



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

June 15, 2010

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1: ENVIRONMENTAL
ASSESSMENT REGARDING THE REQUEST FOR EXEMPTION FROM
TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* PART 50,
APPENDIX R REQUIREMENTS (TAC NO. ME0771)

Dear Mr. Pacilio:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption dated March 3, 2009, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090630134), as supplemented on March 15, 2010 (ADAMS Accession No. ML100750093). The application requests a revision to an existing exemption from Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability," for the use of an operator manual action for Three Mile Island Nuclear Station, Unit 1, in lieu of the requirements specified in Appendix R, Section III.G.2. Specifically, for a specific fire scenario, the exemption requests a time reduction from a previously-granted exemption for certain manual operator actions to be taken outside of the control room. These manual operator actions support maintaining a reactor coolant system makeup pump minimum recirculation path.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script that reads "Peter Bamford".

Peter Bamford, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure:
Environmental Assessment

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UNITED STATES NUCLEAR REGULATORY COMMISSIONEXELON GENERATION COMPANY, LLCDOCKET NO. 50-289THREE MILE ISLAND NUCLEAR STATION, UNIT 1ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability," for the use of an operator manual action in lieu of the requirements specified in Appendix R, Section III.G.2, for Renewed Facility Operating License No. DPR-50, issued to Exelon Generation Company, LLC (the licensee), for operation of Three Mile Island Nuclear Station, Unit 1 (TMI-1), located in Dauphin County, Pennsylvania. Therefore, as required by 10 CFR 51.21, the NRC performed an environmental assessment. Based on the results of the environmental assessment, the NRC is issuing a finding of no significant impact.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action would grant an exemption to the requirements of 10 CFR 50, Appendix R, Section III.G.2, based on an operator manual action contained in the licensee's Fire Hazards Analysis Report (FHAR), which is part of the TMI-1 Updated Final Safety Analysis Report. The licensee's FHAR requires that the identified operator manual action be performed outside of the control room to achieve safe shutdown following a fire in Fire Zone AB-FZ-6 (Demineralizer and "A" Motor Control Center Area). The licensee states that the manual action

was subjected to a manual action feasibility review for TMI-1 that determined that the manual action is feasible and can be reliably performed.

The proposed action is in accordance with the licensee's application dated March 3, 2009, as supplemented by letter dated March 15, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML090630134 and ML100750093, respectively).

The Need for the Proposed Action:

The proposed exemption modifies an existing exemption which was granted by letter dated December 30, 1986 (ADAMS Accession No. 8701090216). The proposed modified exemption involves an operator manual action to open the supply breaker for the motor control center which powers valve MU-V-36, and then locally ensure that MU-V-36 is open. The proposed exemption specifies a reduced (40 minute) time frame to perform these actions as compared to one hour in the original exemption. The reduced timeframe is being specified because recent plant testing has shown that the backup air supply to seal injection valve MU-V-20 would only allow the valve to stay open for approximately 75 minutes under the postulated conditions. With MU-V-20 closed, ensuring that valve MU-V-36 is open provides a minimum recirculation flow path for the makeup pumps. By maintaining a minimum recirculation flow path, the makeup pumps will not be susceptible to pump damage from operation in a "deadheaded" condition. The recent test results on MU-V-20 necessitate a time reduction for the specified operator manual action to maintain sufficient time margin in order to prevent potential operation of the makeup pumps in a "deadheaded" condition.

The proposed exemption is necessary because the crediting of operator manual actions to achieve and maintain hot shutdown is not addressed in 10 CFR 50, Appendix R, Section III.G.2, and an exemption is therefore required in accordance with 10 CFR 50.12.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation for the proposed action and concludes that the operator manual action addressed in the application is feasible and can be reliably performed. Further, the NRC concludes that there is sufficient defense-in-depth within the fire protection program to ensure that a redundant train necessary to achieve and maintain safe shutdown of the plant will remain free of fire damage in the event of a fire in the postulated area.

The details of the staff's safety evaluation will be provided in the exemption that will be issued as part of the letter to the licensee approving the exemption to 10 CFR Part 50, Appendix R, Section III.G.2.

As described in the staff's safety evaluation that will be provided to the licensee with the exemption, the proposed action will not significantly increase the probability or consequences of accidents. Since the change being evaluated in this assessment involves only a change to the time allotted to accomplish a previously approved operator manual action, no changes are being made in the types of effluents that may be released off-site. Likewise, there is no significant increase in the amount of any effluent released off-site because the time change has no impact on any effluent release path or duration. There is no significant increase in occupational radiation exposure because, as described in the staff's safety evaluation, the areas of consideration for the operator manual action are expected to have dose rates of less than 10 millirem per hour. Since there is no impact to any radiological effluents or in-plant dose rates from the operator manual action time change, there is no impact to public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

The operator manual action described in the proposed exemption involves ensuring recirculation flow within the plant makeup system such that it continues to operate as designed. It does not have any impact to water usage or impact plant systems that contribute to non-radiological effluent releases from the plant. Therefore, the proposed action does not result in

changes to land use or water use, or result in changes to the quality or quantity of non-radiological effluents. Likewise, no changes to the National Pollution Discharge Elimination System permit are needed and no effects on the aquatic or terrestrial habitat in the vicinity of the plant, or to threatened, endangered, or protected species under the Endangered Species Act, or impacts to essential fish habitat covered by the Magnuson-Stevens Act are expected. For the same reasons, there are no impacts to the air or ambient air quality, nor are there impacts to historical and cultural resources. With no impact of the proposed exemption beyond the site boundary, there would be no noticeable effect on socioeconomic conditions in the region. Therefore, no changes or different types of non-radiological environmental impacts are expected as a result of the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the NRC staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would not result in a decrease in current environmental impacts. If the proposed action was denied, the licensee would have to perform plant modifications and/or reroute or wrap cables to achieve compliance. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement Related to the Operation of Three Mile Island Nuclear Station, Units 1 and 2, NUREG-0552, dated December 1972, and Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NUREG-1437, Supplement 37), dated June 2009.

Agencies and Persons Consulted:

In accordance with its stated policy, on March 29, 2010, the NRC staff consulted with the Pennsylvania State official, Dennis Dyckman, of the Pennsylvania State Department of Environmental Protection, regarding the environmental impact of the proposed action. The State official had no comments.

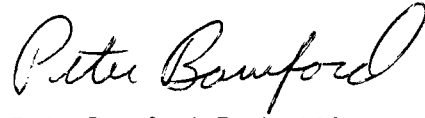
FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated March 3, 2009, as supplemented on March 15, 2010 (ADAMS Accession Nos. ML090630134 and ML100750093, respectively). Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the ADAMS Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or send an e-mail to pdr.resource@nrc.gov.

Dated at Rockville, Maryland, this 15th day of June 2010.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, reading "Peter Bamford". The signature is written in a cursive style with a large, looping initial "P".

Peter Bamford, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

June 15, 2010

Mr. Michael J. Pacilio
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Accession: Package: ML100880072/Letter: ML100880077/EA: ML100880079

OFFICE	LPL1-1-2/PM	LPL1-2/LA	RERB/BC	OGC	LPL1-2/BC
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DATE	04/07/2010	04/08/2010	05/21/2010	06/07/2010	06/15/2010

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