evaluation results are reviewed by a station oversight board as defined in site procedures and any required changes, as determined by the station oversight board, are incorporated into the program. The licensee’s procedure TR-AA-230-1000 describes the activities performed in the evaluation phase of the training system development process. It provides specific guidance for the conduct of the activities during the evaluation phase, including evaluating training and post-training effectiveness. The NRC staff reviewed the licensee’s process to evaluate and revise the training based on the performance of trained personnel and finds it to be consistent with SAT element 5.

Based on the above, the NRC staff concludes that the proposed DAEC CFH Training and Continuing Training Program includes the five elements of 10 CFR 55.4 and, thus, complies with 10 CFR 50.120(b)(2).

3.2.2 Compliance with the Requirements of 10 CFR 50.120(b)(3)

The NRC staff also verified that the proposed DAEC CFH Training and Continuing Training Program meets the requirements of 10 CFR 50.120(b)(3). Specifically, 10 CFR 50.120(b)(3) requires that the training program:

a. Incorporate the instructional requirements necessary to provide qualified personnel to operate and maintain the facility in a safe manner in all modes of operation;
b. Be developed to be in compliance with the facility license, including all technical specifications and applicable regulations;
c. Be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements;
d. Be periodically reviewed by licensee management for effectiveness; and
e. Ensure that the licensee maintains and keeps available sufficient records to maintain program integrity and to allow for NRG inspection to verify the adequacy of the program.

The NRC staff reviewed the proposed CFH Training and Continuing Program and confirmed that each of the 10 CFR 50.120(b)(3) requirements is satisfied as discussed below.

Section 3.2.2, “Fundamentals Training,” states that the job analysis will be conducted by an incumbent SRO, a training Subject Matter Expert, and a site decommissioning Subject Matter Expert at DAEC. Learning objectives will be derived from the analysis to describe the desired performance after training and training materials will be designed based on the learning objectives. On May 9, 2019, the NRC staff sent a request for additional information to the licensee asking that the licensee provide a detailed description of the process for developing the learning objectives for the CFH Training and Continuing Training Program. On May 30, 2019, the licensee provided the following response.

DAEC utilizes an SAT as prescribed by TR-AA-230-1000. The initial objectives included in the training program description were taken from other CFH training program descriptions that were previously approved by the NRC. The DAEC staff reviewed these objectives for applicability to the proposed CFH Training and Continuing Training Program using Job Analysis and Task Analysis processes and found the objectives to be satisfactory as terminal objectives. Each terminal objective was evaluated by an experienced fuel handler for the required knowledge,

skills, and tasks that would be required to meet that terminal objective. A task list and a list of enabling objectives were then generated. Many of the objectives are duplicated in the Operations Training Program and were evaluated and imported into the CFH program. Once all of the enabling objectives are defined, they will be reviewed by the Operations Department line supervisors and adjusted as necessary. In summary, DAEC is following an SAT as prescribed by TR-AA-230-1000. The objectives are being developed by an experienced fuel handler and will be reviewed by operations management. In addition, DAEC utilized training objectives from the Operations Department Training Program where duplication of objectives and tasks were deemed applicable to the CFH program.

Section 3.2.4, "Candidate Evaluation," states that a comprehensive final examination shall be administered at the end of the initial training cycle consisting of a written examination and an operating examination. Further, Section 3.3.1, "Course Schedule," states that the proposed CFH Continuing Training Program shall be administered in a biennial training cycle, which includes annual operating examinations and biennial written examinations. Appendices A and B of the proposed CFH Training and Continuing Training Program provide instructional areas that the licensee has identified as required instructional areas necessary to ensure that the CFHs will be trained in all areas necessary to maintain the facility and operate equipment in a safe manner. The NRC staff finds that this satisfies element "a" above.

Section 3, "Main Body," states, in part, that the training program shall comply with American National Standards Institute (ANSI)/American Nuclear Society (ANS) 3.1-1978, "Selection and Training of Nuclear Power Plant Personnel," requirements for the qualification and training of plant personnel, as specified in TSs and be consistent with the level of hazard at the facility and ensure that the facility is maintained in a safe and stable condition. It further states that candidates in the training program will meet minimum operator experience requirements of ANSI/ANS 3.1-1978 as specified by the facility TSs. Section 3.2.1, "Eligibility Requirements," states that the CFH Training and Continuing Training Program will use the definition of nuclear power plant experience listed in ANSI/ANS 3.1-1978, as amended to include nuclear power plant experience acquired at a defueled reactor site which has spent nuclear fuel stored in its spent fuel pool. DAEC TS Section 5.0, "Administrative Controls," contains responsibility, organization, unit staff qualifications, procedures, programs and manuals, high radiation area, and reporting requirements. The NRC staff finds that this is consistent with element "b" above.

Section 3.4, "Program Evaluation," states that routine assessments of the effectiveness and accuracy of the training program are conducted by appropriate management personnel during and at the end of each 2-year training cycle. Evaluation results are 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. The NRC staff finds that this satisfies elements "c" and "d" above.

Section 3.5, "Record Retention," states that records associated with the proposed CFH Training and Continuing Training Program will be retained in a retrievable format until there is no longer a need for the CFH position at the facility (i.e., when all fuel is permanently transferred to a dry fuel storage facility). Further, Section 3.6, "Evaluating Changes to the Certified Fuel Handler Training and Continuing Training Program," states that changes may be made to the training program 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 10 CFR 50.120. The NRC staff finds that this is consistent with

element “e” above.

Based on the above, the NRC staff concludes that the proposed DAEC CFH Training and Continuing Training Program meets the requirements of 10 CFR 50.120(b)(3).

4.0 CONCLUSION

The NRC staff’s review of the proposed CFH Training and Continuing Training Program for DAEC determined that the program adequately addresses the safe conduct of decommissioning activities, the safe handling and storage of spent fuel, the appropriate response to plant emergencies, and is consistent with the SAT processes defined by 10 CFR 55.4 and the requirements of 10 CFR 50.120(b)(2) and (b)(3). Based on the above findings, the NRC staff approves the CFH Training and Continuing Training Program for DAEC pursuant to 10 CFR 50.2. Because the program is based on SAT, the licensee may change elements of the program 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 10 CFR 50.120.

Principal Contributors: Molly Keefe-Forsyth, NRR/DIRS

Date of issuance: August 28, 2019