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Dominion®

November 7, 2013

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

Serial No. 13-226E
LIC/CDS/R0
Docket No. 50-305
License No. DPR-43

DOMINION ENERGY KEWAUNEE, INC.
KEWAUNEE POWER STATION
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST 256, PERMANENTLY DEFUELED LICENSE AND TECHNICAL SPECIFICATIONS

By application dated May 29, 2013 (Reference 1), Dominion Energy Kewaunee, Inc. (DEK), requested an amendment to Renewed Facility Operating License for Kewaunee Power Station (KPS). The proposed amendment would revise the Operating License and associated Technical Specifications (TS) to Permanently Defueled Technical Specifications (PDTS), consistent with the permanently defueled status of the facility.

Subsequently, the Nuclear Regulatory Commission (NRC) transmitted a request for additional information (RAI) regarding the proposed amendment (Reference 2). The RAI questions and associated DEK response are provided in Attachment 1 to this letter.

The June 1, 2014 requested approval date for the submittal remains unchanged.

Please contact Mr. Jack Gadzala at 920-388-8604 if you have any questions or require additional information.

Sincerely,

Mark D. Sartain
Vice President – Nuclear Engineering and Development

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

CRAIG D SLY
Notary Public
Commonwealth of Virginia
Reg. # 7518653
My Commission Expires December 31, 2016

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Mark D. Sartain, who is Vice President – Nuclear Engineering and Development of Dominion Energy Kewaunee, Inc. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 7th day of November, 2013.

My Commission Expires: 12/31/16 Craig D Sly
Notary Public

A001
NRR

Attachment:

1. Response to Request for Additional Information

References:

1. Letter from Eugene S. Grecheck (DEK) to NRC Document Control Desk, "License Amendment Request 256, Permanently Defueled License and Technical Specifications," dated May 29, 2013 (ADAMS Accession No. ML13156A037).
2. Email from Karl D. Feintuch (NRC) to Jack Gadzala (DEK), "MF1952 - Kewaunee Defueled License and TS LAR Request for Additional Information MF1952-RAII-AHPB-Keefe-001 to -003," dated October 9, 2013.

Commitments made by this letter: None

cc: Regional Administrator, Region III
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ATTACHMENT 1

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION:
LICENSE AMENDMENT REQUEST 256
PERMANENTLY DEFUELED LICENSE AND TECHNICAL SPECIFICATIONS

KEWAUNEE POWER STATION
DOMINION ENERGY KEWAUNEE, INC.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION: LICENSE AMENDMENT REQUEST 256 PERMANENTLY DEFUELED LICENSE AND TECHNICAL SPECIFICATIONS

By application dated May 29, 2013 (Reference 1), Dominion Energy Kewaunee, Inc. (DEK), requested an amendment to the KPS Renewed Facility Operating License for Kewaunee Power Station (KPS). The proposed amendment would revise the Operating License and associated Technical Specifications (TS) to Permanently Defueled Technical Specifications (PDTS) consistent with the permanently defueled status of the facility.

Subsequently, the Nuclear Regulatory Commission (NRC) transmitted a request for additional information (RAI) regarding the proposed amendment (Reference 2). The RAI questions and associated DEK responses are provided below.

NRC Question MF1952-RAII-AHPB-Keefe-001-2013-10-09

Section 5.1 addresses Responsibilities. Technical Specification 5.1.2 states that the shift manager shall be responsible for the shift command function.

NUREG–1625, "Proposed Standard Technical Specifications for Permanently Defueled Westinghouse Plants," dated March, 1998 provides specific criteria with regard to responsibility, specifically with regard to the shift supervisor being absent from the control room.

Please describe personnel responsibility when the Shift Supervisor is absent from the control room.

Response:

NUREG-1625 states that the proposed TS contained therein were based on the Improved STS for Westinghouse Plants (i.e., NUREG-1431). The KPS TS are also based on NUREG-1431. However, they are based on a later version of NUREG-1431 than was used for development of NUREG-1625. KPS converted from a custom TS format to the Improved STS format via Amendment 207. KPS Amendment 207 was approved by NRC in a safety evaluation dated February 2, 2011 (Reference 3). The safety evaluation states that "the NRC staff's conclusion [is] that the ITS are consistent with the KPS current licensing basis (CLB) and the requirements of 10 CFR 50.36."

