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Dry Spent Fuel Storage
at the
Monticello Nuclear Generating Plant

U.S. Nuclear Regulatory Commission

December 8, 2004

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Enclosure 2

Meeting Agenda

- Introductions
- MNGP Spent Fuel Storage History
- MNGP Dry Fuel Storage Project
- 10 CFR Part 50 Interface
- State of Minnesota Approval Process
- Closing/Questions

Project Plan

The Monticello ISFSI Project will successfully design and implement a spent fuel storage and transportation system at the site. The Project will develop a plan to support continuous plant operation through the license renewal period and future decommissioning.

History of Spent Fuel at MNGP

- 1970 - Original Spent Fuel Pool (SFP) configured for 740 assemblies
- 1978 - Re-rack SFP
- 1984 to 1985 - Shipped 1058 assemblies to GE Morris, IL
- 2004 - Initiated Study for Dry Fuel Storage

Current Spent Fuel Pool Status

- 2237 Assembly License
- 2209 Assembly Capacity
- 1478 Assemblies in Storage
- Full Core Offload Capability Lost March 2007
  - Contingency Evaluation for Temp. Rack
- Sufficient space to support plant operation until EOL in 2010

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Study Findings

- **Evaluation Scope**
  - **Reactor Building Evaluation**
  - **Crane Assessment** 85 Ton - single failure proof Reg 1.104 design
  - **ISFSI Site Evaluation**
- **Technology Assessment**
- **SFP Evaluation**
- **Minnesota Regulatory Timeline**

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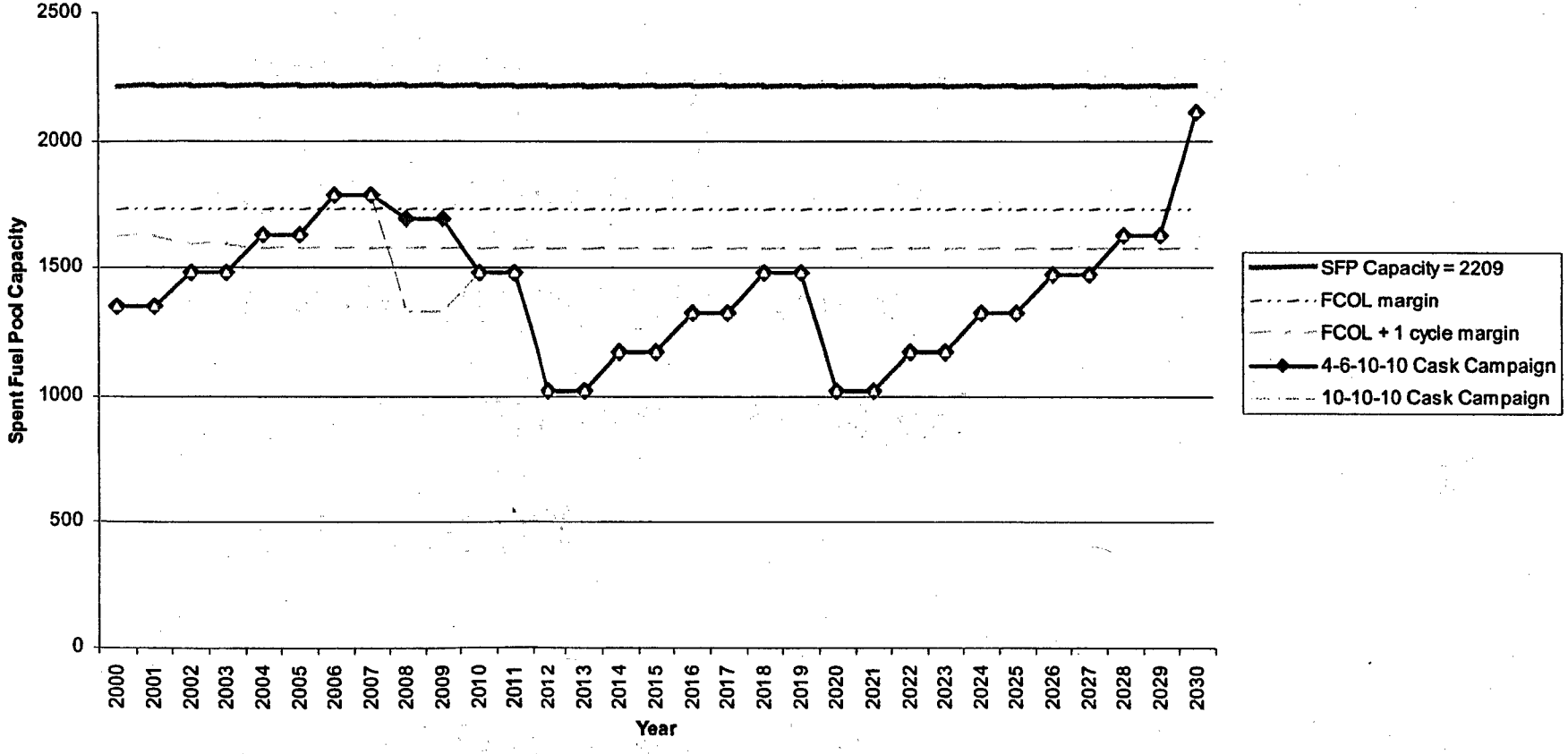
MNGP Storage Requirements



