

STATE OF MINNESOTA

ENVIRONMENTAL QUALITY BOARD

**In the Matter of An Environmental
Impact Statement for an Independent
Spent Fuel Storage Installation at the
Monticello Nuclear Generating Plant**

**ENVIRONMENTAL IMPACT STATEMENT
SCOPING DECISION
AND SCOPING ENVIRONMENTAL
ASSESSMENT WORKSHEET**

**Docket No. 04-87-CON-Monticello
May 19, 2005**

The above-entitled matter came before the Environmental Quality Board (EQB) for a decision on the scope of the environmental impact statement (EIS) to be prepared on a proposed independent spent-fuel storage installation (ISFSI) at the Monticello Nuclear Generating Plant. Xcel Energy submitted its Certificate of Need Application (“CON Application”) for the Monticello ISFSI to the Minnesota Public Utilities Commission (PUC) on January 18, 2005. Xcel Energy plans to apply to the U.S. Nuclear Regulatory Commission (NRC) in March 2005 for a twenty-year license renewal for the generating plant that would allow it to operate until 2030. The proposed ISFSI is therefore designed to have enough storage capacity to allow the generating plant to continue operating until 2030.

The EQB must prepare an EIS before the PUC can make its certificate of need decision. Minn. Stat. §116C.83, subd. 6(b). Federal regulations also require the NRC to prepare a separate supplemental EIS before deciding whether to renew the generating plant operating license.

Having reviewed the record in this matter, the Environmental Quality Board makes the following scoping decision regarding the Monticello EIS.

I. Summary

The state EIS will focus on those issues that are (1) not already analyzed in detail in the CON Application and (2) directly relevant to the PUC certificate of need decision. The ISFSI is a prerequisite to keeping the Monticello Generating Plant operating past 2010. Therefore, the EIS will not only address the ISFSI but also the impacts and alternatives to continuing to operate the generating plant. However, health and safety issues related to the ISFSI are preempted by NRC regulations. Therefore, the primary issue to be studied in the state EIS is the feasibility and impacts of alternatives to continued operation of the

Monticello Generating Plant until 2030. Other relevant technical and environmental issues are either (1) addressed in detail in the CON Application, (2) preempted by federal regulations, (3) subject to the federal EIS, or (4) a combination of the above. For these issues, the EIS will verify, summarize and supplement already available information as outlined in the attached Scoping EAW.

II. Background

The “scoping process” is the first step in the state EIS process. The purpose of scoping is, in part, to reduce the scope and bulk of the EIS and to identify only those potentially significant issues relevant to the proposed project. *See* Minn. Rules, part 4410.2100. This scoping decision describes the major issues to be studied in the EIS and the issues that will not be studied in the EIS. In addition, the scoping environmental assessment worksheet (EAW) incorporated in this scoping decision summarizes the proposed project and potential impacts, and also describes the level of detail to which each topic will be studied further in the EIS.

Certificate of Need (CON) Application. The EIS process begins when the project proposer supplies reasonably accessible data for — but does not complete — the final EAW. In this case, the CON Application provides much of the information required to begin the EIS process, and the basis for much of the EIS itself. The CON Application describes the proposed project in detail and provides information and analysis required by PUC rules. The CON Application describes the location of the generating plant, the location, design and operation of the proposed dual purpose ISFSI system, the expected quantities of spent-fuel to be stored, the alternatives to dry-cask storage considered, as well as the estimated cost and air pollution emissions of several base-load generation alternatives. The CON Application also contains an overview of the environmental, economic, employment and costs of the proposed ISFSI and predicted on-site and off-site radiation exposure in the surrounding area.

NRC License Renewal Application. Xcel Energy plans to apply to the NRC in March 2005 for a 20 year license renewal that would allow the Monticello Generating plant to continue to operate until 2030. The NRC license renewal process also includes a federal EIS (both generic and supplemental) and related public comment opportunities that will cover, among other issues, the expected radiation and health impacts of the plant and ISFSI, as well as a separate analysis of the feasibility and impacts of alternatives to the continued operation of the Monticello plant itself. The NRC EIS process also includes a “scoping” process, public meetings, and opportunity for public comment.

What's Next? There is a 30-day comment period on this draft EIS scope, during which the EQB will hold a public comment open house/ meeting at the Monticello Community Center, 505 Walnut Street, on April 4, 2005, from 2:00 p.m to 9:00 p.m. Following the comment period, the final decision on the scope of the EIS will come before the Environmental Quality Board at a subsequent regularly scheduled meeting. The EQB's scoping decision will then be used to guide the preparation of the EIS as well as the alternatives to be analyzed in the certificate of need determination at the PUC.

III. MATTERS TO BE ADDRESSED IN THE EIS

The Environmental Quality Board will address the following matters in the Environmental Impact Statement on the proposed construction of a dry cask storage facility at the Monticello Nuclear Generating Plant.

A. Project Description.

The EIS will verify, summarize, and supplement the description of the proposed Monticello ISFSI and generating plant provided in the CON Application, but will not repeat the information in its entirety. The EIS will summarize the operation of the Monticello Generating Plant because its continued operation is dependant on the approval of the ISFSI.

B. Environmental Impact Analysis.

The EIS will summarize the major potential environmental impacts associated with construction and operation of the ISFSI at the Monticello Plant and potential mitigation. The EIS will also summarize, but not study in detail, the radiation and other water and air emissions related to continued operation of the Monticello Generating Plant itself so that these impacts can be compared to reasonable alternatives. The level of detail to which various potential environmental impacts will be evaluated in the EIS is outlined in the attached Scoping EAW. The EIS approach to the major issue of radiation exposure, health, and safety is outlined below:

1. **Radiation and Safety Issues: State Jurisdiction.** Federal (NRC) regulations generally preempt state regulation of the radiological, health and safety standards applicable to nuclear generating plants and spent nuclear fuel storage. The NRC will address these issues in the federal EIS as part of the license renewal process. The NRC also regulates radiation and safety issues for the plant and the ISFSI in the Monticello operating license. Therefore, a detailed evaluation of potential radiological or safety mitigation measures in this EIS may be both unnecessarily duplicative and not directly relevant to the PUC need decision. As described below, however, the EIS will verify, review, and summarize radiation exposure and safety information from the CON Application and other sources in order to inform the public as well as to allow a comparison of continued operation of the generating plant and ISFSI with reasonable alternatives.

