



Yankee Atomic Electric Company License Termination Plan

Meeting with USNRC
December 17, 2002

1

Agenda

- | | |
|-------------------------------|----------------------|
| ■ Introduction | Gerry van Noordennen |
| ■ YNPS History | Ellen Heath |
| ■ Decommissioning Activities | Ellen Heath |
| ■ LTP Organization/Activities | Eric Darois |
| ■ HSA/Site Characterization | Eric Darois |
| ■ Dose Modeling | Jay Tarzia |
| ■ Final Status Survey | Jay Tarzia |
| ■ Next Steps | Gerry van Noordennen |

2

Introduction

- Purpose of the Meeting
 - Open lines of communication with the NRC
 - Review decommissioning history
 - Discuss current decommissioning strategy
 - Review past LTP and FSS activities
 - Present current LTP team and approach
 - Obtain NRC feedback on approach
 - Discuss future interactions on selected topics

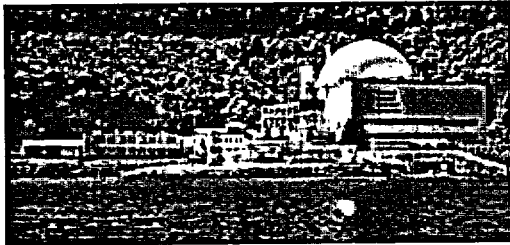
3

YNPS History

- Achieved Initial Criticality—1960
- Began Commercial Operation—1961
- Upgrade to 600 MWt—1963
- Decision to Cease Operations—2/1992
- Possession Only Status—8/1992
- Decommissioning Activities—1992-present
- Fuel Movement to ISFSI (Begin)—6/2002

4

Yankee Nuclear Power Station



5

YNPS Decommissioning History

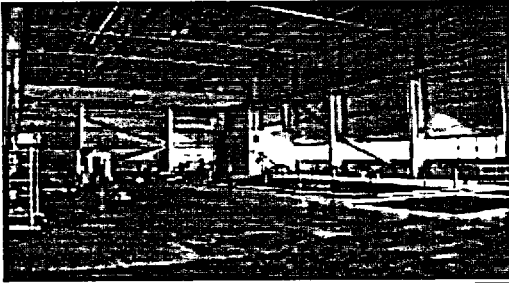
- Decommissioning Plan Submitted—12/1993
- Decommissioning Environmental Report—12/1993
- Characterization Activities Commence—1994
- Decommissioning Plan Approved 2/1995, Suspended 10/1995 and Re-Approved 10/1996
- LTP Submitted to NRC (Revision 1 – 12/97)
- Management Decision to Withdraw LTP (Availability of MARSSIM)—9/99

6

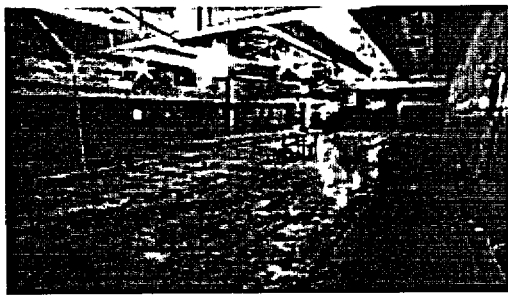
YNPS Decommissioning History (Con't.)

- Large Components Removed
- Majority of SSCs Disposed of Off-Site
- Significant Remediation and FSS Activities Performed Under Previously Submitted LTP
- FSS Conducted Based Upon Guidance in
 - RG 1.86
 - Draft NUREG/CR-5849
 - Draft NUREG-1500

