

May 28, 2010
L-10-166

10 CFR 26

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

SUBJECT:

Davis-Besse Nuclear Power Station
Docket No. 50-346, License No. NPF-3
Request for One-Time Exemption from the Requirements of 10 CFR 26.205(d)(3)

Pursuant to 10 CFR 26.9, "Specific exemptions," the FirstEnergy Nuclear Operating Company (FENOC) hereby requests a one-time exemption from portions of 10 CFR 26.205(d)(3) for the Davis-Besse Nuclear Power Station (DBNPS). Currently, 10 CFR 26.205(d)(4) and (d)(5) permit the use of less restrictive working hour limitations during the first 60 days of a unit outage, in lieu of the requirements of 10 CFR 26.205(d)(3). The proposed exemption would allow the use of the less restrictive working hour limitations described in 10 CFR 26.205(d)(4) and (d)(5) to support the activities required to complete the current, extended DBNPS outage, for a period not to exceed 60 days. The proposed exemption would apply to operations (who also comprise the fire brigade), maintenance, security, chemistry and radiation protection personnel as defined in 10 CFR 26.4(a)(1) through (a)(5).

Approval of the exemption will be necessary by June 14, 2010 in order to support the activities required to complete the current, extended DBNPS outage.

Details and supporting analysis for the exemption request are provided in Attachment 1. An Environmental Assessment supporting the exemption request is provided in Attachment 2. Attachment 3 contains a regulatory commitment established in Attachment 1.

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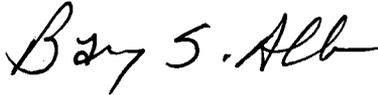
Davis-Besse Nuclear Power Station

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If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager - Fleet Licensing, at 330-761-6071.

Sincerely,

A handwritten signature in black ink that reads "Barry S. Allen". The signature is written in a cursive style with a large initial 'B' and a long horizontal stroke at the end.

Barry S. Allen
Site Vice President, DB Nuclear

Attachments:

1. Request for One-Time Exemption from Requirements of 10 CFR 26.205(d)(3)
2. Environmental Assessment
3. Regulatory Commitment List

cc: NRC Region III Administrator
NRC Resident Inspector
NRC Project Manager
Utility Radiological Safety Board

Request for One-Time Exemption from Requirements of 10 CFR 26.205(d)(3)
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SUMMARY DESCRIPTION

Pursuant to 10 CFR 26.9, "Specific exemptions," the FirstEnergy Nuclear Operating Company (FENOC) hereby requests a one-time exemption from portions of 10 CFR 26.205(d)(3) for the Davis-Besse Nuclear Power Station (DBNPS). Currently, 10 CFR 26.(d)(4) and (d)(5) permit the use of less restrictive working hour limitations during the first 60 days of a unit outage, in lieu of the requirements of 10 CFR 26.205(d)(3). The proposed exemption would allow the use of the less restrictive working hour limitations described in 10 CFR 26.205(d)(4) and (d)(5) for a period not to exceed 60 days to support the activities required to complete the current, extended outage. The proposed exemption would apply to operations (who also comprise the fire brigade), maintenance, security, chemistry and radiation protection personnel as defined in 10 CFR 26.4(a)(1) through (a)(5).

DETAILED DESCRIPTION

Background

On February 28, 2010, FENOC commenced a refueling outage at the Davis-Besse Nuclear Power Station (DBNPS). During the outage, nondestructive examination revealed rejectable indications on several control rod drive mechanism (CRDM) nozzles. Following the completion of testing and data analysis, it was determined that the nozzles required modification prior to restart. As a result of these modifications, the outage has been extended.

The first 60 days of the DBNPS outage during which the less restrictive working hour limitations described in 10 CFR 26.(d)(4) and (d)(5) were applied, ended on April 29, 2010. The DBNPS operations (who also comprise the fire brigade), maintenance, security, chemistry and radiation protection personnel as defined in 10 CFR 26.4(a)(1) through (a)(5) have transitioned to an on-line schedule that complies with 10 CFR 26.205(d)(3) requirements.

10 CFR 26 Requirements

The 10 CFR 26 requirements involved in the proposed exemption are described below. In some cases, the text from 10 CFR 26 has been paraphrased or editorially enhanced to provide clarity and focus.