2. **Radiation and Safety.** The proposed analysis will be limited to a summary and review of the characteristics of radiation and neutron emissions associated with spent nuclear fuel storage, including a summary of the information in the CON Application and the estimated contribution to radiation exposure levels associated with the proposed ISFSI and the generating plant. The EIS will also describe and estimate the magnitude of radiation levels in the vicinity of the Monticello Plant due to both natural background and the Monticello facility. It will also summarize the state of the scientific knowledge of potential impacts associated with the radiation levels associated with the Plant's contribution. This section will also discuss the applicable federal NRC regulations regarding radiation and verify and summarize the health risk analysis in the CON Application.
3. **Groundwater Protection.** Minn. Stat. § 116C.83, subd. 6(b) requires the EIS to address whether the facility is designed "to provide a reasonable expectation that the operation of the facility will not result in groundwater contamination in excess of the water standards established in Minn. Stat. § 116C.76, subd. 1, clauses (1) to (3)." The EIS will address this issue. The EIS will not evaluate the adequacy of the federal regulations or potential mitigation measures that might reduce groundwater radiation releases, exposure or health risks associated with either the proposed ISFSI or the generating plant because the NRC has sole regulatory jurisdiction over these issues.
4. **Term of Storage.** No one knows exactly how long the spent fuel would be stored in the Monticello ISFSI. Even if a permanent repository at Yucca Mountain opens by 2012 or so, Yucca Mountain is currently designed to hold 77,000 metric tons of spent nuclear fuel. It is unlikely that the spent fuel stored at Monticello would fall within this initial 77,000 tons. So spent fuel stored in the Monticello ISFSI would remain there for an unknown length of time, and its ultimate destination remains uncertain. The EIS will assume an uncertain but "interim" term of storage. The EIS will review and summarize the issues surrounding the term of storage and potential ultimate disposal of the spent fuel, but will not evaluate the ISFSI as a permanent or long term repository. Likewise, the EIS will not evaluate whether ISFSI design or operation is adequate from a health and safety perspective for the interim term of storage because the NRC has sole jurisdiction over this and related issues.

C. Alternatives to the Proposed Dry Cask Storage Facility.

As with radiation health and safety issues, the NRC has jurisdiction over the type of dry cask technology selected. The EIS will summarize the review of alternatives to the proposed ISFSI as provided in the CON Application, but will not repeat the information in detail, nor will the EIS evaluate other alternatives than those already provided in the

CON Application. The following alternatives to the proposed ISFSI technology will be reviewed and summarized in the EIS:

1. Extend pool storage, including the potential to re-rack such that pool storage would be available until 2014;
2. Cask technology alternatives reviewed in the CON Application;
3. Size alternatives. The EIS will include a histogram of spent fuel production and storage requirements for the Monticello Facility;
4. Site alternatives.

Yucca Mountain. The EIS will summarize the federal government's role and responsibilities for spent nuclear fuel storage and disposal and the schedule and status of the federal government's effort to establish a repository at Yucca Mountain.

Private Fuel Storage. The EIS will summarize the current status and schedule of the private fuel storage proposal for an interim storage facility in Utah.

D. Alternatives to Continued Operation of the Monticello Nuclear Plant.

The EIS will analyze the feasibility and environmental impacts of reasonable alternatives to continued operation of the Monticello Generating Plant. For this analysis, the EIS will incorporate by reference the economic analysis by the Minnesota Department of Commerce and other parties to the Certificate of Need proceeding at the PUC. The EIS will evaluate the land use and environmental characteristics of the generic alternative generating technologies. The EIS will estimate the land necessary for a plant approximately 600 MW in size for each alternative. The EIS will estimate fuel consumption and air and water emissions associated with each type of plant and solid waste volumes and environmental characteristics associated with each plant type. In addition, the CON Application alternatives analysis is based largely on a proprietary computer model called "Strategist" developed by New Energy Associates, Inc. The Strategist model will be evaluated for possible use for the state EIS, and if used, all algorithms will be reviewed and input assumptions will be evaluated and described in detail. Alternatively, if Strategist model details and assumptions are not available, a different method of evaluating air emissions from alternatives will be used.

The following 600 megawatt capacity alternatives will be addressed:

1. **A base load pulverized coal power plant.**
2. **A coal fueled integrated gasification combined cycle power plant.**
3. **A natural gas fueled combined cycle plant.**
4. **Wind and natural gas plant combination.** Wind turbines alone cannot replace a baseload resource like Monticello and are not an alternative but are

often considered in combination with natural gas fueled plants. The EIS will describe wind turbine technology generically, and define and evaluate different wind configurations coupled with dispatchable baseload natural gas technologies.

- 5. System wide distributed generation option: to be defined.** It is likely that the EQB will receive requests to evaluate replacing the Monticello Generating Plant with a combination of conservation, load management, purchased energy, wind energy, biomass, or other renewable and or distributed generation, either for 2010 or beyond. One or more variations of this alternative will be defined and evaluated in the EIS. This alternative or alternatives must be capable of replacing 600 megawatts of baseload capacity. The alternative, however, may be similar to that to be evaluated as part of the ongoing Xcel Energy Resource Plan docket at the PUC. Therefore, to avoid duplication, the EIS analysis would incorporate information developed for the Resource Plan review to the extent possible.
- 5. No-build alternative.** The consequences of shutting down the Monticello Generation plant with no replacement generation will be briefly described, including the description of the ISFSI capacity likely required for decommissioning.

E. Permits.

This EIS is being developed for consideration by the Minnesota Public Utilities Commission in its determination of whether to issue a Certificate of Need for the proposed facility. Other permits, such as a NPDES stormwater permit, will be listed in the EIS.

IV. MATTERS NOT WITHIN THE SCOPE OF THE EIS

The following issues will not be addressed in the Environmental Impact Statement.

Prairie Island Plant. The EIS will not evaluate the consequences of a shut down of the Prairie Island Generation Plant, nor will it evaluate alternatives to continued operation of the Prairie Island Generating Plant.

