



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

September 23, 2011

Mr. Jack M. Davis
Senior Vice President and
Chief Nuclear Officer
Detroit Edison Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT RE: STAFF AUGMENTATION TIMES
DURING RADIOLOGICAL EMERGENCIES (TAC NO. ME4761)

Dear Mr. Davis:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 187 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment consists of changes to the Facility Operating License in response to your application dated September 24, 2010, supplemented by your letter dated March 4, 2011.

The amendment revises the licensing basis, specifically the Radiological Emergency Response Preparedness Plan, to increase the staff augmentation times for the Operational and Technical Support Centers-related functions from 30 to 60 minutes, and for Emergency Operations Facility-related functions from 60 to 90 minutes.

A copy of our safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Mahesh L. Chawla", followed by the word "for" in a smaller, cursive script.

Mahesh L. Chawla, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures:

1. Amendment No. 187 to NPF-43
2. Safety Evaluation

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

DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 187
License No. NPF-43

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Detroit Edison Company (DECo, the licensee) dated September 24, 2010, as supplemented by letter dated March 4, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-43 is hereby amended to read as follows:

Enclosure 1

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 187, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. Further, Facility Operating License No. NPF-43 is hereby amended to authorize changes to Fermi 2 Radiological Emergency Response Preparedness (RERP) Plan as set forth in the license amendment application dated September 24, 2010, as supplemented by March 4, 2011, and evaluated in the safety evaluation dated September 2011. The amendment revises the licensing basis, specifically the Radiological Emergency Response Preparedness Plan, to increase the staff augmentation times for the Operational and Technical Support Centers-related functions from 30 to 60 minutes, and for Emergency Operations Facility-related functions from 60 to 90 minutes.
4. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachment:
Changes to Page 3 of Facility
Operating License No. NPF-43

Date of Issuance: September 23, 2011

ATTACHMENT TO LICENSE AMENDMENT NO. 187

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

License Page 3

INSERT

License Page 3

- (4) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material such as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

DECo is authorized to operate the facility at reactor core power levels not in excess of 3430 megawatts thermal (100% power) in accordance with conditions specified herein and in Attachment 1 to this license. The items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A as revised through Amendment No. 187, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

DECo shall abide by the agreements and interpretations between it and the Department of Justice relating to Article I, Paragraph 3 of the Electric Power Pool Agreement between Detroit Edison Company and



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 187 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By application dated September 24, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102700478), and as supplemented by the letter dated March 4, 2011 (ADAMS Accession No. ML110660050), Detroit Edison Company (DECo, the licensee) proposed changes to the Fermi 2 licensing basis, specifically the Radiological Emergency Response Preparedness (RERP) Plan, for Commission review and prior approval pursuant to Section 50.54(q) of Title 10 of the *Code of Federal Regulations* (10 CFR).

The amendment revises the licensing basis by increasing the staff augmentation times for the Operational and Technical Support Centers-related functions from 30 to 60 minutes, and for Emergency Operations Facility-related functions from 60 to 90 minutes.

The supplement dated March 4, 2011, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the U.S. Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on November 30, 2010 (75 FR 74093).

2.0 REGULATORY EVALUATION

The regulatory requirements and guidance on which the NRC staff based its acceptance are as follows:

2.1 Regulatory Requirements

In 10 CFR 50.47(b)(1) it states, in part, that: "...each principal response organization has staff to respond and to augment its initial response on a continuous basis."

In 10 CFR 50.47(b)(2) it states, in part, that: "...adequate staffing to provide initial facility accident response in key functional areas is maintained at all times," and that "timely augmentation of response capabilities is available..."

In 10 CFR 50, Appendix E, Section IV, Part A, "Organization," it states, in part, that: "The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization..."

2.2 Guidance

Regulatory Guide 1.101 (RG 1.101), "Emergency Response Planning and Preparedness for Nuclear Power Reactors," provides guidance on methods acceptable to the NRC staff for implementing specific parts of the NRC's regulations – in this case, 10 CFR 50.47(b) and Appendix E to Part 50. Revision 2 of RG 1.101 endorses Revision 1 to NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," (NUREG-0654) which provides specific acceptance criteria for complying with the standards set forth in 10 CFR 50.47. These criteria provide a basis for NRC licensees, and State and local governments to develop acceptable radiological emergency plans, and improve emergency preparedness.

In NUREG-0654, Section II, "Planning Standards and Evaluation Criteria," Evaluation Criteria II.B.1 and II.B.5 address the 10 CFR 50.47(b)(2) planning standard. Evaluation Criteria II.B.1 specifies the on-site emergency organization of plant staff personnel for all shifts, and its relation to the responsibilities and duties of the normal shift complement. Evaluation Criteria II.B.5, states, in part, that:

Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.

Regulatory Issue Summary 2005-02, "Clarifying the Process for Making Emergency Plan Changes," was issued by the NRC to clarify the meaning of "decrease in effectiveness" and the process for making changes to emergency plans, and to provide some examples of changes that are considered to be a decrease in effectiveness.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed emergency plan changes, as described in the application dated September 24, 2010, and as supplemented by the letter dated March 4, 2011. Specifically, the staff reviewed the RERP Plan Table B-1 provided as Enclosure 3 of the letter dated March 4, 2011. The staff's technical evaluation is detailed below.