10 CFR 26.4(a) defines the categories of individuals that are subject to the work hour controls specified in 10 CFR 26.205. These categories include:

Operating or onsite directing of the operation of systems and components that a risk-informed evaluation process has shown to be significant to public health and safety [10 CFR 26.4(a)(1)]. Performing health physics or chemistry duties required as a member of the onsite emergency response organization minimum shift complement [10 CFR 26.4(a)(2)].

Performing the duties of a fire brigade member who is responsible for understanding the effects of fire and fire suppressants on safe shutdown capability [10 CFR 26.4(a)(3)].

Performing maintenance or onsite directing of the maintenance of structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety [10 CFR 26.4(a)(4)].

Performing security duties as an armed security force officer, alarm station operator, response team leader, or watchperson, hereinafter referred to as security personnel [10 CFR 26.4(a)(5)].

10 CFR 26.205(d)(3) provides the following requirements:

Licensees shall ensure that individuals have, at a minimum, the number of days off specified in this paragraph. For the purposes of this subpart, a day off is defined as a calendar day during which an individual does not start a work shift. For the purposes of calculating the average number of days off required in this paragraph, the duration of the shift cycle may not exceed 6 weeks.

(i) Individuals who are working 8-hour shift schedules shall have at least 1 day off per week, averaged over the shift cycle;

(ii) Individuals who are working 10-hour shift schedules shall have at least 2 days off per week, averaged over the shift cycle;

(iii) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(1) through (a)(3) shall have at least 2.5 days off per week, averaged over the shift cycle;

(iv) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(4) shall have at least 2 days off per week, averaged over the shift cycle; and

(v) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(5) shall have at least 3 days off per week, averaged over the shift cycle.

10 CFR 26.205(d)(4) provides the following requirements:

During the first 60 days of a unit outage, licensees need not meet the requirements of 10 CFR 26.205(d)(3) for individuals specified in 10 CFR 26.4(a)(1) through (a)(4), while those individuals are working on outage activities. However, the licensee shall ensure that the individuals specified in 10 CFR 26.4(a)(1) through (a)(3) have at least 3 days off in each successive (i.e., non-rolling) 15-day period and that the individuals specified in 10 CFR 26.4(a)(4) have at least 1 day off in any 7-day period.

10 CFR 26.205(d)(5) provides the following requirements for individuals specified in 10 CFR 26.4(a)(5) during the first 60 days of a unit outage:

During the first 60 days of a unit outage... licensees need not meet the requirements of 10 CFR 26.205(d)(3) of this section. However, licensees shall ensure that these individuals have at least 4 days off in each successive (i.e., non-rolling) 15-day period.

10 CFR 26.9 states that:

Upon application of any interested person or on its own initiative, the Commission may grant such exemptions from the requirements of the regulations in 10 CFR 26 as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Requested Exemption

The proposed one-time exemption from the provisions of 10 CFR 26.205(d)(3) would allow the application of the less restrictive working hour limitations described in 10 CFR 26.205(d)(4) and (d)(5) to be applied to support the activities required to complete the current DBNPS extended outage, in lieu of the working hour limitations described in 10 CFR 26.205(d)(3). The proposed exemption would be applicable for a period not to exceed 60 days to support the activities required to complete the current, extended outage. The proposed exemption would apply to the DBNPS personnel covered by 10 CFR 26.4(a)(1) through (a)(5). During the period of exemption, FENOC

will apply the limitations of 10 CFR 26.205(d)(4) and (d)(5), such that the individuals specified in 10 CFR 26.4(a)(1) through (a)(3) have at least 3 days off in each successive (i.e., non-rolling) 15-day period, the individuals specified in 10 CFR 26.4(a)(4) have at least 1 day off in any 7-day period, and individuals specified in 10 CFR 26.4(a)(5) have at least 4 days off in each successive, non-rolling 15-day period.

Regulatory Evaluation

In accordance with 10 CFR 26.9, "Specific exemptions," the NRC may grant exemptions from the regulations that are determined to be authorized by law, that do not endanger life or property or the common defense and security, and are otherwise in the public interest. This exemption request satisfies these requirements.

