

Sequoyah Nuclear Plant

Independent Spent Fuel Storage Facility

**TVA/NRC Meeting
Atlanta, GA
August 20, 2002**

Enclosure 2

Agenda

- Spent Fuel Storage
- Project Workscope
- Level 1 SQN ISFSI Schedule
- Work Scope Status
- Project Risks
- Oversight Activities
- Licensing Activities
- NRC Review Considerations
- Project Overview
- Summary

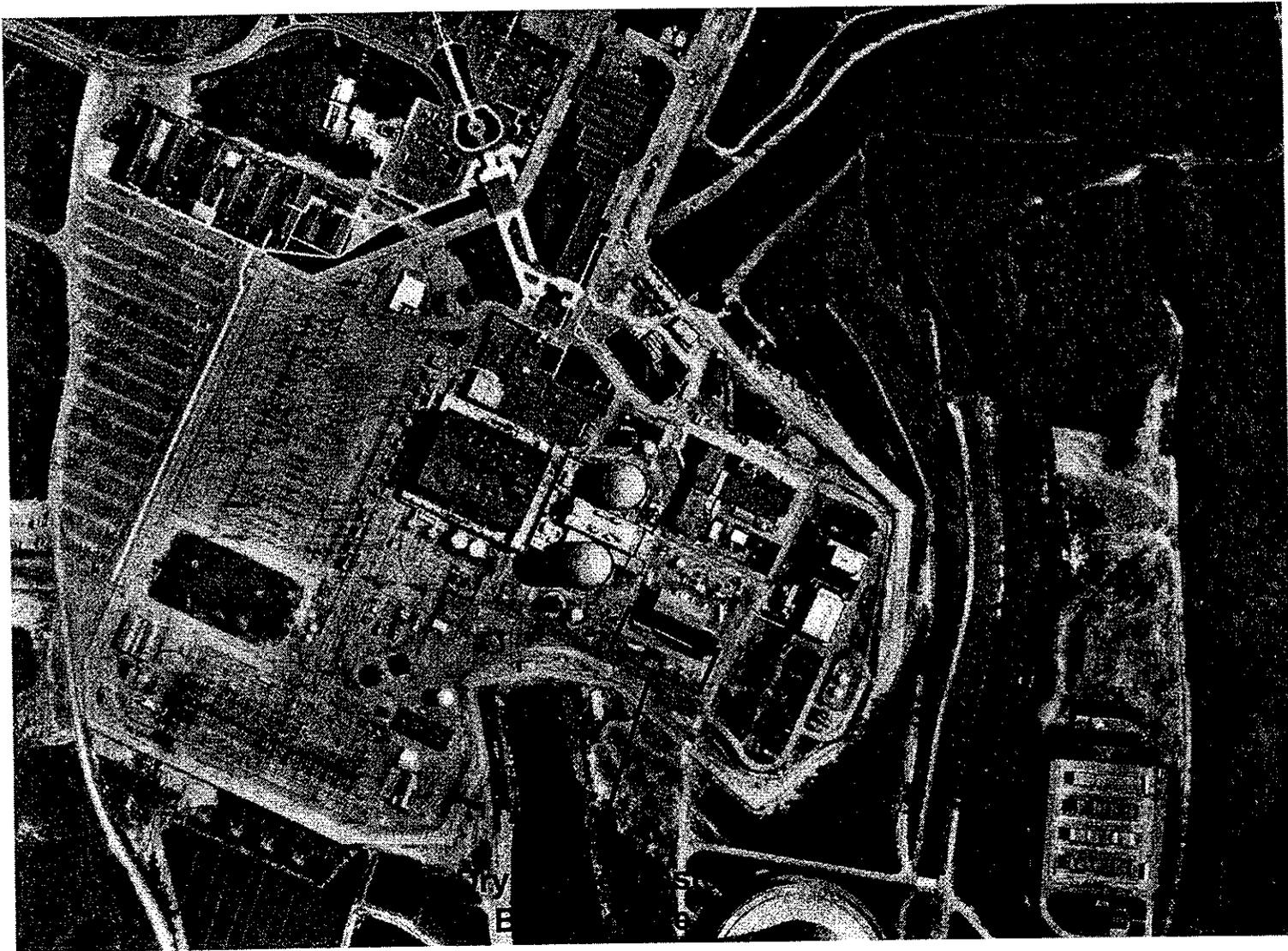
Spent Fuel Storage - Background

- SQN Spent Fuel Pool
 - Common to both units
 - Transfer canal and cask loading area adjacent
 - Uses boral as neutron poison
 - Boron concentration maintained between 2,000 and 2,700 ppm
 - Pool temperature typically between 70 °F and 112 °F
- Spent Fuel Pool Capacity
 - 2,091 storage locations installed with 2,089 useable storage locations
 - 8 non-fuel items stored (debris container, boral specimen array, etc.)
 - 1,700 spent fuel assemblies stored in pool
 - 381 open cells, but full utilization limited by TS requirements

