



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

January 28, 2014

Mrs. Karen D. Fili  
Site Vice President  
Monticello Nuclear Generating Plant  
Northern States Power Company - Minnesota  
2807 West County Road 75  
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT - ISSUANCE OF AMENDMENT  
NO. 177 TO RENEWED FACILITY OPERATING LICENSE RE: EMERGENCY  
PLAN CHANGE (TAC NO. MF0461)

Dear Mrs. Fili:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 177 to Renewed Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant (MNGP). The amendment consists of changes to the facility operating license in response to your application dated December 21, 2012, as supplemented by letter dated May 16, 2013.

The amendment revises the MNGP Emergency Plan by revising the Emergency Action Level (EAL) setpoint for the Turbine Building Normal Waste Sump Monitor. Specifically, a change was requested to EAL RA1.2, such that the change restores indication of an Alert condition to within the range of the applicable instrumentation.

A copy of our related 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, which appears to read "Terry A. Beltz", is written over a horizontal line.

Terry A. Beltz, Senior Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosures:

1. Amendment No. 177 to DPR-22
2. Safety Evaluation

cc: ListServ



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

NORTHERN STATES POWER COMPANY - MINNESOTA

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 177  
License No. DPR-22

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Northern States Power Company, a Minnesota Corporation (NSPM, the licensee), dated December 21, 2012, as supplemented by letter dated May 16, 2013, 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.

Enclosure 1

2. Accordingly, by Amendment No. 177, Renewed Facility Operating License No. DPR-22 is hereby amended to authorize revision to the Monticello Nuclear Generating Plant Emergency Plan as set forth in NSPM's application dated December 21, 2012, as supplemented by letter dated May 16, 2013, and evaluated in the NRC staff's safety evaluation dated January 28, 2014. The license amendment is effective as of its date of issuance and shall be implemented within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Eric J. Leeds", followed by the initials "E.J.L." in a cursive style.

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Renewed Facility  
Operating License

Date of Issuance: January 28, 2014



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 177

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY - MINNESOTA

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NOS. 50-263

1.0 INTRODUCTION

By application dated December 21, 2012 (Reference 1), and as supplemented by letter dated May 16, 2013 (Reference 2), Northern States Power Company, a Minnesota corporation (NSPM, the licensee), doing business as Xcel Energy, proposed a change to the Monticello Nuclear Generating Plant (MNGP) Emergency Plan by revising the Emergency Action Level (EAL) setpoint for the Turbine Building Normal Waste Sump (TBNWS) [Radiation] Monitor. The proposed change to EAL RA1.2, "VALID reading on any of the following radiation monitors that exceeds or is expected to exceed the reading shown for 15 minutes or longer," is necessary to restore indication of an Alert condition to within the range of the applicable instrumentation.

The supplemental letter dated May 16, 2013, 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 March 4, 2013 (78 FR 14133).

2.0 REGULATORY EVALUATION

This safety evaluation addresses the impact of the proposed changes on the MNGP EALs. The regulatory requirements and guidance on which the NRC staff based its acceptance are as follows:

2.1 Regulations

Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.47, "Emergency plans," sets forth emergency plan requirements for nuclear power plant facilities. The regulations in 10 CFR 50.47(a)(1)(i) state, in part, that:

... no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Section 50.47(b) establishes the standards that the onsite and offsite emergency response plans must meet for NRC staff to make a positive finding that there is reasonable assurance that the licensee can and will take adequate protective measures in the event of a radiological emergency. Planning Standard (4) of this section requires that a licensee's emergency response plan contain: "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures."

Section 50.54(q)(4) states, in part, that:

[C]hanges to a licensee's emergency plan that reduce the effectiveness of the plan ... may not be implemented without prior approval by the NRC: ... [A licensee's request for approval] must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the licensee's emergency plan, as revised, will continue to meet the requirements in appendix E to [10 C.F.R. part 50 and] the planning standards of § 50.47(b).

The Staff's review standards likewise are similar. Specifically,

The NRC may approve a proposed emergency plan change that the licensee determined to be a reduction in effectiveness if the NRC can find that the emergency plan, as modified, continues to meet the requirements of Appendix E, and for nuclear power reactor licensees, the planning standards of § 50.47(b), and continues to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Final Rule, Enhancements to Emergency Preparedness Regulations, 76 Fed. Reg. 72,560, 72,577 (Nov. 23, 2011).

## 2.2 Guidance

Revision 4 to Regulatory Guide (RG) 1.101, issued in July 2003 (Reference 3), endorses the guidance contained in the Nuclear Energy Institute (NEI) document NEI 99-01 "Methodology for Development of Emergency Action Levels" Revision 4, January 2003 (Reference 4), as acceptable to the NRC staff as an alternative method to that described in the following guidance for developing EALs required in Section IV of Appendix E to 10 CFR Part 50 and 10 CFR 50.47(b)(4):

- Appendix 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" (Reference 5).