Monticello Plant Radiation and Safety. The EIS will summarize the environmental impacts of continued operation of the Monticello Generating Plant, but will not include a detailed study of these issues because the NRC will complete a detailed evaluation of environmental impacts, and mitigation options, of continued plant operations during its license renewal review. See Minn. Rule 4410.1700, subp. 6. Likewise, the EIS will summarize but not evaluate potential mitigation methods regarding radiation and safety issues of continued operation of the plant because the NRC has sole regulatory jurisdiction over those issues.

Storage Technology, Accidents, Terrorism. The EIS will summarize but not evaluate options for dry cask storage because the NRC has sole jurisdiction over whether and how spent fuel is stored on site at nuclear power plants, including ISFSI design and safety from threats such as accident and terrorism. Likewise, the EIS will not evaluate life-cycle safety of the ISFSI, ISFSI management, or the adequacy of security at the generating plant or the proposed ISFSI.

Nuclear Fuel Cycle. The EIS will not address the impacts of the nuclear fuel cycle because that issue will be addressed in the federal generic and supplemental EIS to be completed during the federal re-licensing review.

Off-Site Alternatives. The EIS will not evaluate ISFSI sites outside the Monticello Generating Plant boundaries because the NRC has jurisdiction over whether such a site can be considered.

Economic Feasibility of Alternatives. The analysis of the economic feasibility will cover the same alternatives for which environmental impacts are evaluated, but will incorporate by reference the analysis of the Department of Commerce in the CON proceeding.

Transportation of Spent Fuel from Monticello. While certain matters regarding Yucca Mountain will be described in the EIS, the EIS will not include a discussion of any issues related to the transportation of spent nuclear fuel from Minnesota to Yucca Mountain.

Nuclear Regulatory Commission Standards. While the EIS will reference certain standards and rules promulgated by the NRC, the EIS will not address the adequacy of any federal standards that are applicable to the ISFSI or the generating plant. Nor will the EIS evaluate potential mitigation measures to reduce radiation exposure, accident risks or security requirements.

V. SCHEDULE

The EQB intends to complete a Draft Environmental Impact Statement by [\[August 2005\]](#).

The EQB will publish notice of the availability of the Draft EIS and of the holding of a public meeting in August 2005 at a time and place to be determined. The EIS will be distributed in accordance with Minn. Rules part 4410.2600 and a copy will be posted on the EQB webpage.

The EQB will respond to all timely substantive comments within 30 days after close of the comment period.

The Final EIS will be submitted to the Public Utilities Commission by approximately [October, 2005].

Signed this ____ day of May, 2005

STATE OF MINNESOTA
ENVIRONMENTAL QUALITY BOARD

Robert A. Schroeder, Chair

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ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to preparers: This form is available at www.mnplan.state.mn.us. **EAW Guidelines will be available in Spring 1999 at the web site.** The Environmental Assessment Worksheet provides information about a project that may have the potential for significant environmental effects. The EAW is prepared by the Responsible Governmental Unit or its agents to determine whether an Environmental Impact Statement should be prepared. The project proposer must supply any reasonably accessible data for — but should not complete — the final worksheet. If a complete answer does not fit in the space allotted, attach additional sheets as necessary. The complete question as well as the answer must be included if the EAW is prepared electronically.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation in the EIS.

1. **Project title** Monticello Independent Spent Nuclear Fuel Storage Facility

	2. Proposer	3. RGU
	Xcel Energy	Minnesota Environmental
Contact person	James Alders	John Wachtler
Title	Manager Regulatory Projects	EQB Staff
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4. **Reason for EAW preparation** (check one)
 EIS scoping

If EAW or EIS is mandatory give EQB rule category subpart number and subpart name

An Environmental Impact Statement is required pursuant to Minnesota Statutes § 116C.83, subdivision 6(b).

5. **Project location** County Wright City/Township Monticello
 NE¹/₄ SE¹/₄ Section 32 Township 122N Range 25W

Attach each of the following to the EAW:

- County map showing the general location of the project; (See Attachments A)
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); (See Attachment B-1 and B-2)
- Site plan showing all significant project and natural features. (See Attachment C-1 and C-2)

6. Description

a. Provide a project summary of 50 words or less to be published in the *EQB Monitor*.

Xcel Energy proposes to expand the storage of spent nuclear fuel at the Monticello Nuclear Generating Plant by establishing for an uncertain period of time an Independent Spent Fuel Storage Installation (ISFSI) approximately 200 feet by 460 feet in size to store up to 30 dry storage canisters in concrete vaults. The ISFSI is required to allow the Monticello Nuclear Generating Plant to continue operating past 2010.

b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

The detailed description of the proposed project is in Chapter 3 of the Application. Chapter 3 is available online here:

<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch3ProjectDesc.pdf>

Treatment In EIS

The EIS will verify, summarize and review the project description but will not repeat the information in the CON Application. (E.g. See Project Description below.) No additional analysis is planned for the EIS regarding the description of general project location, the description of the spent fuel quantities or characteristics, or the description of the proposed storage containment system or operation.

Plant Description

The Monticello Nuclear Generating Plant is capable of generating approximately 600 megawatts of electrical power. The Plant is owned by Xcel Energy and operated by Nuclear Management Company, LLC (“NMC”) under contract with Xcel Energy. NMC, a nuclear power plant operating company, is owned by Xcel Energy, Alliant Energy, CMS Energy, Wisconsin Public Service and We Energies. In addition to the Monticello plant, NMC operates the Prairie Island, Point Beach,

Kewaunee, Palisades and Duane Arnold plants in Minnesota, Wisconsin, Michigan and Iowa respectively.

The Plant is located within the city limits of Monticello, Minnesota, in Wright County, on the Mississippi River, in Section 32, T-122N, R-25W, at 45° 20' N latitude and 93° 50' W longitude, approximately 50 miles northwest of Minneapolis/ St. Paul (Figure 3-1 and 3-2). The plant is located on approximately 2150 acres of land owned by Xcel Energy. Part of this property is on the eastern bank of the Mississippi River in Sherburne County and part is on the western bank in Wright County. Access to the plant is restricted by a perimeter fence and other barriers.

