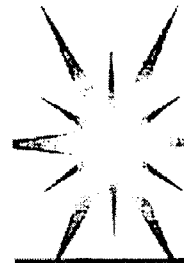


New York Power Authority
James A. Fitzpatrick
Independent Spent Fuel Storage

Installation



—Project Statement and Objectives

- Provide dry spent fuel storage system and facilities and transfer 200 spent fuel assemblies (SFA) prior to RO15
- Provide space for dry fuel storage of 1200 SFA to support operation through 2014.



Spent Fuel Storage Issue

- There is insufficient storage capacity in the JAF Spent Fuel Pool for storage of spent fuel beginning in 2002 through the end of plant life.
- Current SFP Capacity Licensed - 3239
- Current SFP Capacity Installed - 3061
- Current Spent Fuel Inventory - 2272
- Reactor Core Size / Balance - 560 / 789
- Per Cycle Spent Fuel Discharge - ~200



Project Schedule

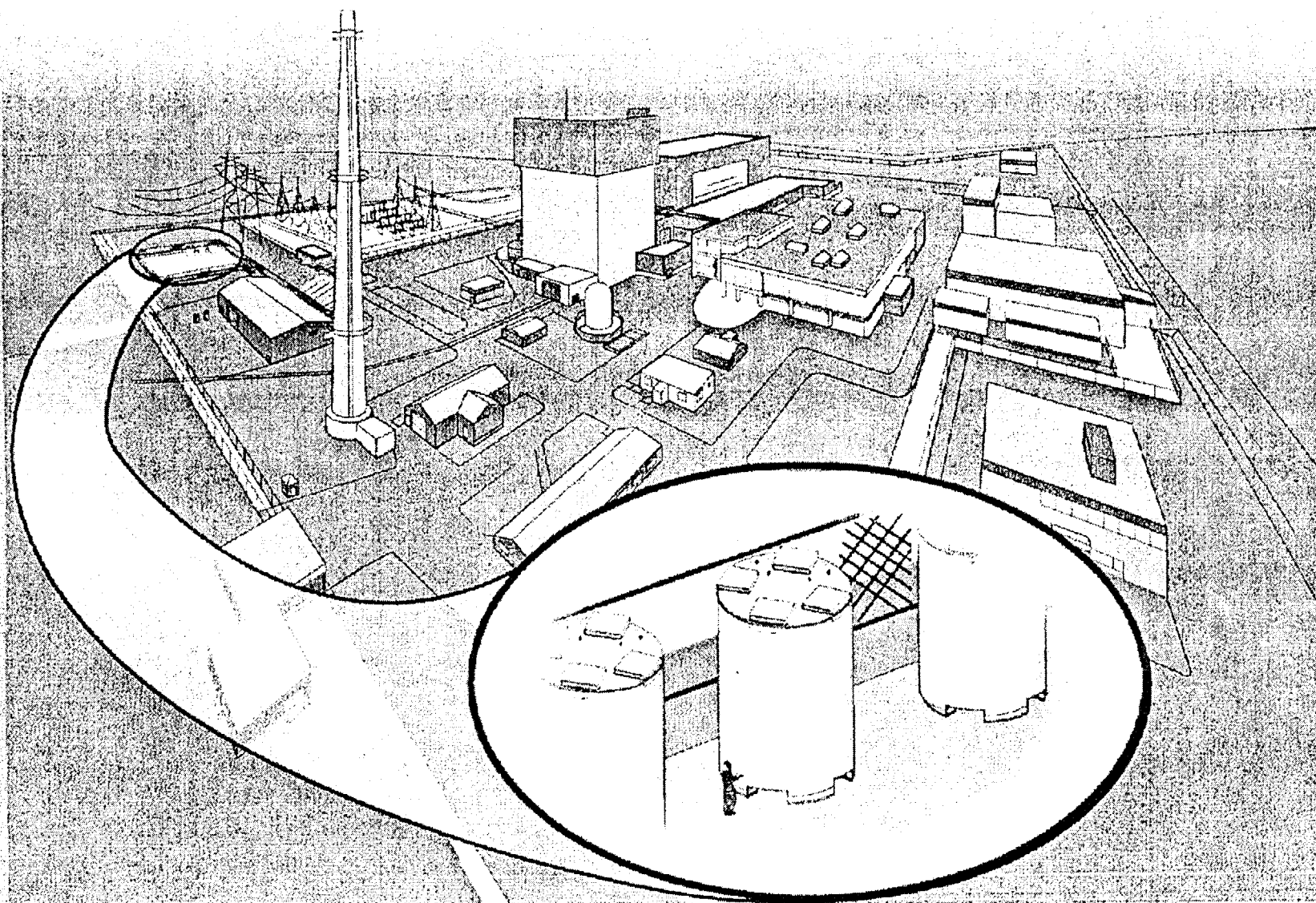
- Detail Engineering - 1999 & 2000
 - Facility Construction - Summer 2000
 - MPC Ancillary Equip Training - Jun 2000
 - Cask & Equipment Delivery - Mar 2001
 - Operation & Handling Training - Jan 2001
 - Start NRC Dry Runs – Jun 2001
 - Complete Loading (3) Casks – Sep 2001
-



