



July 11, 2011

L-PI-11-069
10 CFR 50.54(f)

U S Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Prairie Island Nuclear Generating Plant, Units 1 and 2
Dockets 50-282 and 50-306
Renewed License Nos. DPR-42 and DPR-60

60-Day Response to NRC Bulletin 2011-01, "Mitigating Strategies"

Reference: NRC Bulletin 2011-01, "Mitigating Strategies," dated May 11, 2011
(ML111250360).

On May 11, 2011, the U.S. Nuclear Regulatory Commission (NRC) issued Bulletin 2011-01, "*Mitigating Strategies*" (Reference). The NRC issued this Bulletin to achieve the following objectives:

1. To require that addressees provide a comprehensive verification of their compliance with the regulatory requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(hh)(2),
2. To notify addressees about the NRC staff's need for information associated with licensee mitigating strategies under 10 CFR 50.54(hh)(2) in light of the recent events at Japan's Fukushima-Daiichi facility in order to determine if 1) additional assessment of program implementation is needed, 2) the current inspection program should be enhanced, or 3) further regulatory action is warranted, and
3. To require that addressees provide a written response to the NRC in accordance with 10 CFR 50.54(f).

The Bulletin requested each licensee to submit a written response within 30 days of the date of the Bulletin. This 30-day response letter was provided by Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), on June 9, 2011.

The Bulletin also requested that within 60 days of the date of the Bulletin that NSPM provide the following information on their mitigating strategies:

- How essential resources are maintained, tested and controlled to ensure availability;
- How strategies are re-evaluated if plant conditions or configurations change; and
- How arrangements are reached and maintained with local emergency response organizations.

The enclosure to this letter contains the 60-day response to the requested information pursuant to the provisions of 10 CFR 50.54(f) for the Prairie Island Nuclear Generating Plant (PINGP).

Summary of Commitments

This letter contains one new commitment and no changes to existing commitments. In response to Question 4 in the Enclosure, NSPM makes the following commitment:

NSPM will include a requirement for continuing training on Extensive Damage Mitigation Guidelines (EDMG) in the PINGP training program for the Emergency Response Organization (ERO) qualified decision makers by January 13, 2012.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 11, 2011.



Mark A. Schimmel
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosure

cc: Administrator, Region III, USNRC
NRR Project Manager, PINGP, USNRC
Resident Inspector, PINGP, USNRC

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Enclosure 1

60-Day Response for NRC Bulletin 2011-01

On May 11, 2011, the NRC issued Bulletin 2011-01, "*Mitigating Strategies.*" The Bulletin requested that within 60 days of the date of this Bulletin, licensees provide information on their mitigating strategies programs. The NRC questions related to the 60-day response are restated below followed by the Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), response for the Prairie Island Nuclear Generating Plant (PINGP).

The items described below represent current plant practices. Individual items may be revised or adjusted in the future based on new or revised vendor recommendations, industry experience, etc., in accordance with established processes. Any changes involving commitments will be executed in accordance with NEI 99-04, Revision 0, "*Guidelines for Managing NRC Commitment Changes.*"

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Request:

1. Describe in detail the maintenance of equipment procured to support the strategies and guidance required by 10 CFR 50.54(hh)(2) in order to ensure that it is functional when needed.

Examples of the types of information to include when providing your response to Question (1) are:

- a. Measures implemented to maintain the equipment, including periodicity.
- b. Basis for establishing each maintenance item (e.g., manufacturer's recommendation, code or standard applicable to the craft). This should include consideration of storage environment impact on the maintenance necessary.

These examples are not meant to limit your response if you use other methods to address the issues described above.

NSPM Response:

The maintenance activities listed below in Table 1 have been established to ensure that the equipment procured to support the B.5.b mitigation strategies is functional when needed.

Table 1 - Preventative Maintenance

Equipment	Preventive Maintenance	Periodicity*	Basis
125 VDC Battery Cart	Replace batteries.	30 months	Vendor Specifications.
Portable Diesel Fire Pump	Change engine oil and filter.	Annually	Based on plant experience.
	Replace fuel filter.	Annually	Based on plant experience.
	Check battery condition.	Annually	Based on plant experience.
	Inspect and clean (if necessary) radiator coils.	Annually	Based on plant experience.
	Inspect all hoses and belts for wear and tension. Replace/adjust as necessary.	Annually	Based on plant experience.
	Inspect engine air cleaner for excessive dirt. Replace filter as required.	Annually	Based on plant experience.
	Check gauges and hour meter for damage. Repair/replace as necessary.	Annually	Based on plant experience.