The Monticello generating plant was first licensed in 1970 by the United States Nuclear Regulatory Commission (NRC) for a period of 40 years. This license will expire in September, 2010. Xcel Energy has indicated that it will apply to the NRC in March 2005 for a 20 year license renewal that would allow the plant to continue to operate until 2030.

Spent Fuel Pool

Xcel Energy stores spent nuclear fuel in a pool within the Monticello Plant. The spent fuel pool provides storage for spent fuel assemblies. The pool is located on the refueling floor in the reactor building. It is filled with racks that hold the spent fuel assemblies and other irradiated reactor components. This storage pool will run out of space in 2010. In order to continue to operate the Monticello Plant beyond 2010, Xcel Energy must find additional storage for the spent nuclear fuel. Xcel Energy has proposed to construct an independent dry cask storage facility onsite at which the spent nuclear fuel would be stored in canisters inside concrete vaults.

Spent Fuel Inventory and Production Estimate

The NRC operating license allows for storage of up to 2237 spent fuel assemblies in the current spent fuel storage rack configuration. Eight of the licensed storage spaces are not available because during manufacture they did not meet quality control specifications. This left 2229 storage spaces available for use in the pool at the Plant. Twenty of those spaces hold used reactor control rod blades. Thus, there are 2209 spaces available for spent nuclear fuel storage.

As of December 15, 2004, 1478 spent fuel assemblies were in the pool. The spent fuel pool has sufficient storage capacity to facilitate full core offload until 2007. In the mid 1980's, 1058 spent fuel assemblies were shipped to a General Electric storage pool in Morris, Ill.

Xcel Energy estimates that 1520 spent fuel assemblies would be discharged from Monticello's reactor during operation between 2010 and 2030.

The Independent Spent Fuel Storage Installation

Xcel Energy proposes to provide additional spent fuel storage at the Plant by establishing what in the parlance of the Nuclear Regulatory Commission is called an Independent Spent Fuel Storage Installation or ISFSI.

The storage facility as envisioned by Xcel Energy consists of a lighted area, approximately 460 feet long and 200 feet wide, roughly 3-1/2 acres in size, located adjacent to the reactor and turbine building. The tallest structures are the light poles that are approximately 40 feet tall. Two fences surround the facility with a monitored, clear zone between. Within the storage area, spent fuel canisters are stored in modular concrete vaults, placed on a reinforced concrete support pad, 18 to 24 inches thick. Concrete approach pads surround the support pad to accommodate vault placement and spent fuel canister transfer traffic. A small concrete building will be located within the ISFSI to house electrical equipment. The site and storage vaults are monitored with cameras, other security devices, and temperature sensors. An access road connects the ISFSI to the rest of plant.

The proposed design capacity of the ISFSI is thirty storage units. Thirty storage containers is equivalent to a design capacity of 144 cubic meters. The storage facility is laid out so that it can accommodate another thirty-five vaults on a second support pad without having to change the security perimeter. The extra space could be used for casks to decommission the Plant. An artists rendering of the ISFSI is shown in Figure 3-12.

The proposed ISFSI is intended for temporary storage. Xcel Energy anticipates that the spent fuel will be transported to a federal repository like Yucca Mountain when such a facility is available, although the date for such a facility is uncertain.

The Canisters

Xcel Energy proposes to use a dry storage canister system, called the NUHOMS 61BT, for the storage and transport of spent fuel at the Monticello Plant. Each canister is licensed to store and transport sixty-one (61) spent fuel assemblies. Each canister weighs approximately 45,400 pounds empty and 88,400 pounds loaded with spent fuel.

The NUHOMS 61BT Dry Fuel Storage System is designed, licensed, and manufactured by Transnuclear Inc. The NUHOMS 61BT system is licensed in accordance with federal regulations – 10 C.F.R. Part 72 for storage and 10 C.F.R. Part 71 for transportation.

A Transfer Cask is used to lift and handle the canister during spent fuel loading, closure, and transfer operations. The Transfer Cask is a NUHOMS OS197 cask. The transfer cask is made primarily of stainless steel. The exterior shell has a highly polished surface to facilitate decontamination. The transfer cask is constructed from two concentric cylindrical steel shells with a bolted top cover plate and a welded bottom end assembly. The space between these two shells is filled with cast

lead to provide gamma shielding. The transfer cask also includes an outer stainless steel jacket, which is filled with water for neutron shielding. The top and bottom end assemblies incorporate a solid neutron shield material.

Operation

Spent fuel assemblies must be stored in the spent fuel pool inside the Plant for at least five years before they can be loaded into dry cask storage canisters.

When it is time to load spent fuel assemblies, the NUHOMS 61BT canister is placed inside the NUHOMS OS197 Transfer Cask. The canister and cask are placed in the spent fuel pool and the fuel assemblies are loaded into the canister. The shielded lid to the canister is installed underwater, the canister is dried, and then welded and bolted shut. The canister and cask are then placed on a transport trailer and taken to the ISFSI, where the canister is inserted into the storage module. This system of loading the canister into vaults does not require lifting of the canister during transfer. The transfer trailer can be backed up to the storage module and the canister transferred to or from the storage modules.

The first storage campaign would begin in April 2008 and take approximately four months to complete. Additional spent fuel canisters would periodically be placed in more concrete storage modules at the ISFSI throughout the remaining operating life of the plant.

Cost of the ISFSI

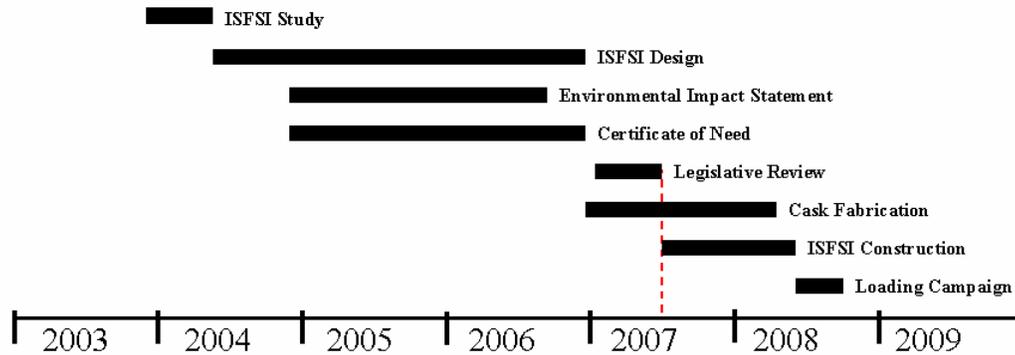
The estimated installed cost of the ISFSI in 2004 dollars is \$55 million. The estimate includes the following component costs:

