



DEC 14 2012

L-PI-12-119  
10 CFR 50 Appendix E

U S Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

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

10 CFR 50 Appendix E Evacuation Time Estimate Study for Prairie Island Nuclear  
Generating Plant

Pursuant to Part 50.4 of Title 10 of the Code of Federal Regulations (10 CFR Part 50.4), Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, hereby submits the evacuation time estimate study (ETE) for Prairie Island Nuclear Generating Plant (PINGP). This study is submitted in accordance with the requirements of Appendix E IV 4 to Part 50 of Title 10 of the Code of Federal Regulations.

The regulation requires the licensee to submit an updated study "within 365 days of the later of the date of the availability of the most recent decennial census data from the U.S. Census Bureau or December 23, 2011."

The Prairie Island ETE was developed in accordance with the federal guidance in NUREG/CR-7002 (SAND2010-0016P), "Criteria for Development of Evacuation Time Estimate Studies," published November 2011.

Enclosure 1 contains a compact disc (CD) of the PINGP ETE. The CD is formatted in a manner consistent with "Guidance for Electronic Submissions to the NRC," Revision 6.1, dated May 27, 2011.

Enclosure 2 contains the PINGP ETE Recommendations, dated November 28, 2012.

The enclosed ETE provides the methods used to derive, for planning purposes, the time for public evacuation. The study provides an important part of the bases for development of protective action recommendations in coordination with the applicable offsite state/local emergency response agencies.

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NRR

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments

A handwritten signature in black ink, appearing to read "J E Lynch". The signature is written in a cursive style with a large initial "J" and "L".

James E. Lynch  
Site Vice President, Prairie Island Nuclear Generating Plant  
Northern States Power Company - Minnesota

Enclosures: (2)

cc: Administrator, Region III, USNRC  
Project Manager, Prairie Island, USNRC  
Resident Inspector, Prairie Island, USNRC  
Emergency Planning Manager, Prairie Island

**ENCLOSURE 1**

**Prairie Island Nuclear Generating Plant  
Development of Evacuation Time Estimates**

**Enclosed on separate CD**

**ENCLOSURE 2**

**Prairie Island Nuclear Generating Plant ETE  
Recommendations Memo**

2 Pages Follow



# Memo

To: Amy Hass, Edward Weinkam  
From: Brandon Allen  
CC: Kevin Weinisch  
Date: 11/28/12  
Re: Recommendations Memo

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As a result of the Prairie Island Nuclear Generating Plant Evacuation Time Estimate (ETE) study, KLD offers the following recommendations:

1. Examination of the general population ETE in Section 7 shows that the ETE for 100 percent of the population is generally 1 ½ to 2 ½ hours longer than for 90 percent of the population. Specifically, the additional time needed for the last 10 percent of the population to evacuate can be as much as double the time needed to evacuate 90 percent of the population. This non-linearity reflects the fact that these relatively few stragglers require significantly more time to mobilize (i.e. prepare for the evacuation trip) than their neighbors. This leads to two recommendations:
  - a. The public outreach (information) program should emphasize the need for evacuees to minimize the time needed to prepare to evacuate (secure the home, assemble needed clothes, medicines, etc.).
  - b. The decision makers should reference Table 7-1 which list the time needed to evacuate 90 percent of the population, when preparing recommended protective actions, as per NUREG/CR-7002 guidance.
2. Staged evacuation is not beneficial due to the low population within the 2 and 5-mile regions of the plant and the limited traffic congestion within these regions. Staged evacuation also adversely impacts many evacuees located beyond the 2-mile region since they are forced to unnecessarily wait before they can start their evacuation trip.
3. The roadway impact scenario – a single lane on US-61 SB from the intersection with SR-19 to the intersection with County 292 Blvd – has a material impact on the 90<sup>th</sup> percentile ETE with increases of up to 15 minutes. State and local law enforcement agencies could consider traffic management tactics such as re-routing of traffic along other evacuation routes to avoid overwhelming US-61. All efforts should be made to remove the blockage on US-61 as expeditiously as possible.

4. Counties should implement procedures whereby schools are contacted prior to dispatch of buses from the depots to get an accurate count of students needing transportation and the number of buses required (See Section 8).
5. Table 8-5 indicates that there are insufficient wheelchair-accessible transportation resources available to evacuate the wheelchair-bound transit-dependent population within the EPZ in a single wave. The second-wave ETE for the wheelchair-bound population exceed the general population ETE at the 90<sup>th</sup> and 100<sup>th</sup> percentile. Mutual aid agreements with neighboring counties and assistance from the states should be considered to address the shortfall in transportation resources (See Sections 8.4 and 8.5).
6. Intelligent Transportation Systems (ITS) such as Dynamic Message Signs (DMS), Highway Advisory Radio (HAR), Automated Traveler Information Systems (ATIS), etc. could be used to facilitate the evacuation process (See Section 9). The placement of additional signage should consider evacuation needs.
7. Counties/States could establish strategic locations to position tow trucks provided with gasoline containers in the event of a disabled vehicle during the evacuation process (see Section 11) and could encourage gas stations to remain open during the evacuation.
8. Counties/states could establish a system/procedure to confirm that the Advisory to Evacuate is being adhered to (see the approach suggested by KLD in Section 12). Should the approach recommended by KLD in Section 12 be used, consideration should be given to keep a list of telephone numbers within the EPZ in the Emergency Operations Center (EOC) at all times.