Regulatory Issue Summary (RIS) 2003-18, with Supplements 1 and 2, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels," (Reference 6), provides guidance for developing or changing a standard emergency classification and action level scheme. In addition, this RIS provides recommendations to assist licensees, consistent with Section IV.B to Appendix E of Part 50, in determining whether to seek prior NRC approval of deviations from the guidance.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Background

The current NRC-approved emergency classification scheme for MNGP is based on NEI 99-01, Revision 4 and was approved by letter dated January 5, 2006 (Reference 7). The initially approved setpoint for the Alert EAL for the TBNWS Monitor in RA1.2 was 3,775,200 Counts per Minute (CPM). Subsequent to implementing the revised EALs, MNGP has determined that the indicating range of the installed monitor was insufficient to support the NEI 99-01 intended value of 200 times the Offsite Dose Calculation Manual (ODCM) alarm setpoint value. The proposed change revises the setpoint for an Alert condition, such that the indications are within the range of the associated instrumentation relied upon to make the declaration.

#### 3.2 Evaluation

The fundamental basis of RA1.2 is not a radiation dose or dose rate, but rather the potential or actual decrease in the level of safety of the plant implied by a radiological release that exceeds regulatory commitments for an extended period of time. The previous emergency classification set point was greater than the indicating range of the radiation monitor used for this purpose. The EAL change was requested in order to restore the Alert setpoint to within the indicating range of the TBNWS Monitor. The proposed setpoint 900,000 CPM is 90 percent of the range of the monitor and corresponds to 48 times the ODCM alarm setpoint. Therefore, the proposed setpoint change would 1) provide a setpoint value within the installed instrument's indicating range, and 2) correspond to an ODCM alarm setpoint that continues to remain well below the NEI 99-01 intended value for an Alert declaration.

The NRC staff requested additional information to determine 1) how a decision maker would know that the setpoint had been reached, 2) if an extent of condition analysis had discovered any similar situation with other radiation monitors, and 3) whether the EAL would apply if the release path were isolated. In a letter dated May 16, 2013, the licensee stated that 1) alarm response procedures, radiation monitor alarms, and simulator training would ensure that the decision maker has the information necessary and ability to make a timely classification; 2) an extent of condition review indicated that each of the other EAL thresholds were measurable within the corresponding instrument's range; and 3) the EAL level would be declared regardless of the isolation state of the release. The NRC staff finds the licensee responses to be acceptable.

The NRC staff also evaluated the differences between the Emergency Classification Level setpoints, the possible redundancy between RA1.1 and RA1.2, the readability of the associated radiation monitor's indication, and the mechanism available to communicate that the setpoint had been reached. The staff finds these to be acceptable.

### 3.3 Conclusion

The NRC staff performed a technical and regulatory review of the proposed changes to EAL RA1.2. The staff finds the justification for changing the setpoint for the TBNWS Monitor technically acceptable. The corresponding radiation monitor alarm and the alarm response procedure provide adequate information for the decision maker to determine that an EAL setpoint has been exceeded.

Therefore, the NRC staff has determined, based on the considerations discussed in the Evaluation section above, that the proposed change: 1) continues to meet the requirements in Appendix E to 10 CFR Part 50 and the planning standards in 10 CFR 50.47(b), and 2) continues to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Minnesota State official was notified of the proposed issuance of the amendments. The State official had no comments.

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes the requirements with respect to use of a facility component located within the restricted area, as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (78 FR 14133). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

### 6.0 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) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

### 7.0 REFERENCES

1. Letter from NSPM to the U.S. Nuclear Regulatory Commission dated December 21, 2012, "License Amendment Request: Modification to the MNGP Emergency Plan Concerning a Revision to the Emergency Action Level Setpoint for the Turbine Building Normal Waste Sump Monitor" (ADAMS Accession No. ML12356A473).

2. Letter from NSPM to the U.S. Nuclear Regulatory Commission dated May 16, 2013; "Response to a Request for Additional Information for License Amendment Request: Modification to the MNGP Emergency Plan Concerning a Revision to the Emergency Action Level Setpoint for the Turbine Building Normal Waste Sump Monitor (TAC No. MF0461)" (ADAMS Accession No. ML13136A289).
3. Regulatory Guide 1.101, Revision 4, "Emergency Planning and Preparedness for Nuclear Power Reactors" (ADAMS Accession No. ML032020276).
4. NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, dated January 2003 (ADAMS Accession No. ML041470143).
5. NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (ADAMS Accession No. ML040420012).
6. Regulatory Issue Summary 2003-18, with Supplements 1 and 2, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels" (ADAMS Accession Nos. ML032580518, ML041550395, and ML051450482).
7. Letter from Peter S. Tam, U.S. Nuclear Regulatory Commission, to John T. Conway, Nuclear Management Company, LLC, regarding "Monticello Nuclear Generating Plant, Unit No. 1 - Revision to Emergency Plan Emergency Action Levels" (ADAMS Accession No. ML060040437).

Principal Contributors: D. Johnson, NSIR/DPR  
M. Wasem, NSIR/DPR

Date: January 28, 2014



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Sincerely,

/RA/

Terry A. Beltz, Senior Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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\*via memorandum

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