3.1 Background

The Fermi 2 RERP Plan Revision 3A was approved by the NRC in NUREG-0798, "Safety Evaluation Report Related to the Operation of Enrico Fermi Atomic Power Plant Unit 2," Supplement 5, dated March 1985. The current revision 38 of the RERP Plan includes several modifications made by the licensee pursuant to the provisions of 10 CFR 50.54(q). Additionally, by application dated May 14, 2007 (ADAMS Accession No. ML071430159), the licensee requested prior NRC approval to eliminate the Station Nuclear Engineer (RERP Plan Revision 32) or Reactor Engineer (RERP Plan Revision 3A) position within 30 minutes to provide support to the Shift Technical Advisor (STA). By letter dated May 29, 2009 (ADAMS Accession No. ML091390364), the NRC staff concluded that, based on review of the information provided by the licensee, the incorporation of this proposed change would not decrease the effectiveness of the Fermi 2 RERP Plan. Some of the discussions in this safety evaluation provide comparison of the proposed changes to the originally NRC-approved Plan (Revision 3A) and to the current Plan (Revision 38).

As originally approved by NRC, the Fermi 2 RERP Plan Revision 3A indicated that 30 minute and 60 minute augmentation time goals for minimum staffing positions were intended to meet the guidance of NUREG-0654 and NUREG-0737, Supplement 1, "Clarification of TMI Action Plan Requirements." These time goals were shown in Table B-1, "Staffing for the Fermi 2 Emergency Response Organization" (RERP Plan Table B-1 shares common design and terminology with the corresponding table in NUREG-0654). It was further explained in Section B.1.2, "Emergency Response Organization," that the 30 minute goal was achievable during normal working hours since most of the key positions were staffed by personnel on-site; however, during off-hours, it would take an average of 60 minutes to staff key positions. At that time the Technical Support Center (TSC) and Operational Support Center (OSC) were activated at the Alert (or higher) emergency level, and the Emergency Operations Facility (EOF) was activated at the Site Area Emergency (or higher) level. Therefore, at times other than normal working hours, it could take up to 60 minutes after an Alert is declared before the first group of responders would be in place and functioning in the TSC and/or OSC. The second group of responders would arrive within 60 minutes after a Site Area Emergency declaration to staff the EOF.

Based on a change made by the licensee to the RERP Plan in accordance with 10 CFR 50.54(q), the EOF is currently activated at the Alert (or higher) level. The licensee discusses that this change was made as a conservative measure to ensure timeliness of response to conditions requiring EOF resources (typically a Site Area Emergency or General Emergency). As a result, all on-site Emergency Response Facilities (ERF) are now activated at the Alert (or higher) classification level.

3.2 Facilities

1. Technical Support Center

The RERP Plan provides that when emergency conditions escalate to an Alert status, coordination of the emergency response measures shifts from the Control Room to the Technical Support Center under the direction of the Emergency Director (Plant Manager/alternate). The Emergency Director (ED) coordinates activities in the TSC and

interfaces with the Control Room, the OSC, and the EOF. The TSC is the emergency operations work area for senior technical, engineering, and management personnel; other licensee designated technical and administrative support personnel; and a small staff of NRC personnel. The TSC provides plant management and technical support to Control Room personnel and relieves the reactor operators of peripheral duties not directly related to reactor system manipulations during an emergency. The TSC may also be used to provide technical support during recovery operations following an emergency.

TSC personnel perform the following functions for an Alert, Site Area Emergency, and General Emergency:

- Accident assessment
- Emergency classification
- Radiological assessment
- Corrective action development and implementation
- Direction and control of on-site activities
- On-site protective actions
- Site access control
- Severe Accident Guideline implementation

In addition to these responsibilities, the TSC is also responsible for the following until relieved by the EOF:

- Emergency communications and notifications
- Off-site protective action recommendations (PARs)
- Direction and control of off-site emergency teams (utility personnel)
- Meteorological and dose assessment

The ED position is staffed by the Shift Supervisor from the Control Room initially, and then from the TSC should the situation progress beyond the Unusual Event classification. Certain responsibilities may be delegated to other individuals or groups, with the exception of decisions to: (1) classify the emergency; (2) authorize radiation exposures over 10 CFR 20 limits for emergency workers; (3) make PARs to off-site response organizations (prior to EOF activation); and (4) authorize distribution and use of potassium iodide to radiological emergency workers.

When functional, the TSC becomes the primary on-site communications center during an emergency. It has a reliable communications system providing communication capabilities with the Control Room, the OSC, the EOF, the NRC and other off-site agencies. The system provides for the immediate exchange of information on plant status and operations, notifications to Federal, State and local agencies, and inter-communications within the TSC. The communications system consists of dedicated and general business telephone lines, a microwave system, the plant intercom, a public address system, and data transmission equipment.

2. Emergency Operations Facility

The RERP Plan provides that the EOF is a command post for the overall management of the off-site emergency response including the coordination of radiological and environmental assessments, the determination of protective actions for the public, and the management of the recovery operations stated below:

- Perform overall emergency management.
- Approve all PARs.
- Ensure that the full resources of Detroit Edison are made available to secure the plant systems and to minimize the effects of the incident on plant personnel and public. This includes availability of other utilities and vendor resources.
- Interface with governmental authorities as required.
- Brief the State ED on the status of the emergency, ongoing response efforts, and any PARs.
- Ensure information released to the public is prompt and accurate, and released through proper channels.
- Establish long-term emergency and recovery organizations.
- Communicate with Corporate Headquarters.