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Equipment	Preventive Maintenance	Periodicity*	Basis
	Verify lug nuts tight on wheels.	Annually	Based on plant experience.
	Verify proper air pressure in tires. Adjust as necessary.	Annually	Based on plant experience.
	Verify jack stands operational and in good condition. Lubricate with grease.	Annually	Based on plant experience.
	Remove compressor guards and inspect the compressor belt, oil lines and air lines, checking for wear. Replace as necessary.	Annually	Based on plant experience.
	Change the mechanical seal oil.	Annually	Based on plant experience.
	Replace display panel battery.	8 years	Based on plant experience.

***Note:** The Preventative Maintenance program is condition based and frequencies are adjusted based on conditions found during maintenance and equipment performance. The periodicity shown is the present frequency.

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Request:

2. Describe in detail the testing of equipment procured to support the strategies and guidance required by 10 CFR 50.54(hh)(2) in order to ensure that it will function when needed.

Examples of the types of information to include when providing your response to Question (2) are:

- a. A description of any testing accomplished to ensure the strategies were initially feasible.
- b. A description of any periodic testing instituted for the equipment, along with the basis for establishing that test requirement
- c. A description of the corrective action process used when the equipment fails to adequately perform its test.

These examples are not meant to limit your response if you use other methods to address the issues described above.

NSPM Response:

During the initial development of the B.5.b mitigating strategies, NSPM validated strategies by performing engineering evaluations, time validations and/or tabletop reviews. The following Table 2.a describes the testing and evaluations accomplished to verify the initial feasibility of the mitigating strategies.

Table 2.a – Mitigating Strategies Validation

Strategy	Description
External Spent Fuel Pool Makeup	Time validation performed to demonstrate water could be delivered within 2 hours. Portable diesel fire pump and 100 foot aerial fire truck tested. A plant walkdown and an engineering evaluation completed to analyze the B.5.b flow path scenarios.
Internal Spent Fuel Pool Makeup	A plant walkdown and an engineering evaluation completed to analyze the B.5.b flow path scenarios.
Spent Fuel Pool Spray	Engineering evaluation completed to analyze the B.5.b flow path scenarios.
Steam Generator Injection	Engineering evaluation completed to analyze the ability of the portable pump to deliver the flow required for scenario.
Containment Flooding	Engineering evaluation completed to analyze the ability of the portable pump to deliver the flow required for scenario.

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Strategy	Description
Refueling Water Storage Tank Makeup	Engineering evaluation completed to analyze the B.5.b flow path scenarios.
Condensate Storage Tank Makeup	Engineering evaluation completed to analyze the B.5.b flow path scenarios.
Remote Battery Operation of the PORV	Engineering evaluation completed to ensure battery capable of supplying power to the solenoids.

The following Table 2.b describes periodic testing instituted for the equipment, along with the basis for establishing that test requirement.

Table 2.b - Surveillances

Equipment	Surveillances	Periodicity	Basis
Portable Diesel Fire Pump	General unit inspection is performed prior to performing the test. The oil, coolant, fuel, and mechanical seal level is checked.	Quarterly	Vendor Recommended.
	The trailer is attached to the truck and transported to test location. Pump is run for 5-10 minutes at 1500-2000 rpm and then reduced to 900 rpm for an additional 3 minutes. The engine operating data (coolant temperature, oil pressure, etc.) is recorded.	Quarterly	Vendor Recommended.
	Perform general visual inspection of diesel and pump (i.e., engine hoses, clamps, connections, etc.)	Quarterly	Vendor Recommended.
	Similar to quarterly surveillance, plus hoses are attached to the suction and discharge of the pump and run for 30 minutes. The pump is also run at elevated rpm to obtain flow vs. pressure data.	Annual	Vendor Recommended.
Pagers	Tested weekly to verify that pagers used for Emergency Response are functional.	Weekly	Based on plant experience.
Cell Phone	Ensure the functionality of the Emergency Operations Facility cellular telephone.	Every other month	Based on plant experience.
Radios	Check the functionality of the radios every quarter.	Quarterly	Based on plant experience.

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Equipment	Surveillances	Periodicity	Basis
Fire Hoses and Adapters	Fire hoses are hydrostatically tested every two years, except the hose on the turbine building roof which is tested annually.	Biennially	10 CFR 50 Appendix R and plant experience.
	Inspect fire hoses and gaskets.	Biennially	Based on plant experience.

In regards to question 2.c, The 10 CFR 50 Appendix B Corrective Action Program (CAP) is used to document failures, establish priorities for corrective actions and perform trending. When an issue is identified, a CAP Action Request (AR) is initiated, a management review team determines level of review required, and corrective actions are determined and implemented in accordance with the significance.