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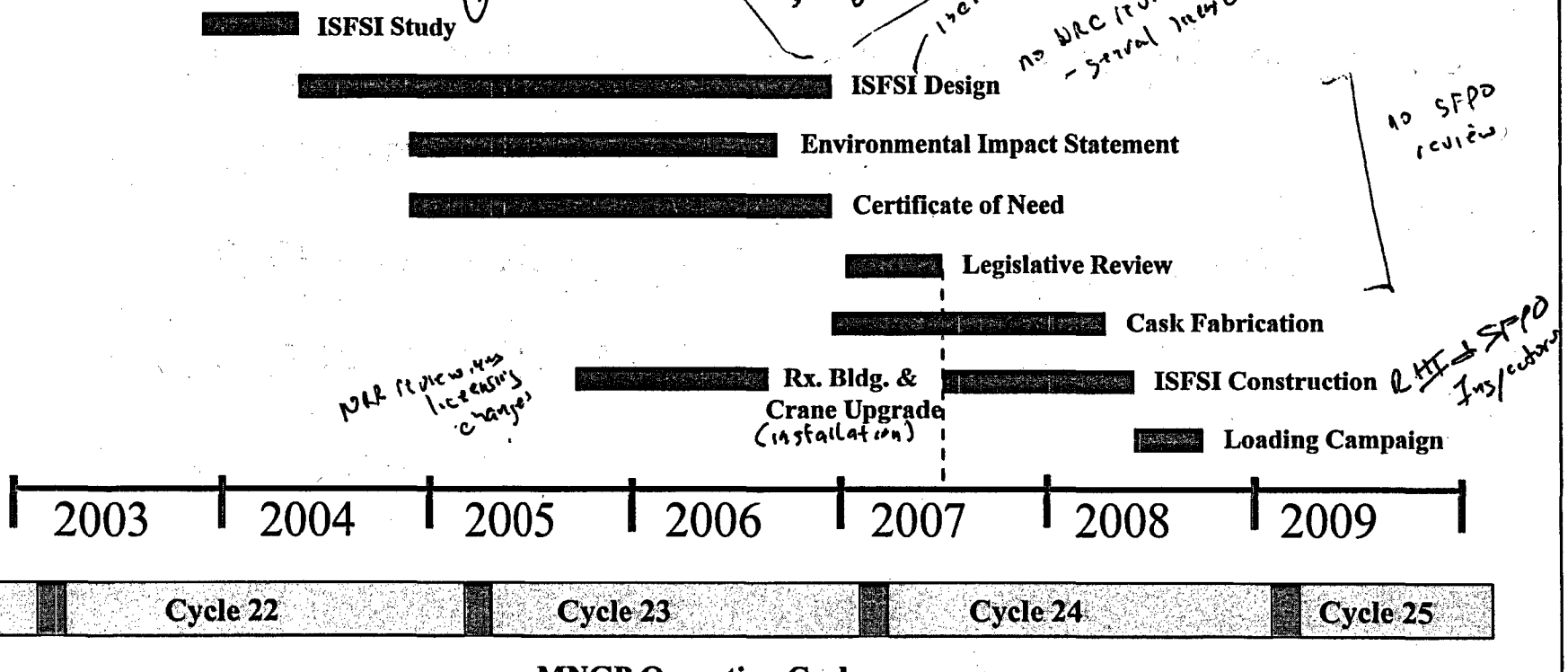
MNGP Key Considerations