An extensive communications system is provided in the EOF, which includes communications to the TSC, the off-site Radiological Emergency Teams, the NRC, the State Emergency Operations Center, and intercommunications within the EOF. The system consists of dedicated and general business telephone lines, a microwave system, radios, a public address system, and data transmission equipment. The State of Michigan and the Province of Ontario may dispatch representatives to the EOF as they deem necessary to support emergency response activities. The EOF contains provisions such as desks, chairs, telephones, and data transmission equipment to support these representatives. The EOF provides a consultation room and provisions for a small staff of NRC personnel.

The current revision of the RERP Plan provides further details of the numerous and diverse types of communication systems, both primary and backup, at the ERFs which ensures redundant communications capabilities are available. It further discusses that the entire emergency communication system is tested on a periodic basis, consistent with communications drill requirements.

3.3 Major Functional Areas

The licensee provided a justification of the proposed RERP Plan changes including a comparison between the Emergency Response Organization (ERO) staffing levels and the staffing levels of Table B-1 in NUREG-0654. This justification included a detailed review of each major functional area and task described in Table B-1. The NRC staff's evaluation of these changes is discussed below for the respective major functional areas in Table B-1.

Plant Operations and Assessment of Operational Aspects

NUREG-0654 Table B-1 provides guidance for staffing of Operation's personnel to perform this function. The regulations in 10 CFR 50.54(m)(2)(1) provides the minimum requirements per shift for on-site staffing of nuclear power units by operators and senior operators licensed under 10 CFR Part 55. The licensee discusses that there has been an increase in on-shift staffing from that required in the NRC-approved RERP Plan (Revision 3A) in order to ensure adequate performance of the major RERP Plan functions and tasks. A total of 16 persons are identified for on-shift staffing which is a significant increase compared to the originally approved RERP Plan (total of 11 persons), and the regulatory guidance provided by NUREG-0654 Table B-1 (total of 10 persons). The licensee states that this increase in on-site staffing over the base requirements may be considered a compensatory measure to ensure that the RERP Plan functions are adequately maintained. Compared to the original plan, the current plan has one additional Nuclear Supervising Operator and one Nuclear Operator to support this function and to support any of the major tasks such as repair and corrective actions or operational accident assessments. Also, included in the current plan is the designation of two dedicated Damage Control and Rescue (DCR) Team members in the on-shift complement. The licensee further states that this improves availability of Operations personnel to perform specified functions.

The licensee describes technological advancements since the initial NRC approval of the RERP Plan (Revision 3A) and how these advancements have resulted in increased capabilities and support of on-shift personnel. These include:

1. 3D-Monicores Computer System (3DM)

The licensee provides that the 3DM computer is designed to periodically determine the three-dimensional power density distribution for the reactor core, and to provide printed logs that permit accurate assessment of core thermal performance. This information is typically used by the on-shift STA.

The 3DM computer provides nearly continuous monitoring of the core margins to operating limits and appropriate alarms based on established core operating limits. This aids in ensuring that the core is operating within acceptable limits at all times, especially during periods of power level changes. For ease of use, the 3DM system has direct interface with the Integrated Plant Computer System (IPCS).

2. Integrated Plant Computer System

The licensee provides that in 2003, IPCS replaced multiple older and obsolete systems with a single, microcomputer-based operating platform incorporating the Safety Parameter Display System and the Emergency Response Information System as well as the following:

- Process Computer System
- Meteorological Data Acquisition System
- Motor Bearing and Winding Temperature Monitor
- Sequence of Events Recorder

- Visual Annunciator System
- General Electric Transient Analysis and Recording System

The licensee further states that by consolidating all of these systems onto a single platform, control room personnel can quickly monitor all critical plant parameters from a single workstation.

3. Dose Assessment

The licensee provides that the current dose assessment program resides on the Integrated Plant Computer System and is a Windows-based application called Raddose-V. The program is loaded on two IPCS terminals in the Control Room, as well as on non-IPCS network computers providing back up capability for any loss of IPCS.

The licensee further provides that Raddose-V has an automatic mode that receives meteorological and radiation monitor data directly from IPCS and prints dose results automatically every 15 minutes. This mode requires minimal inputs for initialization, thereby enabling the user to generate dose reports with little distraction from other activities. Raddose-V can also operate in a manual mode which allows user flexibility to perform dose calculations using optional input sources. The improvements to the dose assessment program make it easy to set up and requires minimal user interface to produce results quickly and automatically. This aspect of accident assessment is now largely automated.

The licensee states that the overall improvements in technology have enabled the on-shift staff to assess plant conditions quickly and efficiently, and with less distraction than before. These improvements help minimize the impact to the performance of the major tasks that may result from the proposed change in augmentation times. The licensee further discusses improvements in procedures and training as part of its application.

1. Emergency Operating Procedures (EOPs)

The licensee provides that since the original emergency plan approval, EOPs have been improved through industry initiatives. EOPs now use a symptom-based approach that demands less assessment and interpretation of plant conditions by the crew. EOPs interface well with new technology such as IPCS. EOP curves are generated by IPCS to graphically display plant conditions relative to limits or required actions. EOPs are also formatted as flowcharts, with RERP Plan Emergency Action Levels (EALs) "flagged" by identifiers indicating where a declaration of emergency is required. Abnormal Operating Procedures also contain directional steps for when a review of the classification procedure is required to determine potential classifiable conditions. This prompts the user to identify applicable EALs.