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Request:

3. Describe in detail the controls for assuring that the equipment is available when needed.

Examples of the types of information to include when providing your response to Question (3) are:

- a. A description of any inventory requirements established for the equipment.
- b. A listing of deficiencies noted in inventories for the equipment and corrective actions taken to prevent loss.

These examples are not meant to limit your response if you use other methods to address the issues described above.

NSPM Response:

In addition to the controls described in responses 1 and 2, procured non-permanently installed B.5.b equipment is inventoried quarterly in accordance with plant processes or procedures. This inventory assures the items are stored in the proper quantities and location. Access to equipment storage locations is controlled by postings on lockers and trailers where they are stored, citing the equipment is designated for use only for B.5.b scenarios.

Inventory deficiencies are entered into the CAP. As of the date of this response, there are no outstanding inventory deficiencies that would render the strategies not viable.

Table 3 - Inventories

Equipment	Inventory Frequency	Special Storage Controls	Actions Performed
Carts, trucks and trailers for staging equipment	Quarterly	Indoors, Heated	Verify proper quantities
Portable Diesel Fire Pump and battery charger	Quarterly	Indoors, Heated	Verify proper quantities
Set(s) of wheel chocks	Quarterly	Indoors, Heated	Verify proper quantities
Floating suction strainer and suction hose	Quarterly	Indoors, Heated	Verify proper quantities
Steam Generator fill connector	Quarterly	Indoors, Heated	Verify proper quantities
Reverse Osmosis connector for Refueling Water Storage Tank fill	Quarterly	Indoors, Heated	Verify proper quantities

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Equipment	Inventory Frequency	Special Storage Controls	Actions Performed
Fire Hose (6, 5, 4, 2 ½ and 1-1/2 - inch) nozzles, valves, adapters, splitters, monitors, manifolds, strainer, connectors, wrenches, etc.	Quarterly	Indoors, Heated	Verify proper quantities
D1/D2 connector (replaces spool pieces)	Quarterly	Indoors, Heated	Verify proper quantities
Deepwell supply connector for D1/D2 cooling	Quarterly	Indoors, Heated	Verify proper quantities
5-inch discharge flow indicator	Quarterly	Indoors, Heated	Verify proper quantities
125 VDC Battery Cart	Quarterly	Indoors, Heated	Verify proper quantities
Turnout gear (coats, pants, helmets, gloves, boots)	Quarterly	Indoors, Heated	Verify proper quantities
Self-Contained Breathing Apparatus/masks/tanks	Quarterly	Indoors, Heated	Verify proper quantities
Radios and chargers	Quarterly	Indoors, Heated	Verify proper quantities
Portable lights (flashlights, quartz lights, halogen lights, etc.)	Quarterly	Indoors, Heated	Verify proper quantities
Dosimetry	Quarterly	Indoors, Heated	Verify proper quantities
Tools (extension cords, hand tools, specialty tools, etc)	Quarterly	Indoors, Heated	Verify proper quantities
Rescue equipment/medical supplies	Quarterly	Indoors, Heated	Verify proper quantities
Fuel oil for Portable Diesel Fire Pump	Quarterly	Indoors, Heated	Verify proper quantities

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Request:

4. Describe in detail how configuration and guidance management is assured so that strategies remain feasible.

Examples of the types of information to include when providing your response to Question (4) are:

- a. Measures taken to evaluate any plant configuration changes for their effect on feasibility of the mitigating strategies.
- b. Measures taken to validate that the procedures or guidelines developed to support the strategies can be executed. These measures could include drills, exercises, or walk through of the procedures by personnel that would be expected to accomplish the strategies.
- c. Measures taken to ensure procedures remain up-to-date and consistent with the current configuration of the plant.
- d. A description of the training program implemented in support of the mitigating strategies and the manner in which you evaluate its effectiveness.

These examples are not meant to limit your response if you use other methods to address the issues described above.

NSPM Response:

Plant configuration changes are procedurally evaluated against the licensing basis, including the license conditions and their associated safety evaluation.

Initially, mitigating strategies were validated by walkdowns, engineering evaluations and/or table top reviews. Subsequent procedure changes are validated to ensure that the guideline remains viable. In 2011, B.5.b mitigating strategies were revalidated by similar techniques. The training discussed below also validates that the associated mitigating strategies can be deployed.

The design change process requires a review of affected procedures and any necessary changes to be made.

The mitigating strategy guidelines are controlled consistent with procedural controls under established administrative processes.

The following table describes the training program implemented in support of the mitigating strategies and the manner in which effectiveness is evaluated.