- **ISFSI Siting**
- **General License Technology**
- **Certificate of Need Process**
- **Crane Upgrade to 105 ton**
- **Heavy Load Analysis for Rx Building**
- **Quality Assurance Program**

Project Schedule



MNGP Operating Cycles

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Key Milestones

- **ISFSI Siting**
- **Technology Selection**
- **Resource Plan & Certificate of Need Filing**
- **Fabrication**
- **MN Legislative Review** need before starting construction
- **ISFSI Construction**
- **Initial Canister Loading**

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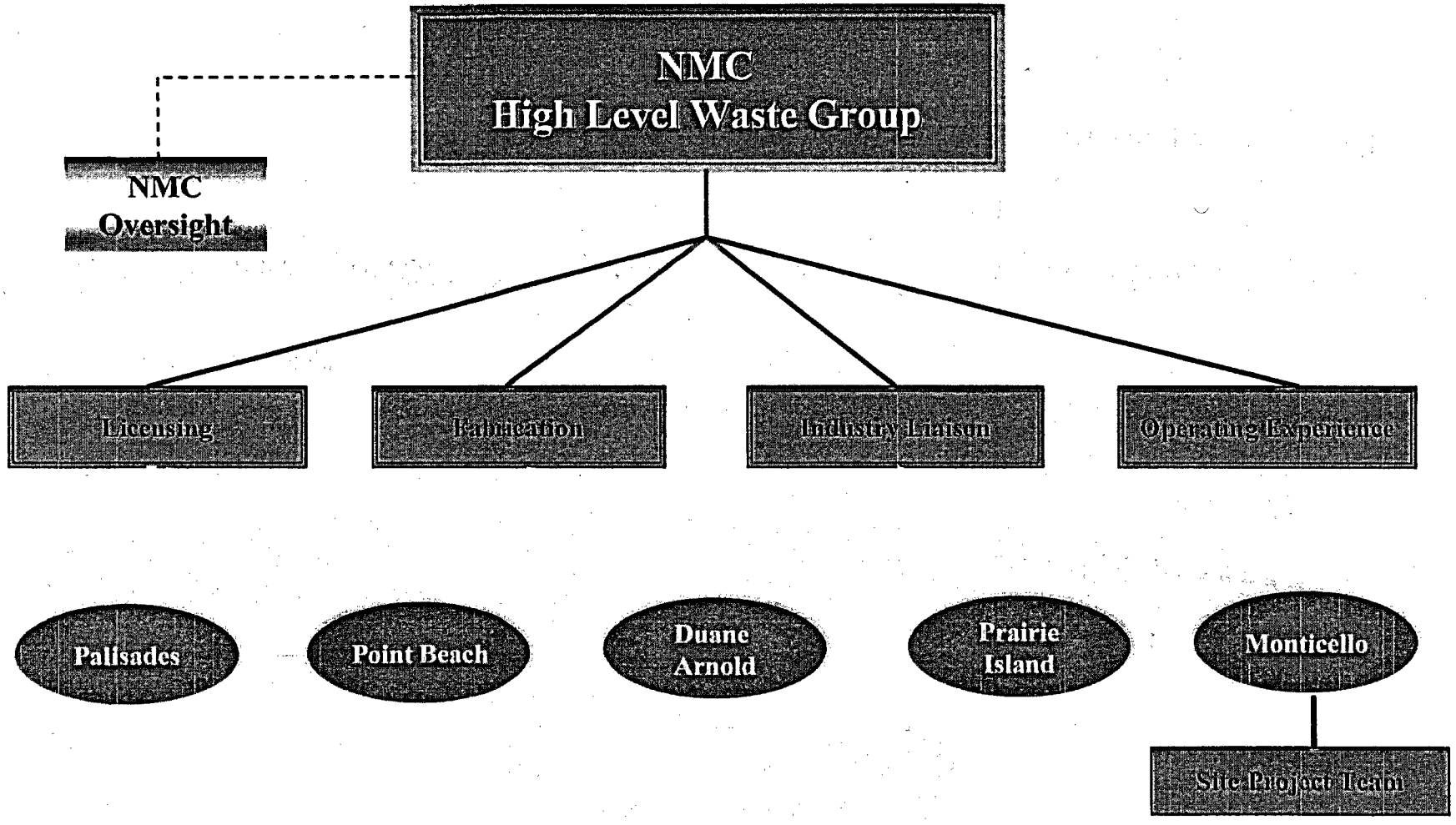
Monticello ISFSI