2. Emergency Plan Implementing Procedures

In 1995, Fermi 2 updated the classification methodology to that originally published in NUMARC/NESP-007. Fermi 2 EALs incorporate the new guidance that has simplified the classification process, including the use of a single page overview matrix of EAL

initiating conditions that streamlines the process of evaluating EAL against plant conditions.

3. Training

The licensee provides that since NRC approval of the RERP Plan under Revision 3A, the Systematic Approach to Training (SAT) has resulted in developing a task list for Operations personnel. The SAT process ensures training is conducted to industry-accepted standards, and has led to accreditation of the Operations Training Programs by the National Academy for Nuclear Training. A dynamic simulator is routinely used during Operations Training. Simulator scenarios are designed to be realistic and reflect a wide range of plant conditions, including emergency conditions. Each crew is evaluated for NRC Performance Indicators related to RERP Plan risk significant activities of emergency classification, initial notifications and PARs. During the simulator evaluated sessions the control room staff is taken from normal operations to accident conditions resulting in the declaration of at least one event which can range from an Unusual Event up to a General Emergency. The crew performs critical functions, such as classification, core damage assessment, accident mitigation, response prioritization, and communications without augmentation from additional responders. The proficiency of the control room staff to perform these functions without additional support is assessed in every training cycle.

The licensee provides that the STA was originally trained as an advisor to the operating shift per NUREG-0737. In 1990, additional guidelines were developed by the Institute for Nuclear Power Operations (INPO) for the training of STAs. This is detailed in the document INPO 90-003, Guidelines for the Training and Qualification of Shift Technical Advisors. The INPO Guidelines describe the role of the STA and is also reflected in Operation Department Expectations procedure ODE-5, Roles and Responsibilities. The STA performs independent assessments of plant operating concerns, technical support, appropriate corrective actions, analysis of events and their effects, effectiveness of response(s) to emergent conditions, classifications of emergencies, protection of the public, and any other actions related to critical safety functions and plant safety during abnormal and emergency situations. They also contribute to operations during normal plant conditions. By routine monitoring of equipment and plant operations, the STA can focus on preventative actions in order to mitigate the consequences of an accident.

The proposed changes to the staff augmentation times do not adversely impact on-shift staffing since NUREG-0654 Table B-1 does not designate staff augmentation goals for this major function area. But it is important to note that the technological advancements, increased staffing, and improvements to procedures and training help minimize the impact to the performance of the major functional areas that may result from the proposed change in augmentation times.

Emergency Direction and Control

NUREG-0654 Table B-1 guidance indicates that the STA, Shift Supervisor or designated Facility Manager should be assigned this function as a collateral duty, where responsibility for overall direction of facility response may be transferred when all centers are fully manned. The current

RERP Plan identifies that the Shift Manager will initially perform this on-shift function until relieved. While RERP Plan Table B-1 currently designates the TSC ED as being available in 30 minutes, NUREG-0654 Table B-1 does not designate an augmentation goal for this direction and control function. NUREG-0654 Table B-1 does provide for the addition of the EOF Director in 60 minutes.

The licensee provides that with the proposed changes, the Shift Manager/ED is relieved within 60 minutes by the ED in the TSC who then assumes overall control of the response efforts. The licensee further states that the advances in technology, training and procedures adequately compensate for any additional burden imposed on the Shift Manager by the retention of the ED function for a total of up to 60 minutes. Specifically, the improved plant monitoring with the 3DM, IPCS and Raddose-V, the use of improved symptom-based EOPs and emergency classification emergency plan implementing procedures, and additional operations personnel on-shift minimizes the burden on the Shift Supervisor.

The licensee states that with the proposed changes to the staff augmentation times, the Emergency Officer (EO) would arrive at the EOF within 90 minutes to relieve the TSC ED of off-site responsibilities including PARs and emergency notifications. The EOF is activated at an Alert level to ensure a rapid mobilization of EOF personnel, including the EO. The licensee concludes that there is minimal potential impact to the TSC ED because the EO provides timely relief to the ED by assuming the off-site responsibilities.

As discussed earlier in the safety evaluation, the advances in technology, improved training and procedures, and the increased staffing of personnel on-shift compensate for any additional burden on the Shift Manager/ED; therefore, the staff finds that increasing the augmentation time for the TSC ED to relieve the Shift Supervisor/ED is acceptable.

Revision 38 of the Fermi 2 RERP Plan indicates the TSC ED position is staffed within 30 minutes and maintains the emergency direction and control until relieved by the EO in the EOF at 60 minutes. As a result of the proposed change, this task will still remain with the TSC for the same 30 minute timeframe until relieved by personnel responding to the EOF. Based on the TSC staffing of technical expertise, the diverse and redundant communications capabilities of the TSC, the coordination of the emergency response measures in the TSC, the designation as the primary on-site communications center during an emergency when the TSC is staffed, and that the timeframe stays consistent with what timeframe is in effect currently, the staff finds that increasing the augmentation time for the EOF EO to relieve the TSC ED is acceptable.