YNPS Turbine Building Deck



YNPS Switchgear Room

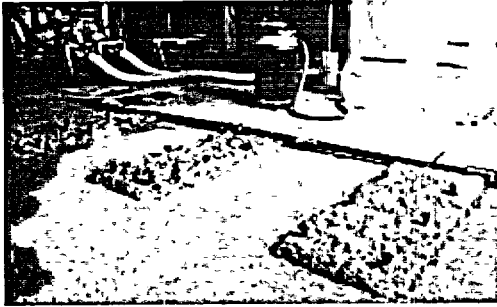


Primary Auxiliary Building Scabbling



10

Safety Injection Room Floor Scabbling



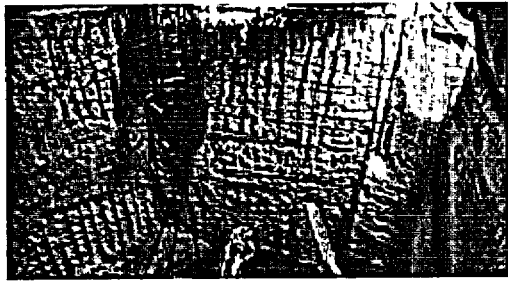
11

Reactor Cavity Scabbling



12

Shield Tank Cavity Scabbling



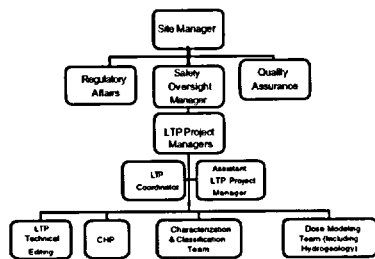
13

Near-Term Decommissioning Approach

- Demolish Buildings to Grade
- Demolish VC and Remove As Waste
- Structures To Remain
 - PAB Cubicle Corridor
 - SFP/IX Pit
 - Turbine, Waste Disposal, Service, and Warehouse Building Pads and Shoreline Structures
- Periodic Re-Evaluation of Approach

14

LTP Project Organization



15

License Termination Approach

- Unrestricted Release (10CFR20, Subpart E)
- Survey to MARSSIM Guidance
- Meet:
 - 25 mrem/yr (all pathways)
 - ALARA

x

LTP Project Goals

- Produce a License Termination Plan That.
 - Satisfies the requirements of 50 82(a)(9)
 - Considers available NRC guidance
 - Considers stakeholder interests (e.g., Commonwealth of Massachusetts, EPA, local community)
 - Minimizes NRC requests for additional information

r

LTP Development Approach

- Ensure Consistency With NRC Guidance Documents (RG 1.179, NUREG-1700, NUREG-1727)
- Use CY LTP As Model
- Incorporate Site-Specific Data
- Incorporate NRC Feedback
- Maintain Open Communications

u

LTP Development Considerations

- Continued Safe Spent Fuel Storage
- Ongoing Decommissioning Activities
- Site-Specific Characteristics, e.g.:
 - Geology
 - Hydrology
 - Meteorology

19

HSA/Site Characterization

- Consistent With MARSSIM
- Considers Prior Survey Data
- HSA/Site Characterization Results Will
 - Provide basis for initial area classification
 - Identify additional samples/measurements needed
 - Create tools to support remediation planning
- HSA/Site Characterization Reports Will Be Submitted to NRC and Referenced in LTP

20

Initial Area Classification Activities

- Validate NUREG/CR-5849 Survey Data
- Validate Instrumentation Used
- Verify Ongoing Controls/Isolations
- Include Initial Classification in LTP

21

Dose Modeling

- Codes Selected.
 - RESRAD V6 21, BUILD V3 21
 - Wide-spread use
 - Probabilistic and deterministic modules
 - Addresses complex hydrology and subsurface soil contamination
- Scenarios Considered
 - Resident farmer
 - Building occupancy
- Probabilistic Mode for Sensitivity Analysis

22

Dose Modeling (Continued)

- Input Parameters Based Upon
 - Results of sensitivity analysis
 - Site-specific information, e.g.,
 - Radionuclides of interest at YNPS
 - Site-specific geologic data
 - Site-specific meteorological data
 - NUREG/CR-5512 Vol 3
 - NUREG/CR-6697

23

Final Status Survey

- Based on MARSSIM
- FSS Development Considerations Include
 - DQOs
 - Anticipated site conditions at time of FSS
 - Varying radionuclide mix
 - Site contamination distribution
 - Monitoring instrumentation
- FSS Plan Included In LTP

24

Project Milestones

- Public Comment on Draft: 10/2003
- Submittal to NRC: 11/2003
- Public Meeting 3/2004
- RAI Issued: 7/2004
- RAI Response 10/2004
- NRC Approval 11/2004
- Complete FSS: 2006

2

Future Meeting Topics/Target Dates

- Site Characterization 2/2003
- Dose Modeling 3/2003
- Final Status Survey 4/2003
- Submittal Mechanics 5/2003

2