The proposed exemption is authorized by law in that no other prohibition of law exists to preclude the activities which would be authorized by the exemption. The provisions of 10 CFR 26.9 allow the NRC to grant exemptions from the requirements of 10 CFR 26. Therefore, the proposed exemption is authorized by law.

10 CFR 26, Subpart I, as described in the Federal Register Notice 73 FR 16966, is to provide assurance that cumulative fatigue does not compromise the abilities of individuals to safely and competently perform their duties. The minimum days off requirements of 10 CFR 26.205(d)(3) address the long-term control of work hours while permitting the occasional use of extended work hours for short duration circumstances such as equipment failure, personnel illness, or attrition. The provisions of 10 CFR 26.205(d)(4) and (d)(5) allow a 60-day period in which the days off requirements of 10 CFR 26.205(d)(3) are replaced by less restrictive requirements. The limitations in 10 CFR 26.205(d)(4) and (d)(5) address the control of work hours for unique plant conditions, such as unit outages, which require extended work hours for a more sustained period of time. The less restrictive limitations of 10 CFR 26.205(d)(4) and (d)(5) provide licensees flexibility in scheduling required days off while accommodating the more intensive work schedules that accompany a unit outage. Limiting the time period in which the less restrictive limitations may be applied provides assurance that cumulative fatigue does not compromise the abilities of individuals to safely and competently perform their duties.

The proposed exemption would allow the less restrictive working hour limitations to be applied during a period not to exceed 60 days to support the activities required to complete the current, extended outage. The exemption will apply to operations (who also comprise the fire brigade), maintenance, security, chemistry and radiation protection personnel as defined in 10 CFR 26.4(a)(1) through (a)(5). These work groups will have worked a normal, on-line schedule, that complies with the

10 CFR 26.205(d)(3) requirements, during the period preceding the application of the less restrictive working hour limitations. Consequently, assurance has been provided that cumulative fatigue will not compromise the abilities of these individuals to safely and competently perform their duties. Therefore, the proposed exemption will not endanger life or property or the common defense and security, and is otherwise in the public interest.

As described above, this exemption request is consistent with the intent of the fatigue rule. As such, it is within the authority of the NRC to grant this request since changing the timeframe when outage hours can be worked will not endanger life or property or the common defense and security. The added flexibility will provide additional safety margin. There is no negative impact to the public interest as a result of this exemption request while the benefit to the affected employees will result in a positive impact to the public interest.

PRECEDENT

On November 10, 2009, the NRC approved an exemption request for the Donald C. Cook Nuclear Plant Unit 1 (D.C. Cook) which applied the requirements of 10 CFR 26.205(d)(4) for a 60-day period to encompass the restart from an extended outage (Agencywide Document Access and Management System Accession Numbers ML092630003 and ML09263004). Though the FENOC exemption request is not identical, the D.C. Cook exemption is relevant in that the provisions of 10 CFR 26.205(d)(4) were approved for application during the restart from an extended outage.

Environmental Assessment
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The FirstEnergy Nuclear Operating Company (FENOC) is requesting a one-time exemption from portions of 10 CFR 26.205(d)(3) for the Davis-Besse Nuclear Power Station (DBNPS). The proposed exemption would allow the application of less restrictive working hour limitations described in 10 CFR 26.205(d)(4) and (d)(5) in lieu of the working hour limitations described in 10 CFR 26.205(d)(3) to support the activities required to complete the current, extended DBNPS outage, for a period not to exceed 60 days. An environmental assessment for the proposed exemption follows.

1. Describe any changes to the types, characteristics, or quantities of non-radiological effluents discharged to the environment as a result of the proposed exemption.

There are no expected changes in the types, characteristics, or quantities of non-radiological effluents discharged to the environment as a result of the proposed exemption. The proposed exemption is administrative in nature and is limited to changing the timeframe when less restrictive hours can be worked. This does not result in any changes to the design basis requirements for the structures, systems, and components (SSCs) at DBNPS that function to limit the release of non-radiological effluents during and following postulated accidents. The SSCs associated with limiting the release of offsite non-radiological effluents will continue to perform their functions, and as a result, there is no significant non-radiological effluent impact. There are no materials or chemicals introduced into the plant that could affect the characteristics or types of non-radiological effluents. In addition, the method of operation of non-radiological waste systems will not be affected by the proposed exemption.