The NRC staff finds the compensation described above to extend the required augmentation time for this task to be acceptable. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

Notification/Communications

NUREG-0654 Table B-1 requires one Communicator to be assigned on-shift. Revisions 3A and 38 of the Fermi 2 RERP Plan each specify one Communicator on-shift to perform this task. The licensee states that in 1991, all operations personnel (licensed and non-licensed operators)

were trained for the task of performing emergency notifications. At the start of each shift one Nuclear Operator is designated as the Shift Communicator, should an emergency arise. There are no proposed changes to this position. As a result of the proposed change, this task would remain with the operating crew for up to 60 minutes until relieved by personnel responding to the TSC. The licensee further concludes that based on the additional operations personnel added to the on-shift staffing and the training to qualify each Nuclear Operator as a Communicator, there would be no undue burden on the Control Room staff or impact on the notification function from an increase in initial augmentation time.

When the TSC becomes functional, it takes over the responsibility of performing emergency notifications. The numerous and diverse communications capabilities of the TSC were described previously in this safety evaluation. Revision 38 of the Fermi 2 RERP Plan indicates the TSC Communicator position is staffed within 30 minutes and maintains the communications responsibilities until relieved by the EOF Communicators at 60 minutes. As a result of the proposed change, this task will still remain with the TSC for the same 30 minute duration until relieved by personnel responding to the EOF.

Based on the diverse and redundant communications capabilities, addition of extra Operations personnel on-shift, and training of all operations personnel in the task of performing emergency notifications, the NRC staff finds the compensation described above to extend the required augmentation time for this task to be acceptable. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

Radiological Accident Assessment and Support of Operational Accident Assessment

The function of on-site radiological assessment is to review radiological conditions on-site using data from available instrumentation, assess the impact of changing radiological conditions on emergency classification, assist in accident assessment based upon those changing radiological conditions, and recommend appropriate on-site protective measures. This Functional Area includes three tasks: EOF Director, Off-Site Dose Assessment and Chemistry/Radiochemistry, and Off-site, On-Site (out of plant) and In-Plant Surveys and Radiation Protection.

1. EOF Director (Emergency Officer)

NUREG-0654 Table B-1 requires one person available in 60 minutes to perform this function, which is currently assigned to the EO. The current revision of the RERP Plan provides that the EO arrives within 60 minutes of an Alert and relieves the ED of overall emergency management as well as all off-site responsibilities including PARs and emergency notifications.

Under this proposed change, the Shift Manager/ED is relieved within 60 minutes by the ED in the TSC who then assumes overall control of the response efforts. The EO arrives at the EOF in 90 minutes and relieves the TSC ED of overall emergency management and off-site responsibilities including PARs, dose assessment and emergency notifications. Revision 38 of the Fermi 2 RERP Plan indicates the ED position is staffed within 30 minutes and maintains the emergency direction responsibilities until relieved by the EO in the EOF at 60 minutes. As a

result of the proposed change, this task would still remain with the TSC for the same 30 minute timeframe until relieved by personnel responding to the EOF. As discussed previously in this safety evaluation, the EOF is currently activated at an Alert to ensure a rapid mobilization of EOF personnel, including the EO.

When the EOF is activated, the EO assumes overall management responsibility for the ERO and for all assignments in the organization. The EO also assumes full responsibility for all coordination and interaction with off-site response organizations, with the exception of the local fire department, the ambulance service, and the hospital for contaminated injured personnel. These organizations are, and will continue to be, contacted through the Control Room. The EOF will be the focal point for meteorological data, dose assessment and projection, off-site radiological field surveys, and recommendations for protective action for the general public within the 10-mile emergency planning zone. The EO will approve all PARs made to the State, when the EOF is activated. The ED, EOF Staff, and Joint Information Center Corporate Spokesperson report to the EO. The EO: (1) ensures that the full resources of Detroit Edison are made available as required to secure the plant systems and to minimize the effects of the incident on plant personnel and the public, including the availability of other utilities, vendors, and consultants, (2) ensures that information released to the public is accurate and directed through proper channels, (3) communicates with Corporate Headquarters, and (4) ensures that the long-term emergency and recovery organizations are established.

Based on the TSC staffing of technical expertise, the diverse and redundant communications capabilities of the TSC, the coordination of the emergency response measures in the TSC, the designation as the primary on-site communications center during an emergency when the TSC is staffed and the fact that the task will remain with the TSC for the same 30 minute duration that is currently in the RERP Plan, the NRC staff finds the compensation described above to extend the required augmentation time for this task to be acceptable. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

2. Off-Site Dose Assessment and Chemistry/Radiochemistry

NUREG-0654 Table B-1 requires one person on-shift to perform this function, which is currently assigned to the on-shift Chemistry Technician and augmentation by Senior Health Physics Expertise in 30 minutes. Revision 38 of the Fermi 2 RERP Plan indicates the TSC Off-site Dose Assessment position is staffed within 30 minutes and maintains the responsibilities until relieved by the EOF Radiation Protection Coordinator at 60 minutes. The licensee performed a review of the emergency operating procedures, abnormal operating procedures, RERP Plan, and the situational requirements procedure used by Chemistry for off-normal plant conditions and identified only one requirement to be completed within the time frame where the Chemistry Technician would be required to perform dose assessment. That requirement is to observe and monitor readings in the Control Room, which is also the location where the Chemistry Technician will perform dose assessment. As such, both activities could easily be performed by the same technician. No other requirements overlap with the dose assessment function under conditions where dose assessment would be required.

As discussed previously in the safety evaluation, the Raddose-V has an automatic mode that receives meteorological and radiation monitor data directly from IPCS and prints dose results automatically every 15 minutes. This mode requires minimal inputs for initialization, thereby enabling the user to generate dose reports with little distraction from other activities.