Regulatory Processes	\$ 2.0 M
Engineering and Design	\$12.0 M
Plant Upgrades	\$ 4.0 M
ISFSI construction	\$ 3.5 M
30 canisters and storage modules	\$26.0 M
Canister Loading Campaigns	<u>\$ 7.5 M</u>
Total	\$55.0 M

Construction Schedule

The overall ISFSI design is being done by Sargent & Lundy, 55 East Monroe Street, Chicago, Illinois 60603. The construction contractor will be selected in late 2006 or early 2007. ISFSI construction is anticipated to commence in July 2007 and be completed by June 2008. To support this schedule, storage canister system orders would need to be made and fabrication would need to begin in 2006. A preliminary project schedule is shown below.

ISFSI Schedule



c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The project is a private project. The need for the project is to provide storage capacity for spent nuclear fuel so the Monticello Plant can continue to operate for another twenty years.

Treatment in EIS

The ISFSI is needed to keep the Monticello Generating Plant operating past 2010, so the impacts of continued plant operation and alternatives will be evaluated in the EIS. The generating plant impacts and alternatives will be subject to a subsequent federal EIS, however, so this state EIS will summarize impacts only to the extent necessary to compare continued operation to reasonable potential alternatives. Neither impacts nor mitigation regarding radiation exposure or safety will be studied in detail.

d. Are future stages of this development including development on any outlots planned or likely to happen? Yes No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

The detailed description of land use in the project area is provided in Section 6.1 of the Xcel Energy CON Application. Online, Chapter 6 is available through this link: <http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch6EnvInfo.pdf>

Treatment in EIS

The EIS will verify, summarize and review the existing and proposed land use for the project area, but will not repeat the information in the Application. No additional analysis is planned for the EIS regarding the descriptions of land use in the project area.

Summary

The proposed site is located entirely within the property of the existing Monticello Generating Plant property and is currently unused. The eastern portion of the site appears to have been used during construction activities for staging and lay-down. A review of aerial photos taken of the site, soon after the completion of the power plant, shows cleared areas in this vicinity. Evidence of construction activities, such as concrete pads and old equipment, was found on the site. This area is now partially re-vegetated with quaking aspen (Populus tremuloides), and grasses dominate the ground cover. Additional common species in this area include big tooth aspen (P. grandidentata), black cherry (Prunus serotina), gray birch (Betula populifolia), poison ivy (Rhus radicans), Virginia creeper (Parthenocissus quinquefolia), and wild grape (Vitis sp.). Approximately 80 percent of the site is covered with this second growth vegetation. The western and southern portion of the site borders on mature forest with numerous large pin oaks (Quercus palustris) still remaining along the edge of the site.

10. Cover types. Estimate the acreage of the site with each of the following cover types before and after development:

Before	After	Before	After
Types 1-8 wetlands 0 acres	0 acres	Lawn/landscaping 0 acres	0 acres
Wooded/forest 2.47 acre	0 acres	Impervious surfaces <0.1 acres	1.82 acres
Brush/Grassland 1.06 acre	0 acres	Other (describe) 0 acres	frost-free gravel 1.71 acres
Cropland 0 acres	0 acres	0 acres	
TOTAL		3.53 acres	3.53 acres

If **Before** and **After** totals are not equal, explain why:

11. Fish, wildlife and ecologically sensitive resources

a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

A description of wildlife and sensitive natural resources in the project area is provided in Chapter 6 of the the Xcel Energy CON Application, including 6.1.8 (Sensitive Environmental Resources). Chapter 6 is available through this link: <http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch6EnvInfo.pdf>

Treatment in EIS

This issue is not likely to be significant regarding the ISFSI. The impacts of thermal discharge due to the plant will be evaluated in the federal EIS and limits are under the NRC jurisdiction. Fish populations and potential impacts are not described in the Application, but no significant impacts due to the ISFSI is expected. The EIS will not repeat the information in the CON Application. No additional analysis is planned for the EIS regarding wildlife or sensitive species.

Summary

Fish: The Monticello Nuclear Generating Facility is located adjacent to the Mississippi River. The river exhibits a warm water fishery, including several species of sport fish like northern pike and walleye. The Mississippi River and the fishery are not expected to be impacted by the ISFSI.

Wildlife: About two and half acres of wooded land will be cleared. Some birds and animals will lose this amount of habitat. No significant impacts on wildlife are expected from the ISFSI. A Peregrine Falcon nesting area is in a nestingbox. A Dry Oak Savanna is found just west of the storage facility site.

b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site? Yes No

If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number: [Where is actual DNR correspondence? Reference number?] Describe measures to minimize or avoid adverse impacts.

The Minnesota Natural Heritage and Non-game Research Program identified two

rare plant or animal species or other significant natural features within approximately a mile of the storage facility site: dry oak savannah and the peregrine falcon.

A description of the rare plant or animal species in the project area is provided in Chapter 6 of the Xcel Energy CON Application, in Section 6.1.4.1. Chapter 6 is available through this link:

<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch6EnvInfo.pdf>

Treatment in EIS

The EIS will review and confirm the information in the CON Application. However, no additional analysis is planned for the EIS regarding rare or endangered wildlife or plant species within one-mile of the project site.