The "Regulatory Evaluation" contained in the NRC safety evaluation states the following regarding the required contents of Technical Specifications.

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. In doing so, the Commission placed emphasis on those matters related to the prevention of accidents and the mitigation of accident consequences. As recorded in the Statements of Consideration, "Technical Specifications for Facility Licenses; Safety Analysis Reports" (33 FR 18610, December 17, 1968), the Commission noted that applicants were expected to incorporate into their TS "those items that are directly related to maintaining the integrity of the physical barriers designed to contain radioactivity."

The certification for permanent removal of fuel from the reactor vessel pursuant to 10 CFR 50.82(a)(1)(ii) that was submitted to NRC on May 14, 2013, did not authorize performance of any new activities at KPS that were not previously allowed. No new accidents or accident sequences were created as a result of DEK permanently shutting down and defueling KPS. The integrity of the remaining necessary physical barriers designed to contain radioactivity also remains unchanged in the permanently defueled condition. As such, the requirements of the existing TS are bounding on the defueled facility and no new requirements are considered necessary.

The NRC did not consider it necessary to require specific criteria regarding the shift supervisor (shift manager) being absent from the control room, when approving the KPS Improved TS for KPS as an operating plant. Therefore, no such new criteria are being proposed for KPS as a permanently defueled plant.

The shift manager does not need to be in the control room to be responsible for and fulfill the shift command function. The location of the command center is functionally where the shift manager is located. As discussed in the response to NRC Question MF2370-RAII-AHPB-Lapinsky-007 (Reference 4), control of activities may be performed either remotely from the control room or locally in the plant. Spent fuel handling activities are performed locally at the SFP. Accordingly, the shift manager is responsible for directing response to abnormal situations from either the control room, or locally at the SFP, in accordance with applicable response procedures. Being absent from the control room does not relieve the shift manager of responsibility for the shift command function.

Procedure OP-KW-100, "Conduct of Operations," establishes uniform standards and expectations associated with operational activities and provides the framework for standards and expectations required to conduct operations in a consistent manner. This procedure specifies the requirements for the shift manager and for staffing the control room. Per this procedure, the normal control room complement (except for short duration reductions), consists of two personnel, one of which is either the shift manager or the on-shift supervisor. The shift manager maintains the shift command function when absent from the control room. The control room complement is maintained to allow implementation of the Emergency Plan. The existing administrative requirements in Procedure OP-KW-100 are considered adequate for specifying the responsibility of

the shift manager, and thus no new Technical Specifications regarding absence of the shift manager from the control room are being proposed.

NRC Question MF1952-RAII-AHPB-Keefe-002-2013-10-09

Section 5.1.1 of NUREG-1625 states that the Plant manager or designee, in accordance with approved administrative procedures, shall approve each proposed test, fuel movement, load movement, or experiment prior to implementation and shall approve modification to structures, systems or equipment that affect safe storage of irradiated fuel.

In Section 5.1.1 of the submittal dated March 29, 2013, there is no discussion of approval of fuel movement or load movement.

Were these intended to be left out of the responsibilities of the plant manager?

Please describe who is responsible for approval of fuel or load movement.

Response:

The previous response to Question 1 above regarding inclusion of requirements into plant Technical Specifications, including the guidance contained in NUREG-1625, is also applicable to this question. The requirements contained in the existing TS are bounding on the defueled facility and no new requirements have been proposed regarding approval of spent fuel movement or heavy load movement.

As discussed in the response to NRC Question MF2370-RAII-AHPB-Lapinsky-003 (Reference 4), movement of spent fuel or heavy loads that could affect the safe handling and storage of nuclear fuel would be approved by the shift manager. In accordance with proposed TS 5.1.2, the shift manager will retain the overall shift command and control function. Proposed TS 5.2.2 requires the shift manager to be a Certified Fuel Handler.