Additionally, the requirement for having a post-accident sample and analysis within three hours was eliminated for Fermi 2 in 2002 with approval of License Amendment No. 150. This amendment deleted TS 5.5.3, "Post Accident Sampling System (PASS)," thereby eliminating the requirement for the PASS at Fermi 2.

The proposed first level of augmentation by the Radiation Protection Advisor (within 60 minutes) will relieve the Chemistry Technician and assume dose assessment. The TSC would retain this task until relieved by the EOF. As a result of the proposed change, this task would still remain with the TSC for the same 30 minute timeframe until relieved by personnel responding to the EOF.

Based on technological advancements in dose assessment, procedural improvements and the evaluation of the tasks assigned to the on-shift Chemistry Technician, the NRC staff finds the compensation described above to extend the required augmentation time for the Radiation Protection Advisor from 30 to 60 minutes for this task to be acceptable. As a result of the proposed change, this task will still remain with the TSC for the same 30 minute duration that is currently in the RERP Plan until relieved by personnel responding to the EOF. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

3. Off-Site and On-Site Surveys, In-Plant Surveys, and Radiation Protection

NUREG-0654 Table B-1 identifies only one on-shift "HP [Health Physics] Technician" who is responsible for performing in-plant surveys. NUREG-0654 Table B-1 further identifies two HP Technicians for protective actions (in-plant), but indicates that they "may be provided by shift personnel assigned other functions."

In Revision 3A of the RERP Plan, only one Radiation Protection (RP) Technician was assigned to the tasks for in-plant and on-site surveys. The current RERP Plan revision identifies two RP Technicians on-shift to support this function.

The licensee provides that personnel accessing the radiologically restricted areas (RRA) at Fermi 2 are required by procedure to obtain electronic alarming dosimetry (EAD) prior to entry. The same EAD is also used as a "key" to unlock turnstiles to gain access to the RRA. Radiation work permits (RWPs) establish the necessary preset warnings/alarms associated with the EAD. Specific emergency RWPs have been developed for use during a declared emergency, which automatically provide the EAD with emergency dose and dose rate alarms. The licensee concludes that this assures that the teams dispatched to the in-plant areas to perform any function during a declared emergency will be afforded ample warning/alarm prior to exceeding their allowed dose or dose rate. Also, damage control teams are briefed regarding radiological conditions prior to being dispatched. Thus, under emergency conditions, personnel responding to emergencies in a high radiation area will be knowledgeable of dose rates in the area, and

radiation protection personnel may not be required to accompany all teams into the plant areas. EADs can also be programmed at the OSC by RP personnel as needed prior to team dispatch.

The licensee further provides that on-site, out-of-plant field teams, and off-site field teams are typically used to verify the status of a potential release, but are not relied upon for timely indication. Installed effluent radiation monitors and in-plant radiation monitors would be able to detect any radioactive release quickly and accurately. The enhanced technology provided by the IPCS computer system and the dose assessment model provides reliable indication of any radioactive plume and its calculated direction. Quantification of a radioactive release is determined by dose assessment which is performed on-shift. Dose calculations determine the radiological impacts of a release, as well as areas of concern which is used to develop off-site PARs or on-site protective actions. The dose assessment program can also provide a rapid estimate of core damage based on in-plant radiation monitor readings.

Additionally the licensee provides that the Nuclear Operators (non-licensed) are qualified as Self-Monitors. Self-Monitors can also support these tasks. Self-Monitors are trained in the use of Geiger Mueller and ion chamber radiation meters, and contamination handling and survey techniques including count rate instruments used in the field. Training includes proper use of survey equipment and the use of survey maps.

Based on the technological improvements for dose monitoring, access control to radiological controlled areas and dose assessment, the qualification of Nuclear Operators (non-licensed) as Self-Monitors, and the assignment of additional RP personnel on-shift to perform these functions, the NRC staff finds the compensation described above to extend the required augmentation time for this task to be acceptable. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

Plant System Engineering, Repair and Corrective Actions

This Functional Area includes two tasks: Technical Support; and Repair and Corrective Actions.

1. Technical Support

NUREG-0654 Table B-1 identifies one STA be on-shift, core/thermal hydraulics expertise be available in 30 minutes, and Electrical and Mechanical expertise be available in 60 minutes. The current RERP Plan identifies the STA as the on-shift person assigned this task. Augmentation to support the STA is provided by the Technical Engineer or Nuclear Safety Advisor and one Support Engineer (two additional responders) in the second group of TSC augmentation within 60 minutes of an Alert. In Revision 3A, the STA was supported in this task by the first level of augmentation or a Core Thermal Hydraulic Reactor Engineer within 30 minutes of an Alert, with additional augmentation by the Technical Engineer or Nuclear Safety Advisor and one Support Engineer within 60 minutes of a Site Area Emergency. By application dated May 14, 2007 (ADAMS Accession No. ML071430159), the licensee requested prior NRC approval to eliminate the Station Nuclear Engineer (RERP Plan Revision 32) or Reactor Engineer (RERP Plan Revision 3A) position within 30 minutes to provide support to the STA. By letter dated May 29, 2009 (ADAMS Accession No. ML091390364), the NRC

concluded that, based on review of the information provided by the licensee, the incorporation of this proposed change would not decrease the effectiveness of the Fermi 2 RERP Plan.

The proposed change will continue to provide technical support augmentation to the STA within 60 minutes of an Alert as specified in the current RERP Plan. Therefore, the proposed change does not affect existing staff augmentation in support of this function.