Summary

Dry Oak Savanna

The project area appears to be located partially within an area identified by the Minnesota County Biological Survey as a “Site of High Biodiversity Significance.” The closest classified area to the site is an area of High significance, located just west of the storage facility site. The Minnesota Natural Heritage Program has classified this wooded habitat as a Sand-Gravel Subtype of the Dry Oak Savanna. In its Biological Report # 20, Minnesota’s Native Vegetation – A Key to Natural Communities Version 1.5, 1993, the Minnesota Department of Natural Resources describes this forest type is dry to dry-mesic community. It is most common in the deciduous forest-woodland zone, but also occurs sporadically throughout the prairie zone. The principal trees are bur oaks and northern pin oaks, but black oaks (*Q. velutina*) are also common in the southeast. The stature and spacing of trees is somewhat variable, reflecting differences in soils, topography, and climate, factors that strongly affect local droughtiness and fire frequency. Small, gnarly, open-grown trees are most common, although in moister spots, or in heavier soils, larger trees are sometimes more common. Tree spacing ranges from sparsely and evenly distributed to strongly clumped in moderately dense patches. Shrub cover is variable as well. The species composition of the shrub layer depends somewhat upon soil characteristics. Oak grubs and chokecherries are common on all soil types. On sandier soils, prairie willows (*Salix humilis*), New Jersey tea (*Ceanothus americanus*), American hazelnuts (*Corylus americana*), sand cherries (*Prunus pumila*), and juneberries (*Amelanchier* spp.) are usually present. Wolfberries (*Symphoricarpos occidentals*) are commoner on heavier soils.

Dry Oak Savanna occurs on the same kinds of landforms as Dry Prairie, except for bedrock bluffs. Correspondingly, substrates range from excessively-drained to well-drained, sand to loam soils. The presence of savanna rather than prairie indicates a lower fire frequency or intensity (or both) than in prairie. Dry Oak Savanna requires less frequent fire than Mesic Savanna for maintenance. However, in the complete absence of fire, woodland will eventually replace Dry Oak Savanna, which is what appears to have happened at the Monticello plant site. Grazing and browsing animals may also have had a role in the maintenance of Dry Oak Savanna.

Xcel Energy chose an area that was previously disturbed. See item 9 above. Clearing of mature oaks and other native under story will equal about 65 percent of the site, of which dry oak savanna type will equal about 20 percent or 0.71 acres.

Peregrine Falcon

The second occurrence found by the Natural Heritage and Nongame Research Program is a Peregrine Falcon (*Falco peregrinus*) nesting area, identified at the Monticello plant. Peregrine Falcons were recently removed from the U.S. Endangered Species List; however, they are still a state-listed threatened species in Minnesota and are further protected by the Migratory Bird Treaty Act. Historically, Peregrine Falcons nested on cliff ledges or in shallow caves in cliffs. However, this species has the ability to adapt to a wide range of environments, demonstrated by the diversity of habitats it now occupies throughout the world. Urban environments are becoming an important habitat for Peregrine Falcons, where buildings and bridges provide nesting structures and birds such as pigeons provide a food base. These urban Peregrine Falcons have contributed to the recovery of the species as a whole. In 1995, a nesting box was established on the stack at the Monticello Plant and peregrines introduced. Peregrines have successfully fledged at Monticello for years.

The Peregrine Falcons presently reside on the stack located south of the power plant facility. The proposed storage facility will be constructed well to the north of the nesting site. There does not appear to be any reason the proposed ISFSI would have any impacts on the nesting falcons.

- 12. Physical impacts on water resources. Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch? Yes No**

If yes, identify water resource affected and give the DNR Protected Waters Inventory number(s) if the water resources affected are on the PWI: Describe alternatives considered and proposed mitigation measures to minimize impacts.

This topic will not be addressed in the EIS.

13. **Water use. Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)?** Yes No

If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

Proposed Treatment of Topic in EIS:

In accordance with Minn. Stat. § 116C.83, subd. 5 and 6(b), the EIS will address whether the proposed ISFSI is designed to provide a reasonable expectation that the operation of the facility will not result in groundwater contamination in excess of the standards established in section 116C.76, subd. (1), clauses (1) to (3). The EIS will not, however, evaluate potential safety or mitigation measures to ensure this result because the NRC is asserting jurisdiction over storage design, operation and related radiological health and safety issues.

14. **Water-related land use management district. Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district?** Yes No
If yes, identify the district and discuss project compatibility with district land use restrictions.

The Mississippi River from St. Cloud to Anoka was added to Minnesota's Wild & Scenic Rivers Program in 1976. The portion of the Mississippi that passes by the Monticello power plant is within the portion of the Riverway designated "recreational."

Recreational rivers are those rivers that may have undergone some impoundment or diversion in the past and that may have adjacent lands which are considerably developed, but that are still capable of being managed to further the purposes and intent of the designation. This means that bordering lands may have already been developed for a full range of agricultural or other land uses, and may also be readily accessible by pre-existing roads or railroads. Xcel Energy owns the largest undeveloped tract of land along this segment of the river which includes the buffer zones of the Monticello and Sherco power plants.

The project is also located within the designated "Mississippi River Scenic Byway Corridor."

The CON Application describes nearby parks, scenic river status and related issues in Section 6.1 of Chapter 6, available online here:

<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch6EnvInfo.pdf>

The project is located entirely within the Monticello power plant property and is not located in the flood plain. According to the CON Application, the proposed project will not be visible from either the Mississippi River or adjacent roadways, nor will the project impact any recreational opportunities that exist along this reach of the Mississippi River.

Proposed Treatment of Topic in EIS:

The EIS will include an overview of area's Wild and Scenic River status, as well as the Mississippi River Scenic Byway Corridor, and will summarize and verify the information in the CON Application regarding the project's potential conflicts with these designations.

15. **Water surface use.** Will the project change the number or type of watercraft on any water body? __Yes No

If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

Proposed Treatment of Topic in EIS:

The EIS will not include a discussion of water surface use.

16. **Erosion and sedimentation.** Give the acreage to be graded or excavated and the cubic yards of soil to be moved:

Approximately 3.5 acres will be cleared. Approximately 4000 cubic yards of soil materials will be moved or excavated and replaced with structural fill for the concrete storage and approach pads at the site. The proposed site is relatively level.

Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

There are no steep slopes or highly erodible soils associated with the storage facility site. Hay bails, silt fencing or other erosion controls will be located around the site as necessary to mitigate erosion potential. These measures will be developed as part of the construction specifications later in the project.

Proposed Treatment of Topic in EIS:

The EIS will describe the measures to be employed to minimize erosion during construction of the facility.

17. Water quality: surface water runoff

Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any stormwater pollution prevention plans.

