FENOC
First Energy Nuclear Operating Company

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Peter P. Sena III
President and Chief Nuclear Officer

June 25, 2013
L-13-156

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

SUBJECT:
Beaver Valley Power Station, Unit Nos. 1 and 2
Docket No. 50-334, License No. DPR-66
Docket No. 50-412, License No. NPF-73
Davis-Besse Nuclear Power Station
Docket No. 50-346, License No. NPF-3
Perry Nuclear Power Plant
Docket No. 50-440, License No. NPF-58
Capability to Perform Offsite Dose Assessment During an Event Involving Multiple Release Sources

By letter dated March 14, 2013, Agencywide Documents Access and Management System (ADAMS) Accession No. ML13073A522, the Nuclear Energy Institute informed the Nuclear Regulatory Commission (NRC) that the industry had elected to provide directly to the NRC staff additional details concerning the current and anticipated capabilities of sites to perform multi-unit dose assessments. The details were to include:

- A summary of the current capability to perform multi-unit/multi-source dose assessment.
- The anticipated schedule to establish the capability on an interim and/or permanent basis.
- Due dates associated with each key schedule action or milestone.
- A description of how the implementation schedule will be tracked and the associated tracking identifiers.

FirstEnergy Nuclear Operating Company (FENOC) hereby provides the additional details for Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2, Davis-Besse Nuclear Power Station (DBNPS), and Perry Nuclear Power Plant (PNPP), in Attachments 1, 2, and 3, respectively.

The regulatory commitments contained in this letter are listed in Attachment 4. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at 330-315-6810.

Sincerely,

Peter P. Sena

Attachments:
1. Beaver Valley Power Station, Unit Nos. 1 and 2 Implementation of Multi-Unit/Multi-Source Dose Assessment Capability
2. Davis-Besse Nuclear Power Station Implementation of Multi-Unit/Multi-Source Dose Assessment Capability
3. Perry Nuclear Power Plant Implementation of Multi-Unit/Multi-Source Dose Assessment Capability
4. Regulatory Commitment List

cc: Director, Office of Nuclear Reactor Regulation (NRR)
NRC Region I Administrator
NRC Region III Administrator
NRC Resident Inspector (BVPS)
NRC Resident Inspector (DBNPS)
NRC Resident Inspector (PNPP)
NRR Project Manager (BVPS)
NRR Project Manager (DBNPS)
NRR Project Manager (PNPP)
Director BRP/DEP (w/o Attachments)
Site BRP/DEP Representative (w/o Attachments)
Utility Radiological Safety Board (w/o Attachments)
Executive Director, Ohio Emergency Management Agency,
State of Ohio (NRC Liaison) (w/o Attachments)
Director, Pennsylvania Emergency Management Agency (w/o Attachments)
Ms. Sue Perkins-Grew, Nuclear Energy Institute

Beaver Valley Power Station, Unit Nos. 1 and 2
Implementation of Multi-Unit/Multi-Source Dose Assessment Capability

Summary of Current Multi-Unit/Multi-Source Dose Assessment Capability

FirstEnergy Nuclear Operating Company (FENOC) currently performs offsite dose calculations at Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2, using Meteorological Information and Dose Assessment System (MIDAS) software. The current version of MIDAS provides the capability to calculate and project offsite dose from a monitored or unmonitored release pathway. Meteorological and effluent data can be manually entered into MIDAS. The current version of MIDAS, however, does not include the capability to perform multi-unit/multi-source dose assessments.

In the event of a release from an additional pathway or from both units, the current method would be used to develop dose projections for each release source term. The dose projections would then be summed to determine the total projected dose. In the event of an unmonitored release, additional data would be obtained from the ventilation system. This would be in the form of air samples from the ventilation pathway.

Interim Measures

Guidance in the offsite dose assessment procedures does not specifically direct the user to sum calculations performed for multiple release pathways to determine the total projected dose. FENOC intends to revise the procedures to clarify multi-unit/multi-source dose assessment as an interim measure until the permanent solution is achieved.

Permanent Solution

FENOC intends to implement an updated version of MIDAS software to provide the capability for multi-unit/multi-source dose assessment. Final implementation of multi-unit/multi-source dose assessment capability will occur at BVPS by October 30, 2014.

Schedule

The table below contains the key schedule milestones for ensuring interim capability and for implementation of the permanent solution. Target dates are provided for each key schedule milestone. The key schedule milestones are being tracked in accordance with the FENOC Activity Tracking procedure under Notification No. 600839307.

Key Schedule Milestones	Target Date
Interim Actions	
Complete procedure revisions to clarify multi-unit/multi-source dose assessment.	August 30, 2013
Permanent Solution	
Install MIDAS software (updated version with multi-unit/multi-source dose assessment capability)/perform software acceptance	March 12, 2014
Complete procedure revisions and initial Emergency Response Organization training	October 30, 2014
Implement multi-unit/multi-source dose assessment capability	October 30, 2014

Davis-Besse Nuclear Power Station
Implementation of Multi-Unit/Multi-Source Dose Assessment Capability

Summary of Current Multi-Unit/Multi-Source Capability

FirstEnergy Nuclear Operating Company (FENOC) currently performs offsite dose calculations at Davis-Besse Nuclear Power Station (DBNPS) using PCDose software. The procedure governing offsite dose assessment provides guidance for performing offsite dose calculations using the software, as well as hand (manual) calculations in the event the software is not available. The current version of PCDose, however, does not include the capability to perform multi-unit/multi-source dose assessments.