2. Repair and Corrective Actions

NUREG-0654 Table B-1 specifies the functional area of "Repair and Corrective Actions," is to be fulfilled on shift by a total of two personnel who also "may be provided by shift personnel assigned other functions." It further identifies that the "position title or expertise" for the "repair and corrective actions" task could be filled by Mechanical Maintenance/Radwaste Operator, Electrical Maintenance or the Instrumentation and Control (I&C) Technician.

In Revision 3A of the RERP Plan, two personnel were identified to be on-shift for the major functional area of "corrective actions and repair." A "Nuclear Assistant Shift Supervisor" (NASS) and an I&C Technician were listed for the major tasks of "plant operation, accident mitigation, corrective actions and damage assessment."

The licensee provides that the NASS (currently, the Control Room Supervisor) is responsible for plant operation and accident mitigation as part of the Control Room Staff under the functional area "Plant Operations and Assessment of Operational Aspects." The remaining task of "corrective actions and damage assessment" was assigned to the on-shift I&C Technician. The licensee further provides that in the current revision of the RERP Plan, the I&C Technician has been replaced with qualified damage control personnel, since the task originally assigned to I&C was no longer required.

In RERP Plan, Revision 3A, one I&C Technician was identified to be on-shift at all times under the task of "corrective actions and repair". The I&C Technician was required to be on-shift for the task of filling all reactor water level instrument reference legs upon a loss of reactor water level indication as part of the emergency operating procedure (EOP), 29.000.04, for "RPV [Reactor Pressure Vessel] Flooding". In RERP Plan Revision 32, the licensee concluded that this task no longer was part of the EOPs for RPV flooding. The EOP for RPV Flooding, 29.100.01, sheet 3A, requires injection using applicable RPV Flooding Systems until the RPV has been flooded to the Main Steam Lines. It is at this point injection is controlled to "keep the Main Steam Lines" flooded. Therefore the task previously assigned to the I&C Technician was no longer a required task under the EOPs and the expertise provided by I&C Technician was no longer required for immediate response.

The current RERP Plan identifies two on-shift DCR Team personnel are assigned the task of Repair and Corrective Actions with no other responsibilities. Dedicated DCR Team members are available to respond for the tasks of damage assessment and corrective actions.

The licensee provides that typically the initial stages of "corrective actions" will be minor or of limited scope, such as:

- Mechanical – Identification and operation of faulty valves, clogged filters, packing and seal adjustments, or troubleshooting.
- Electrical – Identification and correction of tripped breakers and overloads, and hands off troubleshooting.
- I&C – Identification and correction of controller and set point adjustment, calibration, or hands off troubleshooting.

The licensee further concludes that until the reactor is stabilized and the causal agents identified, actual repairs or realignment of plant equipment would not require large scale maintenance support. On-shift personnel are capable of performing initial maintenance activities until augmenting personnel arrive. Therefore, the proposed changes to augmentation times will not adversely affect the ability of the on-shift personnel to manage the initial stages of any emergency.

Based on the assignment of the additional DCR Team personnel on-shift, with no other responsibilities assigned, to the task of Repair and Corrective Actions, the NRC staff finds the compensation described above to extend the required augmentation time for this task to be acceptable. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

Protective Actions (In-Plant)

NUREG-0654 Table B-1 specifies two personnel on-shift who “may be provided by shift personnel assigned other functions.” The Major Tasks specified are:

- access control,
- HP Coverage for repair, corrective actions, search and rescue, first aid, and firefighting,
- personnel monitoring, and
- dosimetry

In Revision 3A, this functional area was included as part of the Functional Area of Radiological Assessment and Protective Actions and Support of Operational Accident Assessment. As described previously, one HP Technician was assigned on-shift and responsible for the completion of these tasks including in-plant, on-site surveys.

The current RERP Plan identifies two RP Technicians on shift to perform the RP functions. The licensee provides that they ensure the access controls, personnel monitoring and dosimetry issue are completed in accordance with established procedures for response teams.

The licensee provides that the Nuclear Operators (non-licensed) are qualified as Self-Monitors. Self-Monitors can also support these tasks. Self-Monitors are trained in the use of Geiger Mueller and ion chamber radiation meters, and contamination handling and survey techniques including count rate instruments used in the field. Training includes proper use of survey equipment and the use of survey maps.

The licensee further provides that the Nuclear Operators are typically assigned to the Damage Control and Rescue Teams dispatched prior to the first level of augmented personnel. Normally the initial response phase involves search and rescue operations or manual manipulation of equipment. If used as Self-Monitors, the operators would be briefed on expected radiological conditions and would be provided survey instruments to monitor radiological conditions in the appropriate area(s). The results they generate would be captured during debriefs.

As described previously in this safety evaluation, the licensee provides that the personnel accessing the RRA at Fermi 2 are required by procedure to obtain EAD prior to entry. The same EAD is also used as a "key" to unlock turnstiles to gain access to the RRA. Radiation work permits (RWPs) establish the necessary preset warnings/alarms associated with the EAD. Specific emergency RWPs have also been developed for use during a declared emergency, which automatically provide the EAD with emergency dose and dose rate alarms. This ensures that the person dispatched to the in-plant areas to perform any function during a declared emergency will be afforded ample warning/alarm prior to exceeding his/her allowed dose or dose rate. Also, damage control teams are briefed prior to dispatch regarding radiological conditions. Thus, personnel responding to emergencies in a high radiation area will be knowledgeable of dose rates in the area without the need to send Radiation Personnel into the plant with the teams.

