

NSIR/DPCP CONFIRMATORY REVIEW REPORT

10 CFR 50.54(p)(2) CHANGES TO THE SECURITY PLAN, REVISION 16

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

LICENSE NO. DPR-22

1.0 INTRODUCTION

By letter dated October 22, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15300A099), Northern States Power Company - Minnesota (NSPM), a Minnesota corporation, doing business as Xcel Energy (licensee), submitted Revision 16 to the Monticello Nuclear Generating Plant's (MNGP) Physical Security Plan, which consists for the Physical Security Plan (PSP), Training and Qualification Plan, and Safeguards Contingency Plan, to the Nuclear Regulatory Commission (NRC) under the provisions of Title 10 to the *Code of Federal Regulations* (10 CFR), Part 50 "Domestic Licensing of Production and Utilization Facilities," section 50.54 "Conditions of License" paragraph (p)(2). The enclosure to the letter contained Safeguards Information and has been withheld from public disclosure. The NRC, Nuclear Security and Incident Response (NSIR), Division of Physical and Cyber Security Policy (DPCP), Reactor Security Branch (RSB), staff confirmatory review was based upon the guidance of NUREG 0800, Standard Review Plan for Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition – Conduct of Operations (Chapters 13.6.1 and 13.6.2) for physical security, the Office of Nuclear Security and Incident Response (NSIR) Procedure LIC 800 "Security Review Procedure for 10 CFR 50.54(p)(2)" and NEI 03-12, Revision 7, "Template for the Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, [and Independent Spent Fuel Storage Installation Security Program]," for conformance with generic format and content of security plans.

The confirmatory review findings on the NSPM changes to the Security Plan, whether they are authorized without NRC prior approval, do not decrease the safeguards effectiveness of the Security Plan and meet established regulatory requirements are described below.

2.0 REGULATORY REQUIREMENTS

The Facility Operating Licenses for MNGP require NSPM to maintain in effect all provisions of the Commission-approved PSP, T&QP, and SCP, Revision 0, and subsequent changes made under 10 CFR 50.54(p)(2) or 10 CFR 50.90. In accordance with 10 CFR 50.54(p), a licensee may not make changes that would decrease the effectiveness of a security plan, or guard training and qualification plan, prepared pursuant to 10 CFR 50.34(c) or 10 CFR 73, or of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, Responsibility Matrix) contained in a licensee's safeguards contingency plan prepared pursuant to 10 CFR 50.34(d) or 10 CFR 73, as applicable, without prior approval of the Commission.

A licensee desiring to make a change that would decrease the effectiveness of Security Plan is required to submit an application for a license amendment in accordance with 10 CFR 50.90.

NRC prior approval, through an amendment or an exemption, is required for a change that is outside of the current licensing basis (i.e., not previously analyzed or proposed in the Security Plan, described in the Updated Final Safety Analysis Report, effects safety basis, etc.), a change to conditions of the license, a proposed alternative measure, or an exemption to a regulatory requirement. The criteria that a change will not or did not decrease the effectiveness of Security Plan, set forth in the requirements of 10 CFR 73.55(p)(2), does not authorize or provide justification to a licensee to make changes to the licensing basis for which the Commission issued the Operating License.

The NRC staff's review determined whether the changes to the licensing bases are authorized under provisions of 10 CFR 50.54(p)(2), by confirming that the changes: (a) meet the applicable prescriptive requirements of 10 CFR 73; (b) satisfy the performance requirements of 10 CFR 73.55(b) to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety; (c) are within the scope, methods, and approaches established in the Security Plan reviewed and approved by the Commission and required by license conditions found in Facility Operating Licenses Nos. DPR-22; (d) did not decrease the safeguards effectiveness of the Security Plan and, therefore, provide at least equivalent methods or approaches for physical security systems, administrative controls, and/or management systems previously established in the Security Plan, to justify the use of the provisions in 10 CFR 50.54(p)(2); and (e) sufficiently described how regulatory requirements will be met and implemented in the Security Plan, in accordance with 10 CFR 73.55(2) and 10 CFR 73.55(c)(3).

3.0 CONFIRMATORY REVIEW

By letter dated October 22, 2015, NSPM submitted a report of changes to the MNGP PSP and SCP in accordance with 10 CFR 50.54(p)(2). No changes were made to the T&QP. NSPM stated the following:

“NSPM has reviewed the changes in this revision of the Security Plan and determined that they do not decrease the effectiveness of the Security Plan.”

