

**CURE**  
**Communities United for Responsible Energy**  
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**Comments in Response to XCEL Energy's Application for Certificates of  
Need for Additional Dry Cask Storage and Extended Power Uprate at the  
Prairie Island Nuclear Generating Plant**

**Preamble:**

Communities United for Responsible Energy (CURE) is an association of citizens, established in 1996 in response to the selection of Florence Township, Goodhue County, MN as the location for an off-site Nuclear Spent Fuel Storage Facility.

CURE members have studied the issues surrounding the operation of nuclear power plants and the storage and transport of radioactive materials for more than a decade. During the earlier debates about nuclear plant operation and storage, industry and state officials continuously assured us that the risk of harm to the environment, animals and people from resulting from operation of the nuclear generating plant and the spent fuel storage facility was minimal and should not be a concern to us. We continue to maintain a healthy suspicion of that assurance.

We have observed that many modern industrial nations, particularly Scandinavia and the 23-country European Union, have established regulations that require government entities and corporations to demonstrate that their actions and products will not harm the environment or the public, now or in the future. We American citizens, on the other hand, are burdened with the requirement to prove that a government or corporate action is harmful to the environment, ourselves or our progeny.

**I. Impact on Regional Waters.**

Citizens and communities located downstream from Prairie Island have observed the changes that have occurred on the River and Lake Pepin since the PI Plant began operation in the 1970's. They are expressing concern about increased adverse seasonal impact to the character of the river valley and it's ecology.

During a recent public meeting, representatives of XCEL and the State of Minnesota indicated that the proposed 15% uprate of the Prairie Island

plant would require a significant increase in the volume of Mississippi River water used to cool plant systems. They also indicated that the temperature of the water returned to River would be increased by approximately 3°F. There is concern about the impact of seasonal thermal plumes on the nearby and down stream aquatic environment and on the expanse, quality and duration of the ice cover on Lake Pepin. The long tradition of commercial and recreational activities (fishing, snowmobiling and ice boating) on River and Lake ice will surely be threatened by a further increase in water temperature.

Concern was also voiced about the potential increased intentional or unplanned releases of radioactive water or chemicals into the River and the risk of subtle/ long-term impacts on the aquatic biome.

## **II. Impact on Regional Atmosphere**

Documented and un-documented releases of radioactive gases from Prairie Island facilities continues to be a serious concern for people living in the ellipse southeast of Prairie Island and lying downstream along the Hiawatha Valley. The absence of monitoring for radiation plus lack of a public health base line survey fuel anecdotal rumors of cancer clusters and worry citizens in this zone.

## **III. Proposal for Monitoring**

The recently opened 35W river crossing bridge in Minneapolis establishes a new precedent for collaborative inspection and continuous independent monitoring of a facility that poses a demonstrated potential risk to the public.

CURE proposes that a similar monitoring program be established to continuously monitor the discharges from the Prairie Island Plant to surrounding environment.

We propose that the National Center for Earth-surface Dynamics (NCED - a research facility established by the National Science Foundation (NSF) and based at the University of Minnesota's St. Anthony Falls Laboratory) be engaged to design an appropriate program and instrumentation system to monitor the PI plant's releases to the environment.

Investigations should include but not be limited to the following:

- Thermal energy added to the river.
- Mapping of thermal plumes and their cycles
- Seasonal anomalies
- Observations of changes to the aquatic biome

- Continuous monitoring to detect intentional and unplanned airborne release events of radioactive gasses and particles; mapping of distribution, concentration and duration of release of contaminants.
- Monitoring of area Karst formations that are at risk for potential radioactive contamination of ground water.
- Monitoring of run-off water from the plant and spent fuel storage sites.

It is proposed that the monitoring program be a collaborative effort guided by NCED working in cooperation with and supported by XCEL Energy, MN DNR, MN PCA, area governments, businesses and citizen groups. The data and analysis of the monitoring systems should be accessible to a broad spectrum of government, academic, public health and public interest organizations.

Monitoring equipment should be cost effective and data collection and transmission automated at an appropriate scale.