Since the site will not add any wastes to storm water, it is expected that the quality of the runoff will be similar to the existing runoff quality. The site will add a little more than an acre of impervious surfaces which will not absorb runoff. Therefore, the quantity of runoff will slightly increase. This runoff will be directed toward natural flow routes around the facility. Energy absorbing controls such as riprap and sediment controls will be used to minimize erosion into these natural flow routes

The Pollution Control Agency (MPCA) requires a NPDES permit for any discharges into streams and rivers and a permit for storm water discharges that occur during construction or operation activities. The permit application must outline an erosion and sediment control plan to be used to ensure that construction activities do not pollute nearby waterways.

Treatment in EIS

Chapter 6 of the CON Application included little information on actual pollutant concentrations expected in storm water runoff. The EIS will quantify the amount and type of such pollutants.

b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

During construction it is estimated that most storm water will drain into the soil since there will be little impervious surfaces and the sandy soils of the site are highly permeable. Construction measures will ensure that there are no point discharges from the site into any drainage ditches that could pass sediment runoff into natural flow routes that discharge into the Mississippi River

The storage facility will be designed with a slight slope to direct runoff to the sides of the facility. Ditches along the perimeter road will collect runoff and disperse the water to existing natural flow routes. Flow dispersion methods such as riprap will be used to absorb runoff energy before entering natural flow routes. Sediment controls

such as geo-textiles and in-situ vegetation will be used to minimize erosion.

Proposed Treatment of Topic in EIS:

The EIS will describe Xcel Energy’s erosion and sediment control program.

18. Water quality: wastewaters

Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

There will be no change in such wastewater produced or discharged at the Monticello Generating Plant Site. The ISFSI site will contain no restroom facilities or any other wastewater generating processes.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

Not applicable

c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility’s ability to handle the volume and composition of wastes, identifying any improvements necessary.

Not applicable

d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

Not applicable

Proposed Treatment of Topic in EIS:

The EIS will not address any sources of sanitary or industrial wastewater discharges.

19. Geologic hazards and soil conditions

a. Approximate depth (in feet)

to ground water:	maximum 38.8 ft	minimum 29.6 ft	average 35 ft
to bedrock:	maximum 116 ft	minimum 97 ft	average 105 ft

Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

The CON Application includes more details on soils and groundwater depth and leak and spill prevention measures in Chapter 6, available on line here:
<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch6EnvInfo.pdf>

Xcel Energy has drilled a total of 12 borings at the site. The borings provided no indication of any irregular soil conditions. No sinkholes, shallow limestone formations or karst have been identified on the proposed site.

b. Describe the soils on the site, giving NRCS (SCS) classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

The soils at the proposed site are primarily Hubbards, which are sandy mixed, frigid Entic Hapludolls. These soils are excessively permeable and have limited available water capacity. They readily transmit rainwater or any surface water to groundwater and are susceptible to wind erosion. The storage system proposed for use includes canisters that are sealed by welding and thus do not release any contaminants. There are no other sources of contamination at the facility that could contaminate the soil.

Proposed Treatment of Topic in EIS:

The EIS will address the matter of soil conditions in relation to compliance with water quality standards described in item 13.

20. Solid wastes, hazardous wastes, storage tanks

a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

The storage facility will house spent nuclear fuel in stainless steel canisters, sealed by welding and stored in concrete vaults. The storage system is completely passive. No wastes are generated. See the project description provided in response to Question 1, above.

b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

The CON Application provides details on radioactive wastes, radiation doses expected, and related safeguards in Sections 6.2 and 6.3 of Chapter 6, available here:

<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch6EnvInfo.pdf>.

The CON Application also includes a Radiation Primer (Appendix A:

<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805AppARadPrimer.pdf>)

The CON Application also includes an initial risk assessment due to the ISFSI, available here:

(<http://www.xcelenergy.com/docs/corpcomm/MontCoN011805AppB-EISRiskAssess.pdf>)

In summary, spent nuclear fuel continues to emit radiation after it is removed from the reactor. The United States Nuclear Regulatory Commission has established standards limiting the exposure to radiation to employees and the public. The storage system proposed limits exposure to radiation to levels well below federal limits and several orders of magnitude below background radiation levels experienced by the general public. The system of canisters and vaults proposed at the storage facility are designed to shield employees and the public from harmful levels of radiation and have been licensed by the NRC.

Proposed Treatment of Topic in EIS:

The EIS will review and verify the dose, exposure and risk analysis in the CON Application, and compare the amount of radiation expected to be emitted from the proposed facility with applicable federal standards. The EIS will describe the measures implemented to reduce the amount of radiation emitted.

However, the federal NRC regulations preempt state jurisdiction over the radiological health and safety due to the generating plant and ISFSI. Therefore, additional mitigation to lower radiation exposure levels will not be evaluated in the EIS but will be evaluated in the federal EIS. See Section III of Scoping Decision.

c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

There are no storage tanks of any kind associated with the proposed facility.

Proposed Treatment of Topic in EIS:

There will be no discussion in the EIS on storage tanks.

21. **Traffic.** Parking spaces added 0. Existing spaces (if project involves expansion)
. Estimated total average daily traffic generated

Construction of the storage facility will include clearing and removal of topsoil, grading, excavation and structural fill of the storage pad, pouring the concrete storage pad, duct bank, and miscellaneous foundations, erecting the electrical building and fences, placing gravel, and implementing various associated activities. The vehicles employed include bull dozers, scrapers, front end loaders, graders, dump trucks, cement trucks, delivery trucks, and various small support vehicles. During the six month construction period, a total of 22 construction workers are estimated with a peak at any one time of 12 workers and an average of eight workers. Additional traffic will be generated from truck deliveries and commuting workers. It is estimated that construction activities and deliveries will add an average of seven trips each day and commuting will add up to 16 trips (two per round trip) each day.

No full time staff is required at the storage facility during operation beyond existing plant personnel.

Estimated maximum peak hour traffic generated (if known) and time of occurrence . Provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.

With a peak construction force of twelve workers, the peak hour traffic generated during the morning and evening commuting hours would be twelve vehicles. During peak construction activity (between the morning and evening commuting hours) it is estimated that the peak hour traffic generated due to deliveries is 3 trucks.