“The licensee has performed a review of the changes against the requirements of 10 CFR 73.55(b) through (q) and determined that there is no decrease in the effectiveness of the plan. The changes do not decrease the ability of the onsite physical protection system and security organization, as described in 10 CFR 73.55(b) through (q), or equivalent measures approved under 10 CFR 73.55(r), to protect with high assurance against the design basis threat as stated in 10 CFR 73.1(a). The changes do not delete or replace any of the regulatory capabilities, as described in 10 CFR 73.55(b) through (q) or in Appendixes B or C.”

NSPM's changes in Revision 16 of the Security Plan submitted on October 22, 2015, are related to physical security systems, administrative controls, management systems, or organization in the following sections of the Security Plan:

- PSP, Section 4.1, "Security Organization Management"
- PSP, Section 11.2.3, "Waterborne Threat Measures"
- PSP, Section 16.2, "System Description"
- PSP, Section 18, "Response Requirements"
- PSP, Section 19.1, "Refuel/Major Maintenance"

- PSP, Section 21.10, "Vehicle Barrier System"
- SCP, Section 7, "Protective Strategy"

By letter dated August 15, 2016, (ADAMS No. ML16229A446) NSPM submitted responses to the NRC staff request for additional information (RAI), transmitted by NRR project manager, e-mail from R. Kuntz (NRC) to K. Nyberg (NSPM), "OUO – Security Related Information Attached. Draft Request for Additional Information RE" Monticello PSP Revision 16 (CAC No. MF81111)," on July 14, 2016 (ADAMS No. ML16287A433). The NSPM responses provided additional information describing changes, effects on the security licensing basis, and supporting bases for applying the provision of 10 CFR 50.52(p)(2). The details related to physical security are safeguards information, which are protected in accordance with 10 CFR 73.21, and are not publically disclosed.

3.1 DISCUSSION

The NSPM report described the following changes to the Security Plan:

- The change in PSP Section 4.1, "Security Organization Management," (Page 4, 5th paragraph) consisted of changes indicating the removal of the term "Security Consultant" and changes to reporting requirement of personnel in the organization structure.
- The changes in PSP Section 11.2.3, "Waterborne Threat Measures," (Page 12, 2nd paragraph) consisted of revising references of engineered physical security system and the removal of an administrative measure no longer needed.
- The changes to PSP Section 16.2, "System Description," (Page 36, 8th and 9th paragraph) consisted of revising descriptions of systems to clarify site configurations of security equipment and how they provide assurance for security functions.
- The changes in PSP Section 18, "Response Requirements," (Page 37, 6th paragraph) consisted of changes of the designation armed responder and armed security officer and the resulting changes to the distributions of numbers for armed responder or armed security officer for the required minimum security responder staffing.
- The changes in PSP Section 19.1, "Refuel/Major Maintenance," (Page 39, 6th paragraph) consisted of removing descriptions of an administrative measure that have been determined to be no longer needed.
- The changes in PSP Section 21.10, "Vehicle Barrier System," (Page 46, 4th bullet) consisted of revising the descriptions to add a compensatory measure that would be required for a degraded physical security system.
- The changes to Section 7 "Protective Strategy," (Page C-32, 6th paragraph), consisted of adding description of a physical protection feature relied on protecting against the DBT and the removal of an administrative measure no longer needed.

The changes described above were implemented in accordance with the provisions of 10 CFR 50.54(p)(2), and by license condition, which allow NSPM to make changes to the security licensing basis without Commission prior approval. NSPM submitted a report containing a descriptions of each change within two months after the changes were made.

In the responses to the NRC staff RAI, dated August 15, 2016, NSPM provided additional information that supplement the reported changes and how the changes to the security licensing basis and revisions to the Security Plan were in compliance with regulatory requirements. The NRC staff confirmatory review is based on initially reported information submitted with Revision 16 of the Security Plan and the subsequent supplemental information provided in response to the NRC staff RAI.

3.2 Confirmatory Review and Results

The following section provides a summary of the staff confirmatory review of the changes identified and described in NSPM reported changes, with the Revision 16 of the MNGP Security Plan.

- **PSP, Section 4.1, "Security Organization Management"**

The staff finds that the changes in PSP Section 4.1 met the requirements of 10 CFR 50.54(p)(2).

The staff confirmatory review determined that the changes in Revision 16 of the MNGP PSP did not decrease the safeguards effectiveness of the Security Plan and maintained and preserve the security licensing basis meeting requirements for the safety and operations of the MNGP. The staff determined that the changes to remove reference to "Security Consultant" and replace with "Security Supervisor(s)" are administrative changes. The changes did not affect the responsibilities and functions required of security personnel designated for performing security functions and the changes did not affect regulatory requirements for the safety and operations of the MNGP. The revised descriptions in the Security Plan conformed to guidance in NEI 03-12, Revision 7, for the descriptions of security personnel within the site security organization.