Spent Fuel Storage - Background

- SQN Spent Fuel Storage Considerations
 - Originally estimated loss of full core off-load capacity by Spring 2002
 - Credit for SFP boron concentration extends SFP full core capacity loss to Fall 2004 - (U1C13)
 - Comprehensive study of spent fuel storage options
 - Onsite dry cask storage determined to be best option
- Proposals, Evaluations, and Decisions
 - SQN issues request for proposals from selected vendors
 - TVA Board awards contract to Holtec International - April 2000
 - SQN enters contract with Holtec International - June 2000

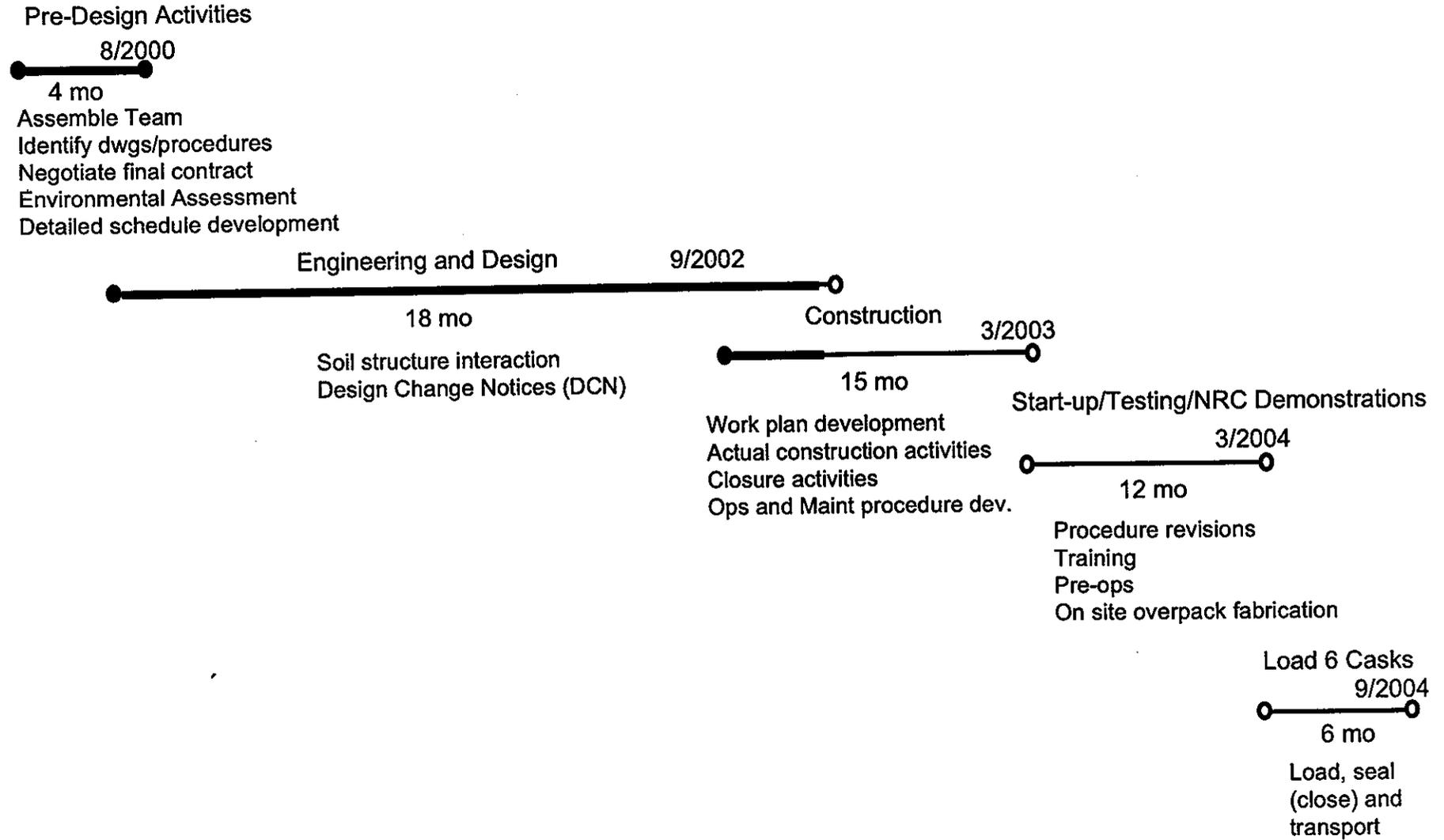
Spent Fuel Storage - Site Location



Project Work Scope

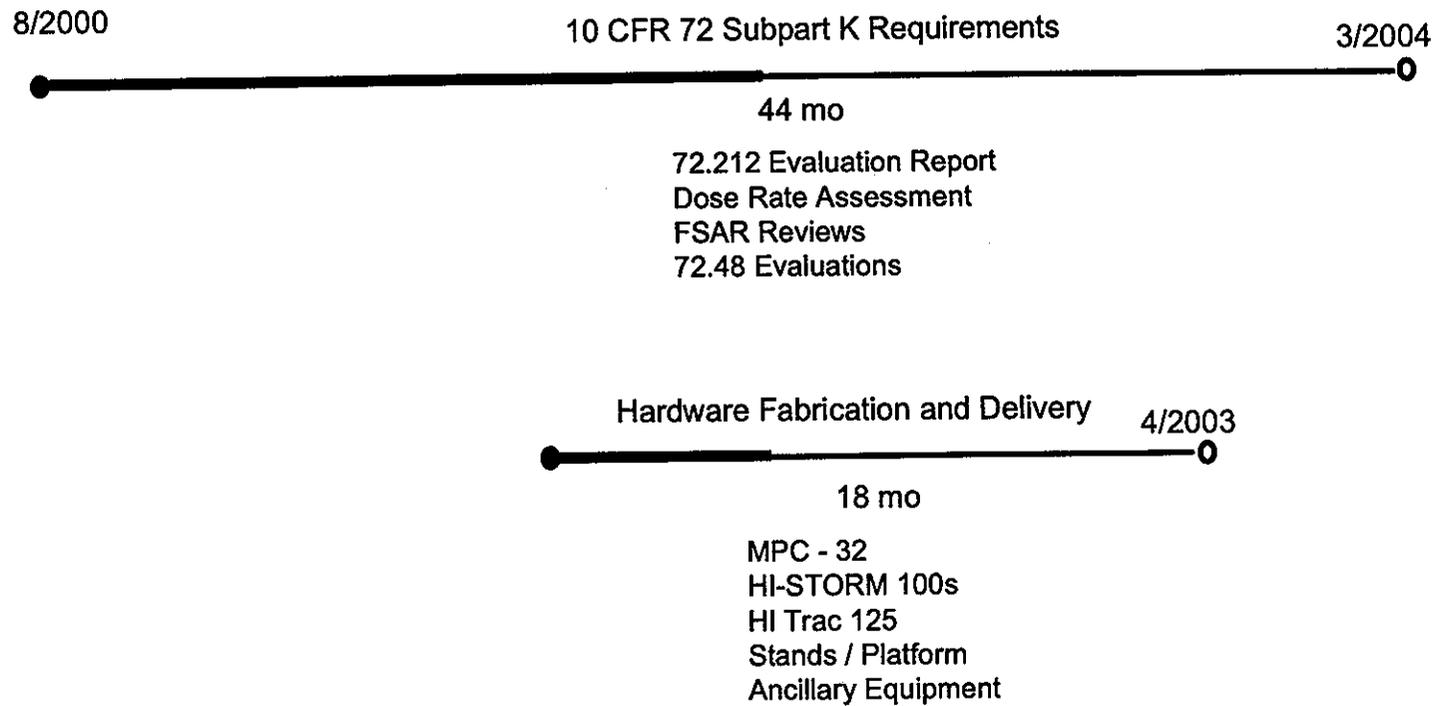
- Preliminary Design Activities
- Engineering and Design
- Site Construction
- Hardware Fabrication and Delivery
- Administrative Programs and Processes
- Dry-Runs and NRC Demonstrations
- Loading Campaign