During declared emergencies, release pathways are evaluated. Each pathway contains radiation monitoring elements, which are fed into the dose assessment software allowing for calculations if a release were to occur. In the event that multiple paths existed, if the additional pathway was in one of the routine pathways, PCDose will provide release calculations based on the combined release rates. If the release was from an unmonitored pathway (for example, failure of onsite dry cask fuel storage), the current software would not be able to analyze these scenarios.

The method available for unmonitored pathway releases would be to obtain field sampling data. This would be in the form of direct reading of dose rates or air samples. DBNPS methodology has the capability of performing dose projections based on the input of the field data into the software or hand calculation.

In these cases, guidance in the offsite dose assessment procedure directs the user to perform calculations and sum them to determine the overall release rates and dose projections. In the event that an unmonitored release were to occur, the assessment performed via calculations based on field data would be manually added to the dose projections provided by the software for a total projected dose.

Interim Measures

The existing procedural method of manually adding the individual offsite dose assessment results as described above provides adequate interim capability until implementation of the permanent solution.

FENOC is implementing new dose assessment software used at DBNPS. The PCDose software is to be replaced with Meteorological Information and Dose Assessment System (MIDAS) software. FENOC intends to revise the dose assessment procedure to clarify multi-unit/multi-source dose assessment for use of this version of MIDAS until such time as the permanent solution is achieved.

Permanent Solution

FENOC intends to implement an updated version of MIDAS software to provide the capability for multi-unit/multi-source dose assessment. Final implementation of multi-unit/multi-source dose assessment capability will occur at DBNPS by November 30, 2014.

Schedule

The table below contains the key schedule milestones for ensuring interim capability and for implementation of the permanent solution. Target dates are provided for each key schedule milestone. The key schedule milestones are being tracked in accordance with the FENOC Activity Tracking procedure under Notification No. 600840774.

Key Schedule Milestones	Target Date
Interim Actions	
Complete procedure revisions to clarify multi-unit/multi-source dose assessment using MIDAS	August 30, 2013
Permanent Solution	
Install MIDAS software (updated version with multi-unit/multi-source dose assessment capability)/perform software acceptance	March 12, 2014
Complete procedure revisions and initial Emergency Response Organization training	November 30, 2014
Implement multi-unit/multi-source dose assessment capability	November 30, 2014

Summary of Current Multi-Unit/Multi-Source Capability

FirstEnergy Nuclear Operating Company (FENOC) currently performs offsite dose calculations at Perry Nuclear Power Plant (PNPP) using Meteorological Information and Dose Assessment System (MIDAS) software. The current version of MIDAS provides the capability to calculate and project offsite dose from a monitored or unmonitored release pathway. Meteorological and effluent data can be manually entered into MIDAS. The procedure governing offsite dose assessment provides guidance for performing offsite dose calculations using the software. The current version of MIDAS, however, does not include the capability to perform multi-unit/multi-source dose assessments.

In the event of a release from an additional pathway, such as a release from the onsite dry cask fuel storage, the current software would not be able to automatically project the dose. The method available for assessing dose in this pathway release would be to obtain field sampling data. This would be in the form of air samples at the site boundary. PNPP methodology has the capability of performing dose projections based on the input of the field data (air sample results) into the software. In these cases, the calculations performed via the field team data would be manually added to the dose projections provided by the software for a total projected dose.

Interim Measures

In the event of a release from the onsite dry cask fuel storage, the air sample results obtained would be input into MIDAS for a dose projection. During a concurrent release from a monitored plant release pathway, the air sample dose projection results would be added to the dose projections provided by the software for the monitored plant release pathway.

Guidance in the offsite dose assessment procedure does not specifically direct the user to sum calculations performed for multiple release pathways to determine the overall release rates and dose projections. FENOC intends to revise the procedure to clarify multi-unit/multi-source dose assessment as an interim measure until the permanent solution is achieved.

Permanent Solution

FENOC intends to implement an updated version of MIDAS software to provide the capability for multi-unit/multi-source dose assessment. Final implementation of multi-unit/multi-source dose assessment capability will occur at PNPP by November 21, 2014.

Schedule

The table below contains the key schedule milestones for ensuring interim capability and for implementation of the permanent solution. Target dates are provided for each key schedule milestone. The key schedule milestones are being tracked in accordance with the FENOC Activity Tracking procedure under Notification No. 600840753.

Key Schedule Milestones	Target Date
Interim Actions	
Complete procedure revision to clarify multi-unit/multi-source dose assessment.	August 30, 2013
Permanent Solution	
Install MIDAS software (updated version with multi-unit/multi-source dose assessment capability)/perform software acceptance	March 12, 2014
Complete procedure revisions and initial Emergency Response Organization training	November 21, 2014
Implement multi-unit/multi-source dose assessment capability	November 21, 2014

Attachment 4
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Regulatory Commitment List
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The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2, Davis-Besse Nuclear Power Station (DBNPS), and Perry Nuclear Power Plant (PNPP) 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 330-315-6810 of any questions regarding this document or associated Regulatory Commitments.

Regulatory Commitment	Due Date
1. Final implementation of multi-unit/multi-source dose assessment capability will occur at BVPS.	October 30, 2014
2. Final implementation of multi-unit/multi-source dose assessment capability will occur at DBNPS.	November 30, 2014
3. Final implementation of multi-unit/multi-source dose assessment capability will occur at PNPP.	November 21, 2014