- **PSP, Section 11.2.3, "Waterborne Threat Measures"**

The staff review of the changes in PSP Section 11.2.3 is indeterminate on whether they met the requirements of 10 CFR 50.54(p)(2).

The staff confirmatory review, based on the reported changes submitted on October 22, 2015, and supplemental information provided on August 15, 2016, identified an Issue of Concern with regards to the as-found condition of a physical security feature. The Issue of Concern is documented separately, because of official-use-only, security-related and pre-decisional, information that is not disclosed publically.

The NSPM report of changes and the supplemental information submitted on August 15, 2016, in responses to RAI Questions No.1 (1.a, 1.b, and 1.c), No. 2 (2.a and 2.b), and No. 3, did not provide additional information specifically requested on the design basis of the physical security feature or provide any new information describing the design and licensing bases to allow the staff to determine the compliance with specific prescriptive and general performance regulatory requirements in 10 CFR 73.55. The NSPM references to Calculations No.15-054, No.15-060, and No.15-061, including finite element and computational fluid dynamic analyses, did not provide summaries of results, key assumptions, and how the NSPM established the design and licensing bases to allow the staff to determine the adequacy of the physical security features to meet regulatory requirements. The calculations referenced did not appear to be adequately analyzed to address all site conditions relative to the structures, systems and components that

are safety significant, and appeared to only address the engineered security structures, systems and components that are of security significance. The NSIR/DPCP/RSB provided the Issue of Concern to Region III for appropriate inspection follow-up on February 22, 2017.

The changes in Revision 16 of the PSP also included the removal of an administrative measure determined to be no longer needed due to the availability and reliability of the a physical protection feature that is the subject of the Issue of Concern. Because the NSPM basis for the physical protection feature is the subject of the Issue of Concern, the subsequent changes may potentially impact the safeguards effectiveness of the Security Plan, and not yet be considered or analyzed by NSPM. The staff finds the changes removing an administrative measure is indeterminate as to whether the changes did or did not decrease the safeguards effectiveness of the Security Plan.

- PSP, Section 16.2, "System Descriptions"

The staff finding for the changes to PSP Section 16.2 met the requirements of 10 CFR 50.54(p)(2).

The staff confirmatory review determined that the changes to PSP Section 16.2, that clarified the configurations of as-built security equipment and how these systems meet the required security functions, did not decrease the safeguards effectiveness of the Security Plan. The revised descriptions maintained/preserved the security licensing basis for meeting regulatory requirements for the safety of the MNGP operations.

In the response to the staff RAI on August 15, 2016, NSPM supplemental information indicated that the design basis for security backup power supply systems, including design of the security power loading, are captured in plant engineering document Calculation No. 10-100. NSPM indicated that Section 9 of the calculation No. 10-100 addresses the capacity of the uninterruptable power supply (UPS) batteries for meeting security functions and identified the maximum design duration for the design (i.e., sizing) of the UPS and the design capacity of the dedicated secondary security power supply. NSPM descriptions support the basis that changes clarifying the as-built configuration and the design margin for the capacity of dedicated security equipment to perform intended security functions. The changes did not decrease the safeguards effectiveness of the Security Plan and provided updates to the as-built conditions of security systems required for providing backup power supply. The changes did not affect regulatory requirements for the safety and operations of the MNGP.

- PSP, Section 18, "Response Requirements"

The staff finding for the changes to PSP Section 18 met the requirements of 10 CFR 50.54(p)(2).

The staff review determined that the changes made to the MNGP PSP Section 18, re-designating a certain number of Armed Responders (ARs) to a designation as Armed Security Officers (ASOs) is consistent with the requirements in 10 CFR 75.55(k)(5) and (k)(6).

Based on supplemental information contained in the MNGP response to RAI Question No.8 (8.a, 8.b, 8.c, and 8.d) and Question No.9, dated August 15, 2016, the licensee described the programmatic elements and functions affected by this plan change and provided the technical basis needed to support a staff determination that the stated number of ARs and ASOs are consistent with 10 CFR 75.55(k)(5) and (k)(6). Therefore, the staff determined that this change

did not decrease the safeguards effectiveness of the MNGP security plan and did not negatively affect regulatory requirements for the safety and operations of the MNGP.

- PSP, Section 19.1, Refuel/Major Maintenance

The staff finding for the changes in PSP Section 11.2.3 is indeterminate on whether they met the requirements of 10 CFR 50.54(p)(2).