Existing procedural requirements are adequate for specifying who is responsible for approving of spent fuel or heavy load movement. Therefore, no new Technical Specification requirements regarding plant manager responsibilities or regarding approval of spent fuel or heavy load movement are being proposed.

NRC Question MF1952-RAII-AHPB-Keefe-003-2013-10-09

NUREG-1625, Proposed Standard Technical Specifications for Permanently Defueled Westinghouse Plants," dated March, 1998 provides specific criteria with regard to facility staffing.

The Kewaunee submittal only partially addressed these staffing criteria.

Please provide information on the following:

a. To accommodate unexpected absences of on duty shift crew members, the shift crew composition may be one less than the minimum requirements depicted in the referenced table for no more than 2 hours, provided immediate action is taken to restore the shift crew composition to within minimum requirements. During such absences, no fuel movement or movement of loads over storage racks containing fuel shall be permitted. This provision does not permit any shift crew position to be unmanned upon shift change due to the absence or tardiness of an oncoming shift crew member.

b. At least one qualified person (non-certified operator or CERTIFIED FUEL HANDLER) shall be present in the Control Room when irradiated fuel is stored in the spent fuel pool;

c. An individual qualified in radiation protection procedures shall be on site during fuel handling operations or movement of loads over storage racks containing fuel;

d. Fuel handling operations or movement of loads over storage racks containing fuel shall be directly supervised by a CERTIFIED FUEL HANDLER;

e. Administrative procedures shall be developed and implemented to limit the working hours of shift personnel who perform functions important to the safe storage of irradiated fuel assemblies (e.g., CERTIFIED FUEL HANDLERS, non-certified operators, radiation protection personnel, and key maintenance personnel).

Response:

The previous response to Question 1 above regarding inclusion of requirements into plant Technical Specifications, including the guidance contained in NUREG-1625, is also applicable to this question. The requirements contained in the existing TS are bounding on the defueled facility and no new staffing requirements are considered necessary.

Specific responses to items "a" thru "e" in Question 3 above are provided below.

a. Unexpected absences of on duty shift crew members

As discussed in the response to NRC Question MF2370-RAII-AHPB-Lapinsky-004 (Reference 4), on-shift crew members are held over until relieved. Procedure OP-KW-100, "Conduct of Operations," specifies that the off-going watch stander remains responsible until properly relieved, and does not relinquish the watch until satisfied that the on-coming watch stander is fully briefed and prepared. This 2-hour allowance is consistent with NUREG-1431 and was approved by NRC in Amendment 207 (Reference 3) as part of the KPS conversion to Improved Technical Specifications.

While it is conceivable that neither of the two minimum crew members would (or could) arrive onsite under severe weather conditions, such conditions would also be expected to prevent the on-shift crew members from departing the site. Regardless, barring extreme circumstances, appropriate on-shift staffing is required to be retained on site in such situations (i.e., personnel are held over until relief staff arrives). If spent fuel or heavy load movement were in progress when such a condition arose, actions would immediately be initiated to place the spent fuel or heavy load in a safe condition and prohibit additional movement until the condition was resolved.

Thus, DEK proposes no change to the 2-hour allowance contained in TS 5.2.2.b.

b. One qualified person present in the Control Room

As discussed in the response to Question 1 above, control of activities may be performed either remotely from the control room or locally in the plant. Spent fuel handling activities are performed locally at the SFP. The shift manager is responsible for directing response to abnormal situations from either the control room, or locally at the SFP, in accordance with applicable response procedures.

Procedure OP-KW-100 requires that at least one qualified person be present in the control room at all times. This level of detail is not needed in the TS and is adequately maintained in licensee-controlled documents. Thus, no new TS requirements have been proposed for control room staffing.

c. Individual qualified in radiation protection procedures

As discussed in the response to NRC Question MF2370-RAII-AHPB-Lapinsky-016 (Reference 4) and in the response to NRC Question MF1952-RAII-STSB-Grover-004 (Reference 5), radiation protection staff will not be required to be on shift. Rather, they will be part of the normal facility staff. Per proposed TS 5.2.2 and Table 5.2.2-1, there is no requirement for individuals qualified in radiation protection procedures to be a part of the minimum shift crew. The current TS 5.2.2 requires a radiation protection technician to be on site only when fuel is in the reactor.