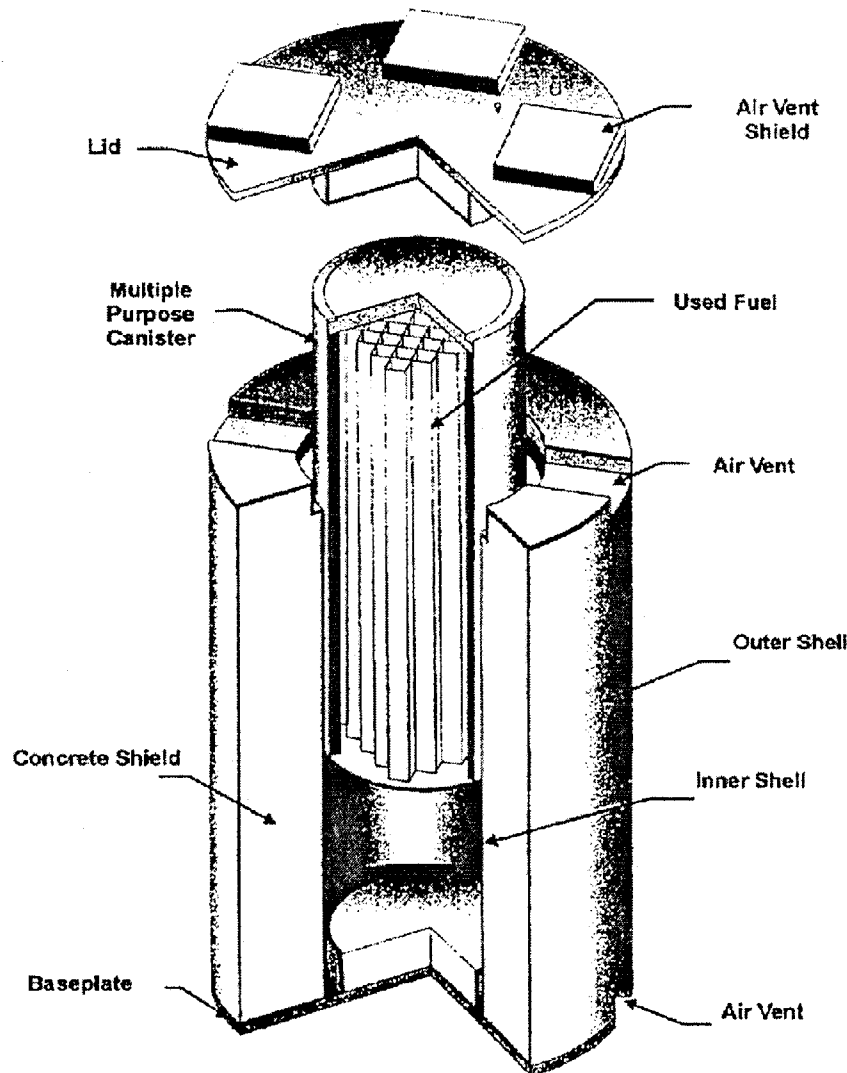
ISFSI Pad and Containers

- Located inside the site protected area
- Concrete Pad is 35' X 170'
- Each Hi-Storm Container is 11' in Diameter and 19' tall