Level 1 SQN ISFSI Schedule



Level 1 SQN ISFSI Schedule

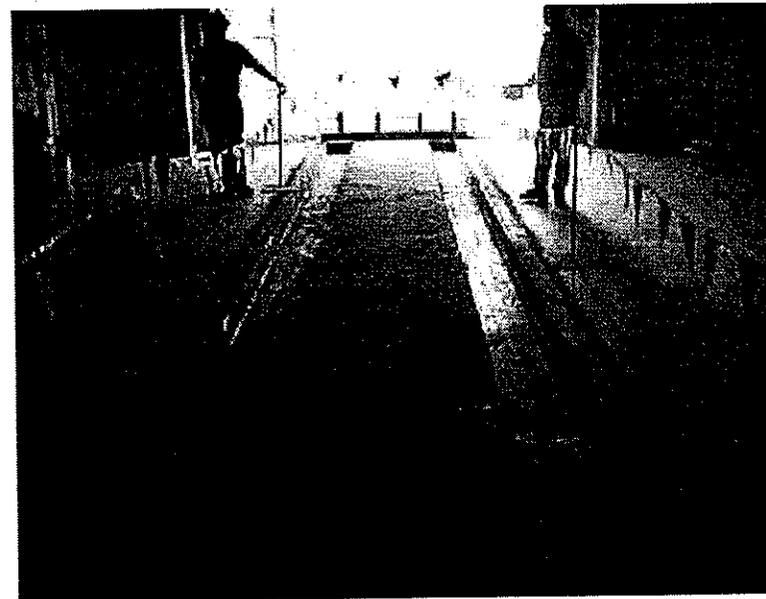
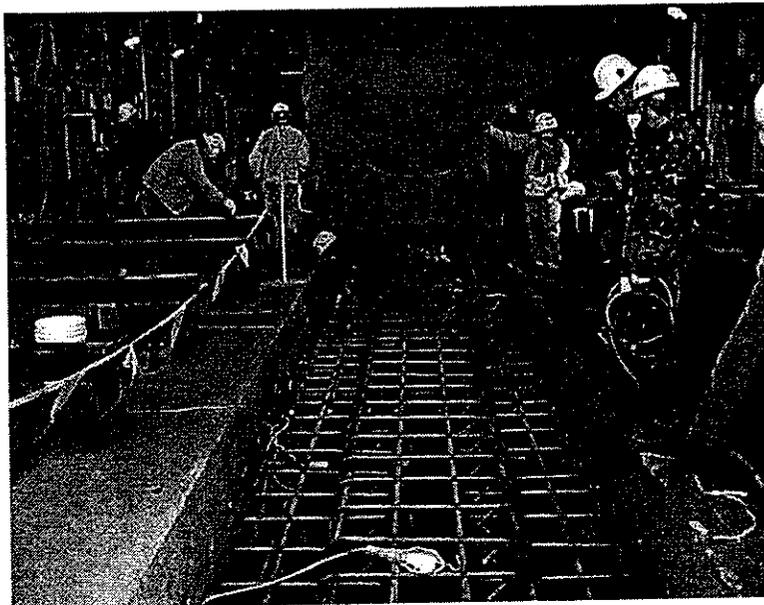
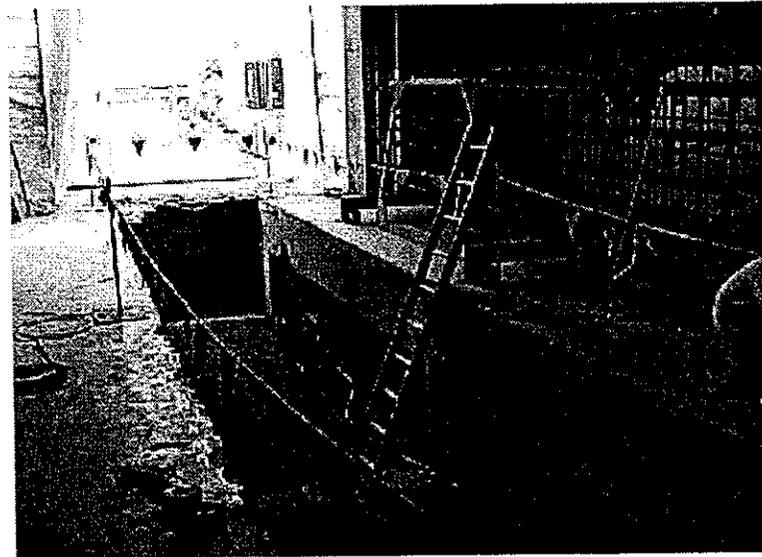
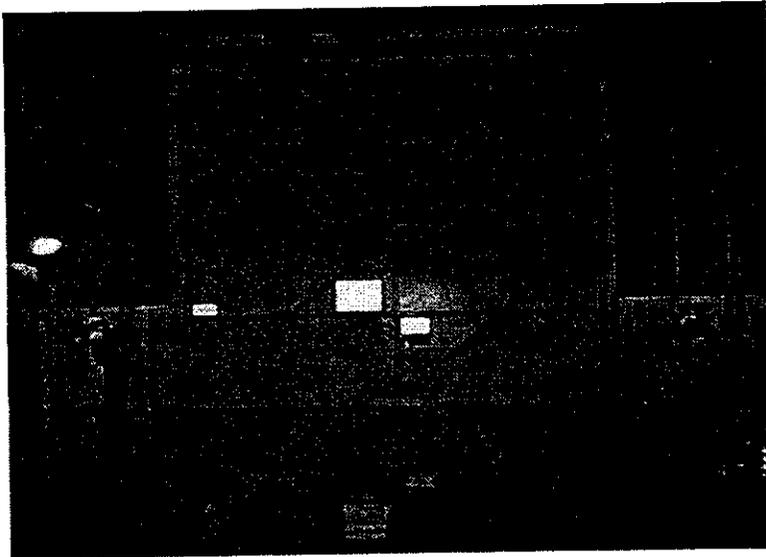
(continued)