Radiation protection (RP) technical oversight during fuel handling activities is provided by facility or supplemental RP personnel as specified in applicable RP and fuel handling procedures. Procedural and Technical Requirements Manual requirements related to fuel handling and movement of loads over storage racks containing spent fuel are listed in Reference 5. The existing procedural and TRM requirements are adequate to ensure that appropriate coverage by radiation protection staff is provided during fuel handling operations and during movement of loads over storage racks containing spent fuel. Thus, no new TS requirements have been proposed for radiation protection personnel staffing.

d. Fuel handling or movement of loads supervised by a CERTIFIED FUEL HANDLER

As discussed in the response to NRC Question MF2370-RAII-AHPB-Lapinsky-005 (Reference 4) and in the response to NRC Question MF1952-RAII-STSB-Grover-005 (Reference 5), the "qualified individual" referred to in proposed TS 5.2.2.c is a Certified Fuel Handler. Certified Fuel Handlers are responsible for handling of nuclear fuel, as stated in the "Shift Manager / Certified Fuel Handler Training Program Guide." This document also explicitly requires that Certified Fuel Handlers be trained to supervise fuel movement as part of their qualification process. Additionally, proposed TS 5.1.2 places overall responsibility for facility operation with the shift manager, who is required to be a Certified Fuel Handler per proposed TS 5.2.2.d.

There is no intended difference between a "qualified individual" (as referred to in TS 5.2.2.c) and a Certified Fuel Hander. TS 5.2.2.c was proposed with the terminology of "qualified individual" for consistency with Millstone Unit 1 TS 5.2.2.e because Millstone and KPS are both part of the Dominion fleet. The proposed TS 5.2.2.c is identical to the requirement approved by NRC for Millstone Unit 1 in existing TS 5.2.2.e.

Proposed TS 5.2.2.a requires that a Certified Fuel Handler be part of the minimum shift crew composition. Proposed TS 5.2.2.d will require that the shift manager is a Certified Fuel Handler. Proposed TS 5.1.2 will require that the shift manager is responsible for the shift command function. Finally, proposed TS 5.2.2.c will require that all fuel handling operations are directly supervised by a qualified individual. The "qualified individual" referred to in proposed TS 5.2.2.c is a Certified Fuel Handler.

These requirements, in aggregate, assure that fuel handling operations are directly supervised by a Certified Fuel Handler.

e. Administrative procedures to limit working hours who perform certain functions

NUREG-1431 does not contain requirements for limiting work hours at either operating reactors or shutdown reactors. Subsequent to publishing NUREG-1625,

work hour requirements were incorporated into 10 CFR 26, Subpart I – Managing Fatigue. Therefore, Part 26 now applies and no new TS have been proposed for work hour restrictions. Appropriate work hour limitations are contained in licensee controlled procedures.

References

1. Letter from Eugene S. Grecheck (DEK) to NRC Document Control Desk, "License Amendment Request 256: Permanently Defueled License and Technical Specifications," dated May 29, 2013 (ADAMS Accession No. ML13156A037).
2. Email from Karl D. Feintuch (NRC) to Jack Gadzala (DEK), "MF1952 - Kewaunee Defueled License and TS LAR Request for Additional Information MF1952-RAII-AHPB-Keefe-001 to -003," dated October 9, 2013.
3. Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 207 to Facility Operating License No. DPR-43, Dominion Energy Kewaunee, Inc., Kewaunee Power Station, Docket No. 50-305, dated February 2, 2011.
4. Letter from Eugene S. Grecheck (DEK) to NRC Document Control Desk, "Response to Request for Additional Information Regarding License Amendment Request 256, Permanently Defueled License and Technical Specifications," dated September 23, 2013.
5. Letter from Eugene S. Grecheck (DEK) to NRC Document Control Desk, "Supplement 1 and Response to Request for Additional Information Regarding License Amendment Request 256, Permanently Defueled License and Technical Specifications," dated October 15, 2013.