James A. FitzPatrick Nuclear Power Plant Temporary Used Fuel Storage Area



James A. FitzPatrick Nuclear Power Plant Used Fuel Storage System



This diagram shows the major components in the planned used fuel storage system at FitzPatrick. The partially-inserted multiple purpose canister with storage overpack make up the system. The canister can be used for either storage or shipment of used fuel.

Each multiple purpose canister holds up to 68 used fuel assemblies and weighs about 60 tons. After loading, the stainless steel canister is welded shut, creating a leak-proof seal, and then loaded into a storage overpack. The loaded storage overpack is then moved to a three-foot thick concrete pad within the plant's existing security fence. A separate overpack will be used for shipping.

The storage overpack is an upright cylinder, about 19 feet tall and 11 feet in diameter. It weighs approximately 179 tons fully-loaded. The storage overpack's two-foot thick concrete wall is covered in a steel inner shell and steel outer shell. The lid is bolted on.

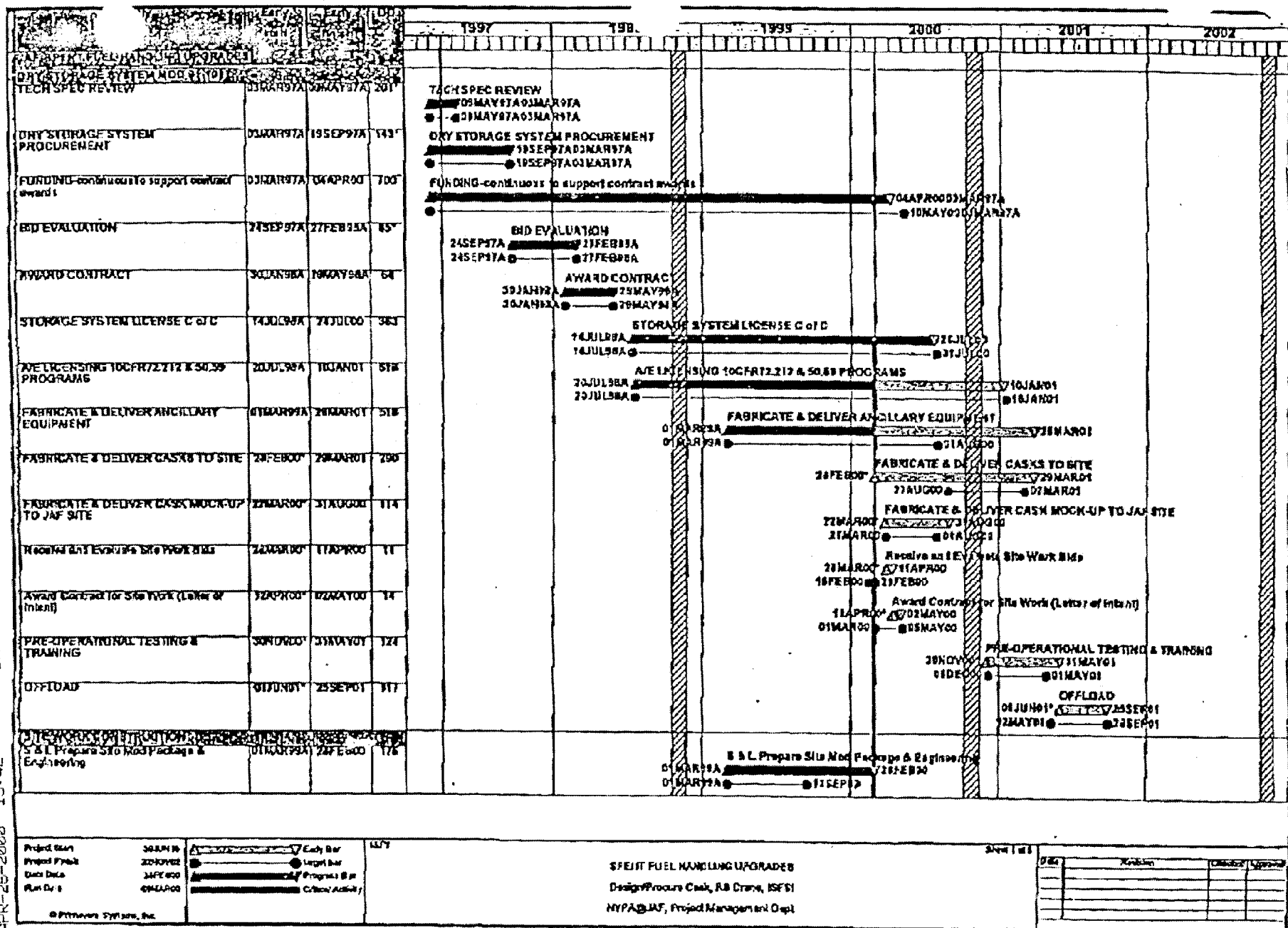
The loaded storage overpack requires no external support structure or cooling system. Mesh-covered vents on each container allow air to flow around and cool the sealed multiple purpose canister.