MNGP's Dry Fuel Storage Project



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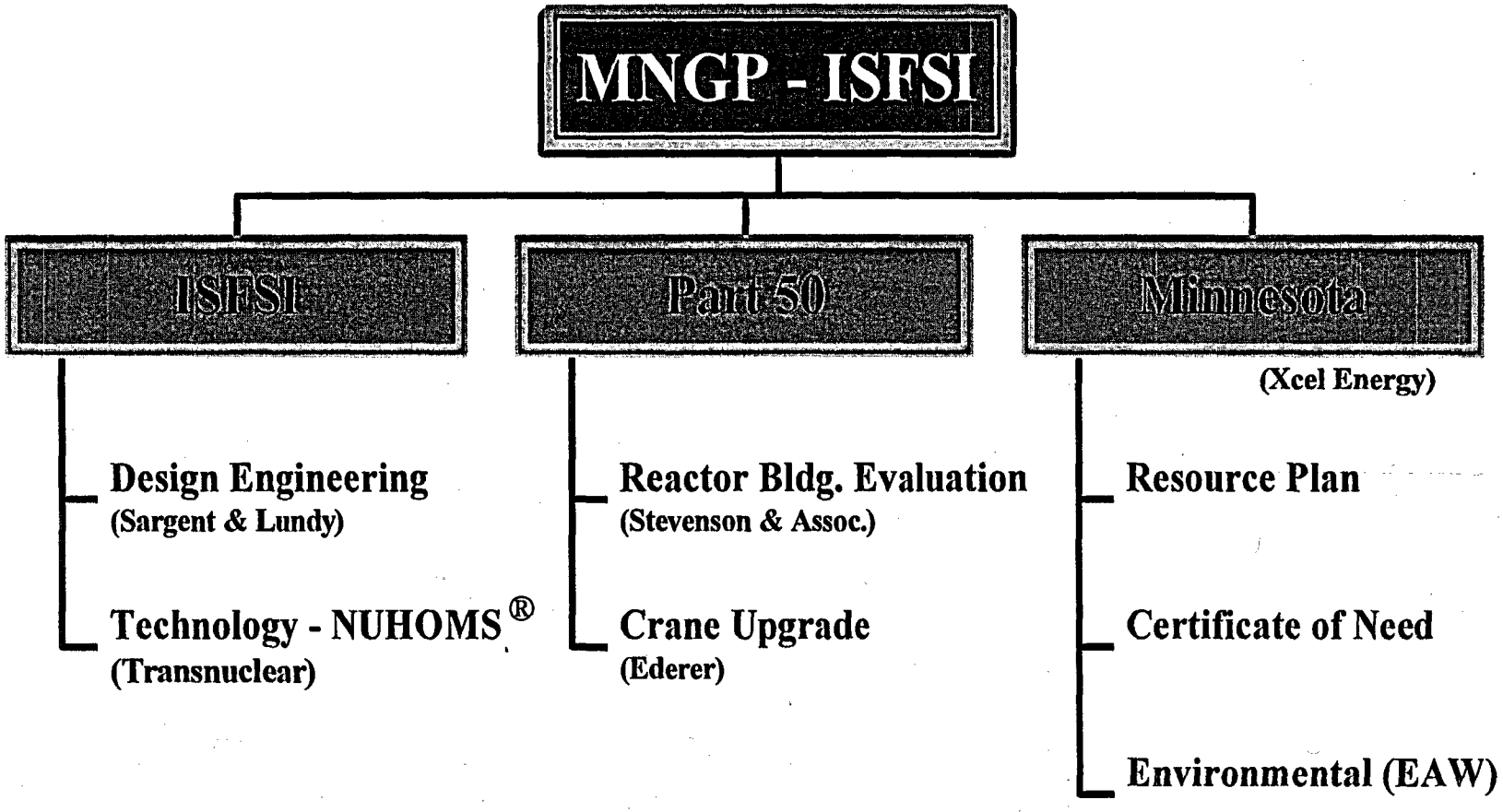