2. Describe any changes to liquid radioactive effluents discharged as a result of the proposed implementation.

There are no expected changes to liquid radioactive effluents discharged as a result of the proposed exemption. The proposed exemption is limited to administrative changes regarding the timeframe when less restrictive working hours can be worked and will not result in the production of any different quantity or type of radioactive material in the reactor coolant system. The proposed exemption will not result in changes to the design basis requirements for the SSCs at DBNPS that function to limit the release of liquid radiological effluents during and following postulated accidents. The SSCs associated with limiting the release of liquid radiological effluents will continue to perform their functions, and as a result, there is no significant liquid radiological effluent impact.

3. Describe any changes to gaseous radioactive effluents discharged as a result of the proposed exemption.

There are no expected changes to gaseous radioactive effluents discharged as a result of the proposed exemption. The proposed administrative changes to the timeframe when less restrictive working hours can be worked will not result in the production of any different quantity or type of radioactive material in the reactor coolant system. These changes will not result in changes to the design basis requirements for the SSCs at DBNPS that function to limit the release of gaseous radiological effluents during and following postulated accidents. The SSCs associated with limiting the release of gaseous radiological effluents will continue to perform their functions, and as a result, there is no significant gaseous radiological effluent impact.

4. Describe any change in the type or quantity of solid radioactive waste generated as a result of the proposed exemption.

There are no expected changes to solid radioactive waste generated as a result of the proposed exemption. The proposed administrative changes to the timeframe when less restrictive working hours can be worked will not result in the production of any different quantity or type of radioactive material. These changes will not result in changes to the design basis requirements for the SSCs at DBNPS that function to limit the release of solid radioactive waste during and following postulated accidents. In addition, radiation surveys will continue to be performed in accordance with plant radiation procedures. The SSCs associated with limiting the release of solid radioactive waste will continue to perform their functions, and as a result, there is no significant solid radioactive waste impact.

5. What is the expected change in occupational dose as a result of the proposed exemption under normal and design basis accident conditions?

The proposed exemption may result in individuals being on-site for longer time periods, hence these individuals have the potential to receive additional dose. The FENOC radiation protection program ensures that individual dose is maintained "as low as reasonably achievable" and that federal dose limits remain satisfied. Therefore, the proposed exemption will not have a significant impact upon occupational dose.

6. What is the expected change in the public dose as a result of the proposed change under normal and design basis accident conditions?

Dose to the public will not be affected by the proposed exemption during either normal or design basis accident conditions. As noted in responses to Items 2, 3, and 4 above, there is no basis to contemplate an increased source of liquid, gaseous, or solid

radiological effluents, or associated leak rate, which could contribute to increased public exposure during normal operations or design basis accident conditions. The proposed administrative changes to the timeframe when less restrictive working hours can be worked do not impact systems used during normal operation nor systems used to detect or mitigate a design basis accident.

7. What is the impact to land disturbance for the proposed changes?

There is no impact to land disturbance as a result of the proposed exemption. The proposed administrative changes to the timeframe when less restrictive working hours can be worked will not result in any impact to land in the vicinity of DBNPS.

Conclusion

There is no significant radiological environmental impact associated with the proposed changes to the timeframe when less restrictive working hours can be worked. These proposed changes will not affect any historical sites nor will they affect non-radiological plant effluents.

Regulatory Commitment List
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The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for the Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only as information and are not Regulatory Commitments. Please notify Mr. Thomas A. Lentz, Manager - Fleet Licensing, at (330) 761-6071 of any questions regarding this document or associated Regulatory Commitments.

Regulatory Commitment

1. During the period of exemption, FENOC will apply the limitations of 10 CFR 26.205(d)(4) and (d)(5), such that the individuals specified in 10 CFR 26.4(a)(1) through (a)(3) have at least 3 days off in each successive (i.e., non-rolling) 15-day period, the individuals specified in 10 CFR 26.4(a)(4) have at least 1 day off in any 7-day period, and individuals specified in 10 CFR 26.4(a)(5) have at least 4 days off in each successive, non-rolling 15-day period.