The storage overpack can withstand manmade occurrences and natural phenomena such as high winds, lightning and temperature extremes.

Used nuclear fuel has been stored in dry casks in the United States since 1984.

DRP

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DRP

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Presentation to
NRC Region I

JAF ISFSI Project

Kenneth A. Phy

New York Power Authority

James A. FitzPatrick Nuclear Power Plant

Agenda

- **Project Goals**
- **Project Description**
- **Spent Fuel Storage Capacity**
- **Full Core Offload Capability**
- **Technology and Licensing**
- **Project Schedule**
- **Open Discussion**

Project Goals

- **Provide Long Term Storage of Spent Nuclear Fuel at JAF**
- **Maintain Full Core Offload Capability**
- **Upgrade Reactor Building Crane**
- **ISFSI Operational Spring 2001**

Description

- **Independent Spent Fuel Storage Installation**
 - Initial Storage - 200 Spent Fuel Assemblies (SFA)
 - Phased Expansion - 4300 SFA
 - Dry Cask Storage System
 - Storage Pad, Facility, & Equipment
 - Site Road and Railway Upgrades
 - Plant Access Modifications
- **Reactor Building Crane Upgrade**

Spent Fuel Storage Capacity

- **Current License - Capacity of 2797 Cells**
- **Technical Specification Amendment Submitted for Increase to 3247 Cells**
- **Current Storage - 2080 SFA**

Maintain Full Core Offload

- Add 1 New Rack Prior to RO13 (Oct 1998)
- Add 2 New Racks Prior to RO14 (Oct 2000)
- Transfer 200 SFA to ISFSI Prior to RO15 (Oct 2002)
- Transfer 200 SFA each Cycle Thereafter

Note: Without ISFSI Plant Shutdown 2008

Technology and Licensing

- **MPC Licensed for Storage 10CFR72 and Transportation 10CFR71**
- **General License - 10 CFR 72 Subpart K**
- **Upgrade RB Crane to Single Failure Criteria (NUREG 0554) 125 Ton Rating**
- **Project Plan Based on NEI 97-01**

Project Schedule

- **Award Major Contracts - May 1998**
 - Cask Vendor (two)
 - Engineering Services
 - RB Crane Vendor
- **ISFSI Design - May 1999**
- **Receive Cask Certificate of Compliance
10CFR72 Subpart L - Dec 1999**
 - Risk of Licensing Delays

Project Schedule - (cont.)

- **ISFSI Complete - Sep 2000**
- **Dry Run & Training - May 2000**
- **Casks Received - Sep 2000**
- **Notify NRC Ready to Load - Dec 2000**
- **Casks Loaded - Aug 2001**
- **Refueling Outage - Oct 2002**

Discussion

- **General License Approach**
- **NRC Experience to Date**
- **Cask Vendors**
- **Industry Experience**
- **Other**