The licensee concludes that the flexibility offered by Nuclear Operators as Self-Monitors, the availability of installed area radiation monitoring instrumentation (including availability of data via IPCS in the OSC), the use of self-issued electronic alarming dosimetry, and the increase in on-shift staffing of RP Technicians ensure that the tasks under the Radiation Protection functional area are maintained and not impacted.

Based on the technological improvements, process improvements, the training of Operations Personnel, and the assignment of additional RP personnel on-shift to perform these functions, the NRC staff finds the compensation described above to extend the required augmentation time for this task to be acceptable. Therefore, the proposed change to the ERO augmentation (response) time continues to meet the intent of the NRC-approved Emergency Plan, and continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

4.0 SUMMARY

The NRC staff finds that the proposed emergency plan changes meet the standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, and provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Therefore, the NRC staff approves the licensee's proposed changes to the Fermi 2 RERP Plan in its application dated September 24, 2010, as supplemented by the letter dated March 4, 2011. Specifically, the NRC staff approves the changes to RERP Plan Table B-1 as provided in Enclosure 3 to the letter dated March 4, 2011.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. On April 15, 2011 (ADAMS Accession No. ML112000451), State of Michigan, Department of State Police, Lansing, wrote to the licensee that the Michigan State Police, Emergency Management and Homeland Security Division (EMHSD) did not support this amendment to change staff augmentation times.

The licensee arranged a meeting with the Michigan State Police to address their questions and concerns. The meeting covered plans for the change, confirmation that emergency response interfaces remain intact and recent improvements made in emergency planning at Fermi 2. On May 25, 2011 (ADAMS Accession No. ML112000475), the licensee sent a letter to Michigan State Police EMHSD, expressing the understanding that issues raised by them were addressed and that Detroit Edison had provided an answer to all outstanding questions.

On July 13, 2011 (ADAMS Accession No. ML112000525), Michigan State Police EMHSD wrote back to the licensee that issues raised by the EMHSD concerning the proposal have been addressed with no further outstanding questions.

6.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the *Federal Register* on September 14, 2011 (76 FR 56820). Accordingly, based upon the environmental assessment, the Commission has determined that issuance of this amendment will not have a significant effect on the quality of the human environment.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

8.0 REFERENCES

1. Detroit Edison Letter, "Request for Approval of Revision to the Fermi 2 Radiological Emergency Response Preparedness Plan to Change Staff Augmentation Times," dated September 24, 2010 (ADAMS Accession No. ML102700478).
2. Detroit Edison Letter, "Response to Request for Additional Information Regarding Fermi 2 Request for Approval of Revision to the Radiological Emergency Response Preparedness Plan to Change Staff Augmentation Times," dated March 4, 2011 (ADAMS Accession No. ML110660050).

3. NUREG-0654/FEMA REP-1, Revision 1, Supplement 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated November, 1980 (ADAMS Accession No. ML040420012).
4. Regulatory Guide 1.101, Revision 2, "Emergency Planning and Preparedness for Nuclear Power Reactors," dated October 1981 (ADAMS Accession No. ML090440294).
5. NRC Regulatory Issue Summary 2005-02, "Clarifying the Process for Making Emergency Plan Changes," dated February 14, 2005 (ADAMS Accession No. ML042580404).
6. NUREG-0798, "Safety Evaluation Report related to the operation of Fermi-2," Supplement No. 5, dated March 31, 1985 (ADAMS Accession No. ML091310377).
7. Detroit Edison Letter, "Submittal of Revision 32 to the Fermi 2 Radiological Emergency Response Preparedness Plan (RERP)," dated March 16, 2007 (ADAMS Accession No. ML070820248).
8. Detroit Edison Letter, "Submittal of Revision 38 to the Fermi 2 Radiological Emergency Response Preparedness Plan (RERP)," dated April 27, 2010 (ADAMS Accession No. ML101180151).

Principal Contributor: M. Norris, NSIR

Date: September 23, 2011

September 23, 2011

Mr. Jack M. Davis
Senior Vice President and
Chief Nuclear Officer
Detroit Edison Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT RE: STAFF AUGMENTATION TIMES
DURING RADIOLOGICAL EMERGENCIES (TAC NO. ME4761)

Dear Mr. Davis:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No.187 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment consists of changes to the Facility Operating License in response to your application dated September 24, 2010, supplemented by your letter dated March 4, 2011.

The amendment revises the licensing basis, specifically the Radiological Emergency Response Preparedness Plan, to increase the staff augmentation times for the Operational and Technical Support Centers-related functions from 30 to 60 minutes, and for Emergency Operations Facility-related functions from 60 to 90 minutes.

A copy of our safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,
/RA/ Terry Beltz for
Mahesh L. Chawla, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures:

- 1. Amendment No.187 to NPF-43
- 2. Safety Evaluation

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Accession Number: **ML112450464**

*memo J. Anderson to R. Pascarelli

OFFICE	NRR/LPL3-1/PM	NRR/LPL3-1/LA	NSIR/DPR*	OGC NLO/comments
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DATE	09/12/11	9/19/11	08/05/11	09/14/11
OFFICE	NRR/LPL3-1/BC	NRR/DD	NRR/D	
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DATE	9/17/11	9/20/11	09/23/11	

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