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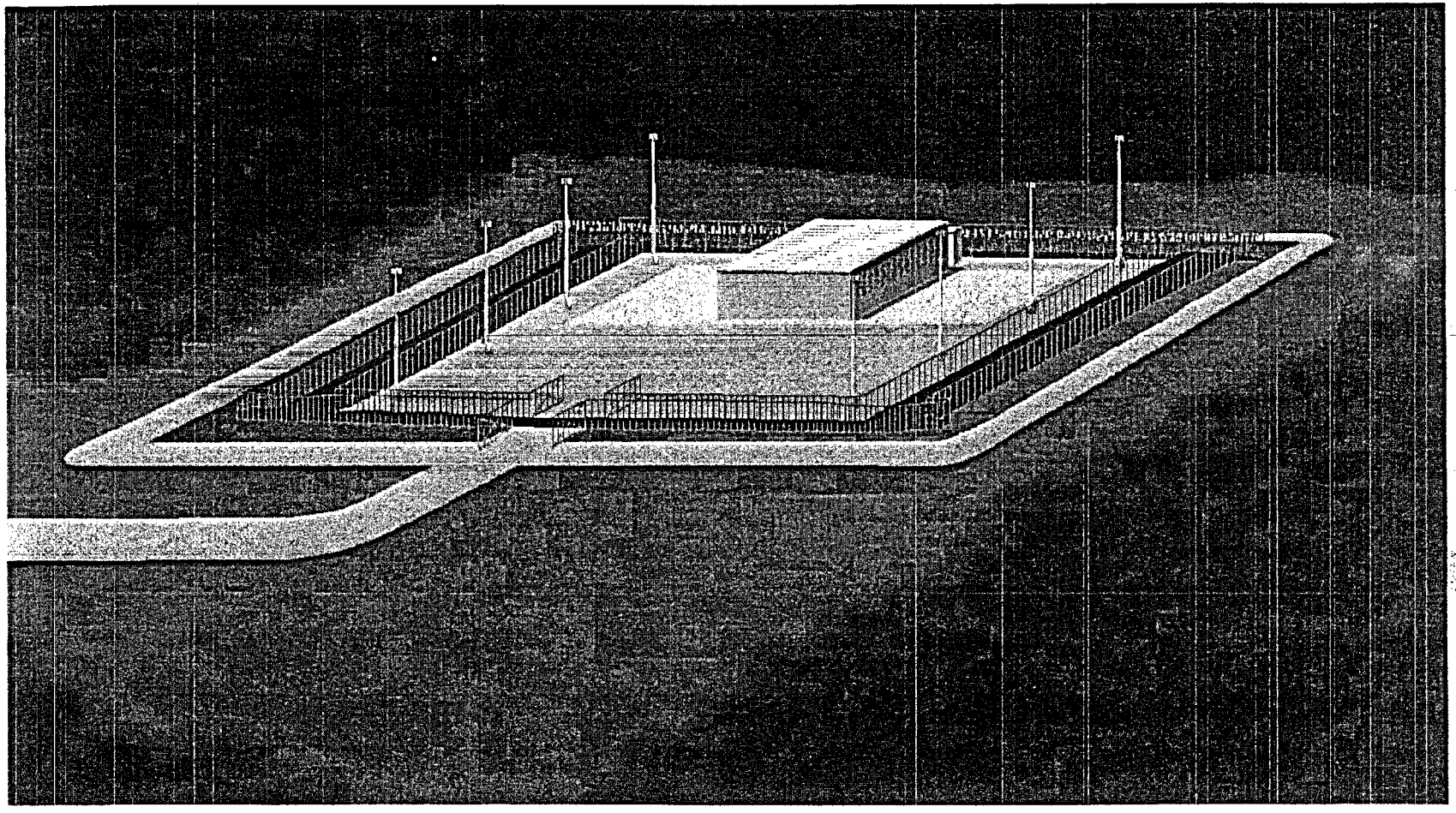
Monticello ISFSI