The addition of twelve vehicles on local roadways during construction activities will not create any traffic impacts. No traffic improvements are proposed or deemed necessary.

Proposed Treatment of Topic in EIS:

The EIS will identify the major roads and highways that will be used by construction traffic.

22. **Vehicle-related air emissions. Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect**

of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

The minimal number of addition vehicles on local roadways during construction activities for such a short duration will add only a negligible amount of air emissions to the environment. No traffic improvements or mitigation measures are warranted.

Proposed Treatment of Topic in EIS:

The EIS will not include a discussion of vehicle-related emissions.

23. **Stationary source air emissions. Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chloro-fluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.**

The ISFSI will not generate any emissions of criteria pollutants, hazardous air pollutants, or greenhouse gases and this topic will not be discussed in the EIS. The ISFSI will store spent nuclear fuel that does emit radioactive emissions.

Chapter 5 of the CON Application includes a summary of the alternatives that Xcel Energy considered before applying for the certificate of need for the proposed ISFSI. These alternatives include alternatives to dry cask storage (Chapter 4 <http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch4StorageAlt.pdf>)

Conservation and generation alternatives to continuing to operate Monticello are include in CON Application in Chapter 5. <http://www.xcelenergy.com/docs/corpcomm/MontCoN011805Ch5GenAltNoAction.pdf>)

Proposed Treatment of Topic in EIS:

The CON Application contains little detail on the generation alternatives or the assumptions used to evaluate the alternatives considered, including the assumptions and workings of the proprietary “Strategist” model. Therefore, the EIS will develop, evaluate, and compare the expected emissions of the Monticello Generating Plant and ISFSI with those of reasonable alternatives as listed in the Scoping Decision.

24. **Odors, noise and dust.** Will the project generate odors, noise or dust during

construction or during operation? Yes No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

Construction of the project will generate noise and dust. Chapter 6 of the CON Application includes an extensive summary of the expected construction impacts.

For example, earth moving equipment such as bull dozers, scrapers, and graders will clear and level the area. Concrete trucks will deliver concrete to the site and pumping trucks will place it. Similar industrial vehicles will be used for erecting the electrical building and fences.

Ambient sound level data was collected in the vicinity of the Monticello plant. The daytime L_{90S} varied from 44 to 59 dBA and the nighttime L_{90S} varied from 38 to 52 dBA depending on traffic density and proximity to I 94.

The predicted sound levels from the site during construction are expected to be much lower than the ambient sound levels.

During the operation of the storage facility, the spent fuel will be moved from the plant to the storage facility with either a front-end loader or truck. To be conservative, both vehicles were assumed to be used concurrently. The sound levels in the residential areas near the ISFSI were estimated to be 6-17 dBA below the ambient sound levels at nearest residences. Therefore, there is no sound impact due to the operation of the storage facility.

Proposed Treatment of Topic in EIS:

The EIS will not include a discussion of odor or dust-related impacts after ISFSI construction. The EIS will identify the nearest receptors and the estimated expected noise levels during construction.

25. **Nearby resources.** Are any of the following resources on or in proximity to the site? Archaeological, historical or architectural resources? Yes No

The closest historical site is located approximately three miles from the facility site and no impacts are anticipated.

Prime or unique farmlands or land within an agricultural preserve?

Yes No

The facility site is not located on designated Prime or Unique farmland.

Designated parks, recreation areas or trails? Yes No

The closest park/recreation area to the project is the Montissippi County Park located approximately 1 mile to the southeast. The proposed project will not impact this area.

Scenic views and vistas? Yes No

The storage facility will not affect aesthetics in the vicinity. The facility will not be seen from the Mississippi River since it is located several feet higher on the south bank of the river close to the plant generating and reactor building.

Other unique resources? Yes No

If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

To the west of the site is an area of Biological Sensitivity identified by the Minnesota Natural Heritage Department. This area is identified as a Bur Oak (*Q. macrocarpa*) – Pin Oak Woodland and has been classified as a Sand-Gravel Subtype of a Dry Oak Savanna . Impacts to this resource are not expected.

Proposed Treatment of Topic in EIS:

The EIS will describe the nearest resources under each of the above categories.

26. **Visual impacts.** Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? Yes No
If yes, explain.

The facility site is obscured by wooded areas within the plant property and will not be visible during construction or operation. During operation facility lighting will illuminate the facility site for security reasons. However, the light fixtures are only 40 ft high, which is less than many of the trees surrounding the site.

Proposed Treatment of Topic in EIS:

The EIS will include a visualization of the proposed ISFSI and include a brief discussion of visual impacts for nearby residents

27. **Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency? Yes No.

If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

This project is located entirely within the property boundary of the existing Monticello power plant site. Therefore no impacts or changes to land use will occur other than the use of a currently unoccupied part of the plant site.

Proposed Treatment of Topic in EIS:

The EIS will not include a discussion of compatibility with local land use plans and regulations.

28. **Impact on infrastructure and public services. Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project? Yes No. If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)**

The storage facility will obtain electrical power from nearby electrical service lines serving other plant facilities.

29. **Cumulative impacts. Minnesota Rule part 4410.1700, subpart 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (or discuss each cumulative impact under appropriate item(s) elsewhere on this form).**

The storage facility will be constructed to house 30 storage vaults. The secured area will be sized to support up to 65 storage vaults.

Also, as described in Section 6, above the ISFSI is needed to keep the Monticello Generating Plant operating past 2010, so continued operation of the plant is a "connected action" to the ISFSI.

Treatment in EIS

The EIS will not evaluate potential future expansion of the ISFSI. Regarding continued operation of the Monticello Generating Plant, impacts will be summarized to the extent necessary to compare its continued operation to reasonable potential alternatives. However, the generating plant will be subject to a subsequent federal EIS, so neither impacts nor mitigation regarding the radiological or other emissions of the generating plant, safety, security or related

issues will be evaluated or studied in detail. The EIS will evaluate the feasibility and impacts of reasonable alternatives to continued plant operation, as described in the Scoping Decision.

30. Other potential environmental impacts. If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

No other environmental impacts not addressed in items 1 through 28 anticipated.

31. **Summary of issues.** *Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.* List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

RGU CERTIFICATION. The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature

Date

Title

Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or www.mnplan.state.mn.us