The NSPM changes in Section 19.1 in Revision 16 of the PSP removed an administrative measure that has been determined to be no longer needed. Because NSPM basis for the removal of an established administrative measure is the physical security feature that is the subject of an Issue of Concern, the potential impact are not determined or yet considered by NSPM. The staff finds the change is indeterminate as to whether the removal of the administrative measures did or did not decrease the safeguards effectiveness of the Security Plan.

- PSP, Section 21.10, Vehicle Barrier System

The staff finding for the changes in PSP Section 21.10 met the requirements of 10 CFR 50.54(p)(2).

The staff confirmatory review determined that the identification of a requirement to implement compensatory measures for vehicle barrier system in PSP Section 21.10 revises the security licensing basis to incorporate requirements for implementing compensatory measures for vehicle barrier system at MNGP. The basis for this determination is based on NSPM supplemental information provided on August 15, 2016, in responses to RAI Question No. 1 (1.d), No. 4 (4.a and 4.b), and No. 6 (6.a, 6.b, and 6.c). The supplemental information indicate that the compensatory security measures requirements are implemented through Procedure FP-S-FSIP-01, Security Compensatory Measures,” for specific plant conditions and unavailability of a physical security feature. NSPM responses to RAI Questions Nos. 4 and 6 provide supplemental descriptions and licensing basis for implementation of compensatory measures in FP-S-FSIP-01 that addressed what conditions and compensatory measures will be implemented, when they would be implemented, and their durations. The compensatory measures as described, and if adequately implemented, provide reasonable assurance for minimizing vulnerabilities from the temporary degradation or loss of a physical security system relied on to meet required security functions and changes to site and operating conditions.

The identification of and the addition of compensatory measures required for a physical security feature and specific site conditions in the Revision 16 of the PSP did not decrease the safeguards effectiveness, and reasonably and adequately address the requirements of 10 CFR 73.55(o), Compensatory Measures.

- SCP, Section 7, "Protective Strategy"

The staff finding for the changes in Section 7(6)D of the SCP is indeterminate on whether they met the requirements of 10 CFR 50.54(p)(2).

The NSPM changes to Section 7, Subsection (6)D, of the SCP consisted of adding text to describe a physical security feature relied on for protecting against the DBT and the removal of an administrative measure no longer needed. The same changes are previously discussed in

the staff confirmatory review of changes in the PSP Sections 11.2.3 and 19.1. The basis for this finding is as previously discussed.

4.0 CONCLUSIONS

The NSIR/DPCP/RSB staff performed a review of NSPM reported changes to the Security Plan to confirm whether the changes met the provisions of 10 CFR 50.54(p)(2), based on the standards and criteria (a) through (e), previously stated in Section 2.

The staff concludes the following for changes in PSP Section 4.1, Section 16.2, Section 18, and Section 21.10:

- NSPM's changes: (a) meet all applicable prescriptive requirements of 10 CFR 73; (b) do not affect the performance requirements of 10 CFR 73.55(b) and continue to "provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety;" (c) are within the scope, methods, and approaches established in the Security Plan reviewed and approved by the Commission and required by a condition of license for the Facility Operating Licenses No. DPR-22; (d) did not decrease the effectiveness of the Security Plan and, therefore, provide at least equivalent methods or approaches for physical security systems, administrative controls, and/or management systems previously established in the Security Plan, to justify the use of provisions in 10 CFR 50.54(p)(2); and (e) provided adequate descriptions, as supplemented on August 15, 2016, of the licensing basis that capture how regulatory requirements are met and implemented (i.e., 10 CFR 73.55(2), 10 CFR 73.55(c)(3)) in the Security Plan.
- NSPM adequately concluded that the changes to the Security Plan, as described in the aforementioned sections in Revision 16, submitted on October 22, 2015, did not result in a decrease in safeguards effectiveness, and as such, NSPM's changes to the Security Plan do not require prior NRC approval.

The effectiveness of the Security Plan changes above and the supporting facility implementing procedures and practices will continue to be subject to future NRC review and inspection, including NRC-conducted force-on-force exercises.

However, for the remaining changes reported, the staff concludes that the changes in PSP Sections 11.2.3 and 19.1 and SCP Section 7 are indeterminate on whether they met the requirements of 10 CFR 50.54(p)(2). The staff confirmatory review based on these changes reported on October 22, 2015, and supplemental additional information provided on August 15, 2016, identified an Issue of Concern with regards to the as-found condition of a physical security feature.

The Issue of Concern is documented separately, because the information is security-related and pre-decisional for official use only. The staff recommends follow-up under NRC inspection oversight activities. The NSIR/DPCP/RSB provided the Issue of Concern to Region III for appropriate inspection follow-up on February 22, 2017.

5.0 REVIEWED BY:

Dennis Gordon, NSIR/DPCP/RSB
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