Tennessee Valley Authority
Browns Ferry Nuclear Plant
Independent Spent Fuel Storage

TVA/NRC Meeting

Region II - Atlanta, GA

March 14, 2002

Enclosure 2

Agenda

◆ Meeting Objectives	Tim Abney
◆ Background	Tim Abney
◆ Schedule	Alan Chapman
◆ Proposed Location	Alan Chapman
◆ Security	Alan Chapman
◆ Site Specific Issues	Alan Chapman
◆ Licensing	Tim Abney
◆ Summary and Closing Remarks	Tim Abney

Introduction/Meeting Objectives

- **Meeting Objectives**
  - **Provide Status of Browns Ferry Nuclear Plant Spent Fuel Storage Situation**
  - **Discuss BFN Activities to Date**
  - **Provide a Schedule for Major Project Milestones**
  - **Discuss Site Specific Issues**
  - **Obtain Staff Input/Lessons Learned**

Background

- BFN Spent Fuel Pool
  - Spent Fuel Pools are Currently Licensed for 3471 Fuel Assemblies (FA) Per Unit
  - Full Core Reserve is 764 FAs
  - Unit 1 Spent Fuel Pool Currently Contains 1978 FAs
  - Unit 2 Spent Fuel Pool Currently Contains 2558 FAs
  - Unit 3 Spent Fuel Pool Currently Contains 2160 FAs Including 284 Fresh Assemblies
  - Unit 3 Will Lose Full Core Offload Capacity in November 2005

Background (Cont)

- Options Considered
  - Rerack Unit 3
    - Provide Storage for Unit 3 Until 2012
    - Provide Storage for Unit 2 Until 2013 Using the Unit 1 Pool
  - Dry Storage
    - Construct On Site ISFSI and Implement Dry Cask by July 2005

Background (Cont)

- Other Considerations
  - Extended Power Uprate
  - Plant License Renewal
- Decision to Proceed With Dry Storage
- Contract Awarded to Holtec International, November 2001

Schedule

2/2002 – 5/2002

Negotiate final contract ✓
Assemble Team ✓
Detailed schedule development ✓
Identify Dwgs/procedures ✓
Environmental Assessment

3/2003 – **Hardware Fabrication / Delivery** – 10/2004

MPC's
HI-STORM's
HI-TRAC
Handling Equipment
Ancillary Equipment

1/2002 – **Design** – 5/2003

RFF and Truck Bay Evaluations
Soil Sampling and Analysis
Heavy Load Transport Path Design
ISFSI Design
Security System Design
SFP RB Crane Design

10/2003 – **Construction** – 12/2004

Work plan development
Construction activities
Closure activities
Ops and Maint Procedure Dev.

Start-up/Testing/ NRC Demonstrations

10/2004 – 6/2005

Pre-operations Testing
Training
Dry Runs
On site overpack Fabrication

1/2002 – **Engineering, Licensing and Other Evaluations** – 2/2005

Load Drop Analysis
Dose rate Assessments
72.212 Report
72.48 Procedure
Licensing Submittals

Load 3 Casks

7/2005 – 9/2005

Load, weld (close) and transport

BFN Proposed Location

- Phase 1
  - Located Just Outside Current Protected Area Boundary Adjacent to the Switch Yard
- Transport pathway Approximately 1500 ft
- Surrounded By
  - 100 Year Flood Control Ditch (Moat)
  - Switch Yard

Security

- Extend the Current Protected Area to Encompass Phase I Storage Location
  - Isolation Zone
  - Lighting
  - Camera Locations
- Revise Security Plan
- Eliminate the East Access Point
- Minimal Impact on Current Security Forces

Site Specific Issues

- Evaluations and Analyses
  - Heavy Load Handling Path Evaluation
    - NUREG-0612, Control Of Heavy Loads
  - 10 CFR 72.212 Evaluations
  - NRC Bulletin 96-04 and ISG-15 Compliance Evaluation
  - Various Off-Normal Condition Analyses and Calculations
  - Radiation Assessment
- Plant Modifications Required to Support Spent Fuel Off-Loading
  - Cask Support Stands and Work Platform
  - Reactor Building Crane Upgrade
    - NUREG-0554, Single-Failure-Proof Cranes for Nuclear Power Plants
  - Truck Bay and Egress Modifications (Potential)

Site Specific Issues (Cont.)

- Design and Construction of Storage Facility
  - Phase 1 ISFSI
    - 88-Cask Capacity
    - Sufficient Storage For Current End-of-License For All 3 Units Through 2016
  - Phase II and Phase III
    - Contingency If DOE Does Not Accept Spent Fuel After 2016

Site Specific Issues (Cont.)

- Design and Construction of Storage Facility (Cont)
  - Transport Roadway and Staging Pad
  - Security Boundary Revision (Fence, Cameras, Lighting, E-Field, etc.)
- Facility Startup / Testing
  - Procedures Development
  - Training Program Development
  - Personnel Training
  - NRC Demonstrations
  - Startup Testing of Ancillary Equipment
  - Cask Loading and Closure Operations for Initial Campaign

Site Specific Issues (Cont.)

- Major Procurement Items
  - Multi Purpose Canister
  - Storage Overpack
  - Transfer Cask
  - Handling and Ancillary Equipment

Licensing

- 10 CFR 72.210, General License
- Selection Considerations
  - Flexibility
  - Well Defined
  - Regulatory Precedence
  - Minimize TVA and Staff Resources
  - Efficiency Associated With a Standard Design
  - SQN Site Will Use a General License
  - Lessons Learned
- Potential Submittals
  - Radiological Emergency Plan
  - Security Plan
  - Quality Assurance Plan

Summary and Closing Remarks

Tim Abney