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Table 4 - Training

Plant Personnel	Training	Periodicity	Evaluation
Non-Licensed Operators	Training on the Non-Licensed Operator role in implementing Extensive Damage Mitigation Guidelines (EDMG) is part of the Initial Non-Licensed Operator Training programs and retrained per the NLO continuing training plan.	3 years	Testing / Qualification
Licensed Operators	Licensed Operators are initially trained on EDMGs per the Initial Licensed Operator training program. Licensed Operators are retrained per the biennial training plan as described in the Licensed Operator Requalification Training Program Description.	2 years	Testing and Drills/Exercises
Fire Brigade	Fire Brigade members are Non-Licensed Operators and are initially trained in EDMGs. Refresher training on B.5.b events is offered every 3 years.	3 Years	Testing
Emergency Reponse Organization - Key Decision Makers	The Emergency Response Organization (ERO) qualified decision makers receive initial training on EDMGs. However, NSPM currently has no procedural requirements to provide continuing training. NSPM recognizes the need for ongoing training for its qualified decision makers. Therefore, NSPM makes the following commitment for the PINGP: NSPM will include a requirement for continuing training on EDMGs in the PINGP training program for the ERO qualified decision makers by January 13, 2012.	None	Qualification
Security	Training on mitigating strategies was done as part of the implementation of B.5.b. Security EDMG actions are incorporated into Security Implementing Procedures, Contingency Plan Implementing Procedure and site procedures that are trained in initial training and are re-qualified per the Security Training Program Description.	2 Years	Testing

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Request:

5. Describe in detail how you assure availability of off-site support.

Examples of the types of information to include when providing your response to Question (5) are:

- a. A listing of off-site organizations you rely on for emergency response.
- b. Measures taken to ensure the continuity of memoranda of agreement or understanding or other applicable contractual arrangements. This should include a listing of periods of lapsed contractual arrangements.
- c. A listing of any training or site familiarization provided to off-site responders. This should include any measures taken to ensure continued familiarity of personnel of the off-site responders in light of turnover and the passage of time.

These examples are not meant to limit your response if you use other methods to address the issues described above.

NSPM Response:

The following off-site organizations in Table 5 are relied on for emergency response.

Table 5 – Offsite Organizations

Off-site Organization	Implementing Document	Date of Agreement	Training/ Periodicity
State of Minnesota	Letter of Agreement	12/17/2008	Annual training provided by the State of Minnesota as stated in Minnesota Emergency Operations Plan.
State of Wisconsin	Letter of Agreement	10/6/2010	Annual training provided by the State of Wisconsin as stated in Wisconsin Emergency Operations Plan.
City of Red Wing (includes Red Wing Fire Department)	Letter of Agreement	2/24/2011	Annual training for the Red Wing Fire Department is provided by the site and the State of Minnesota. Annual training is provided to the City of Red Wing via the Minnesota Emergency Operations Plan.
Dakota County	Letter of Agreement	4/28/2011	Annual training provided by the State of Minnesota as stated in Minnesota Emergency Operations Plan.

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Off-site Organization	Implementing Document	Date of Agreement	Training/ Periodicity
Goodhue County	Letter of Agreement	11/11/2010	Annual training provided by the State of Minnesota as stated in Minnesota Emergency Operations Plan.
Pierce County	Letter of Agreement	1/4/2011	Initial and annual training is provided by Pierce County as stated in the Pierce County Emergency Operations Plan.
Fairview Red Wing Hospital	Letter of Agreement	3/18/2010	Annual training is provided by the site.
Sacred Heart Hospital	Letter of Agreement	3/18/2010	Annual training provided by the Wisconsin Department of Health Services.
Prairie Island Indian Community	Letter of Agreement	1/31/2011	NSPM supports emergency response services provided by the Prairie Island Indian Community, including providing training.
Regions Hospital	Letter of Agreement	6/7/2011	Annual training provided by the State of Minnesota as stated in Minnesota Emergency Operations Plan.
North Memorial Medical Center	Letter of Agreement	10/25/2010	Annual training provided by the State of Minnesota as stated in Minnesota Emergency Operations Plan.
Westinghouse	Letter of Agreement	10/12/2010	N/A
Canadian Pacific Railway	Letter of Agreement	3/25/2010	N/A
Institute of Nuclear Power Operations (INPO)	Letter of Agreement	9/30/2010	N/A
Environmental, Inc. Midwest Laboratory	Letter of Agreement	10/5/2010	N/A
Pooled Inventory Management	Letter of Agreement	12/15/2010	N/A
Department of Energy-Radiation Emergency Assistance Center/Training Site	Letter of Agreement	9/29/2010	N/A

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All Letters of Agreement are reviewed annually by procedure to ensure they are current and are renewed periodically.

NSPM reviewed the corrective action program for issues involving lapsed Letters of Agreement related to B.5.b and found no examples of lapsed contractual agreements. All of the Letters of Agreement identified above meet the procedural requirements for renewal.