MNGP's Dry Fuel Storage Project



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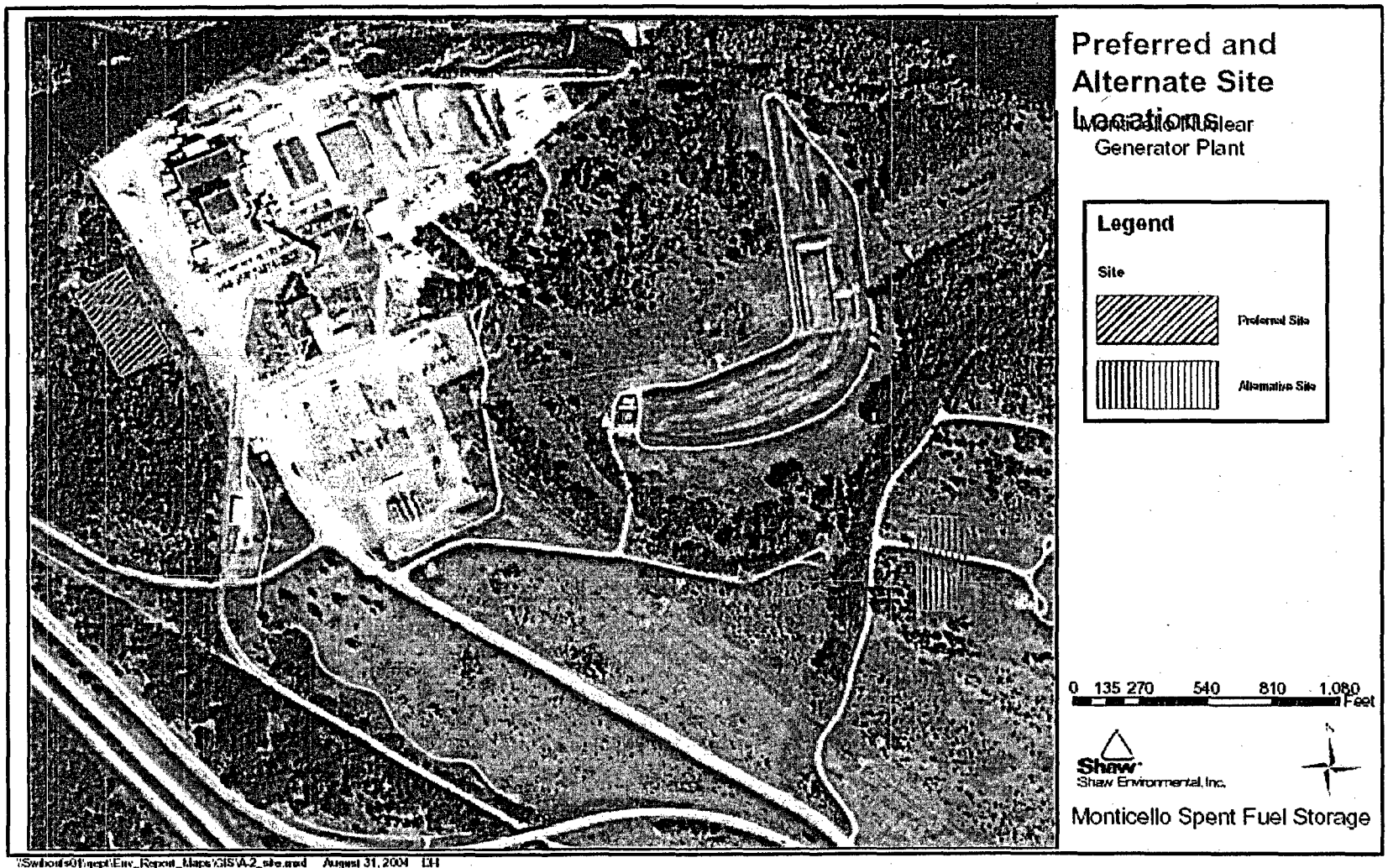
Monticello ISFSI

MNGP's Dry Fuel Storage Project



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Source: USGS, MNDate Deli LandManagement Information Center, Minnesota Geographic Data Clearinghouse, MNNRD

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Reactor Building Crane Current License Basis

current licensing basis

NRC SE (5/19/77) approved the following:

- **Crane modifications for 85-ton Single Failure Proof** dual drum
  - **Comply with draft NRC Regulatory Guide 1.104 "Overhead Crane Handling Systems for Nuclear Power Plants" where practical**
- **Use of 70-ton Spent Fuel Shipping Cask IF-300**

Reactor Building Crane Upgrade

proposed

- **Use NUHOMS® Dry Storage Canister and Transfer Cask**
- **Upgrade Crane to 105-ton Single Failure Proof**
- **Comply with NUREGs-0554/0612 for operating plants where practical**
- **Evaluate crane upgrade under 50.59 process**
- **Evaluate and modify building and structures as required**

use existing bridge + trolley - modify trolley

determine if NRC review is req'd based on this

85 → 105 T is a lot

lot of work to do seismic analysis of upgrade

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presented by Xcel energy

Minnesota Regulatory and Environmental Requirements for Spent Fuel Storage at Monticello

- Need Certificate of Need Minnesota Public Utilities Commission for ISFSI
- Environmental Impact Statement (EIS) Minnesota Environmental Quality Board
- Legislative oversight opportunity, if they chose

by EOY or soon after

will file License Renewal next spring so need ISFSI

prepare by set public involved

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Environmental Quality Board

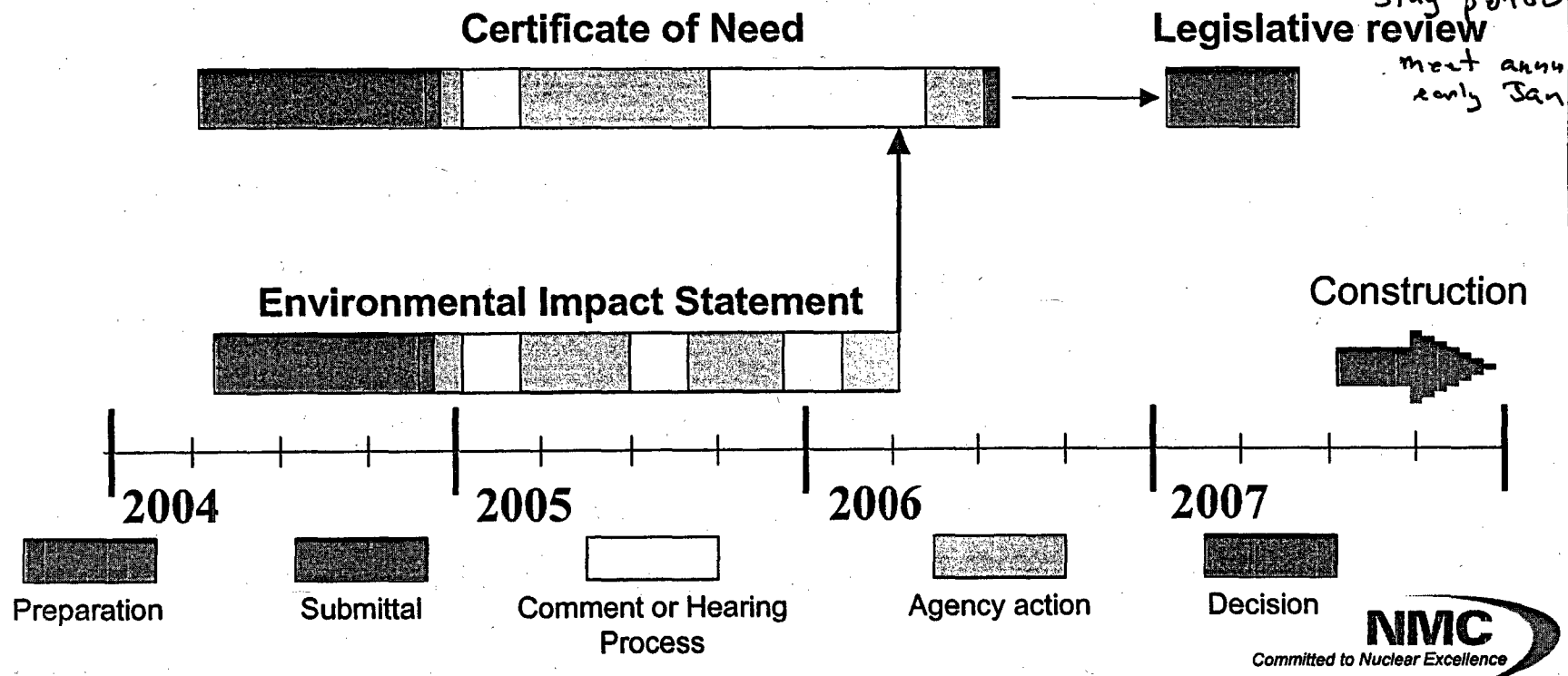
Minnesota Regulatory Timeline

Process & schedule estimate

PUC decision has to be made before the start of the next legislative session

Stay until 5 yr after decision

Issue of permit annual early Jan



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Summary

- MNGP can operate through its current license in 2010.
- MNGP needs additional spent fuel storage capacity for license renewal operation to 2030.
- Dry fuel storage supports continued MNGP operation and the ISFSI will be sized to support eventual decommissioning. in 2030 emptying of pool
- Minnesota's regulatory process requires the state to complete both an Environmental Impact Statement and Certificate of Need.

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Questions

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