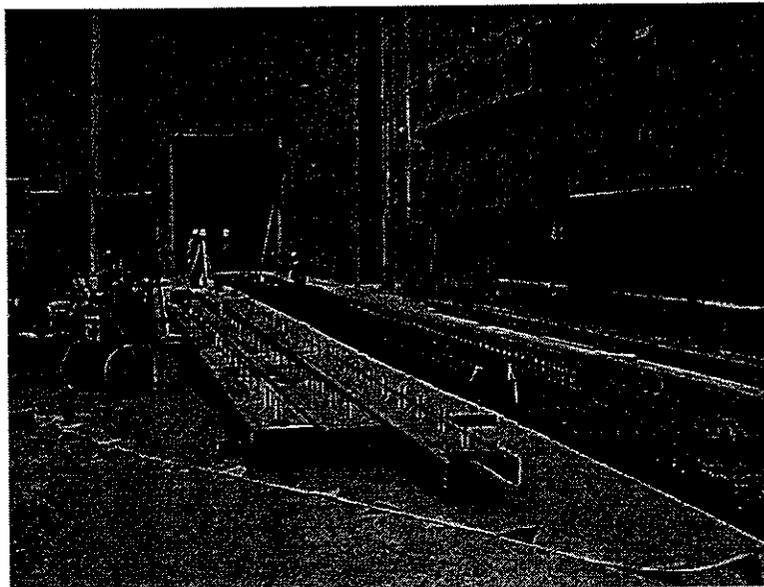
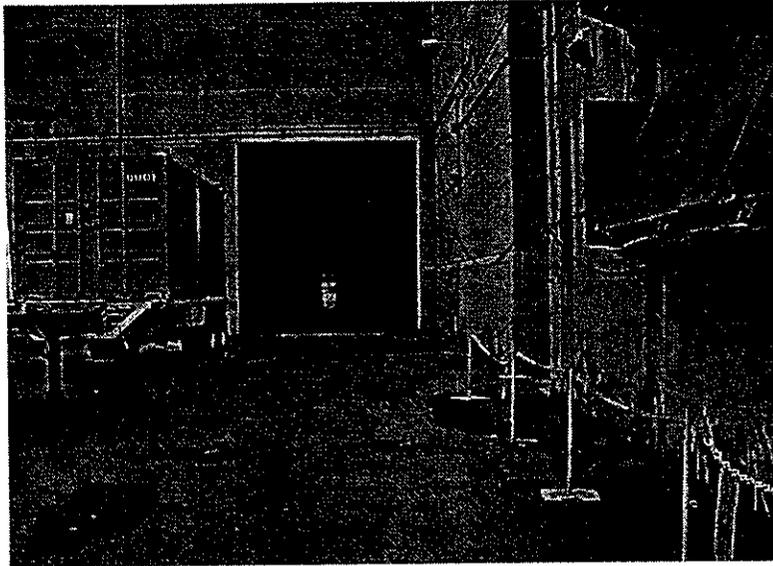
Work Scope Status - Design and Construction

	DCN	Construction
• Railroad Bay	Complete	03/12/02 (C)
• Railroad Bay Egress	Complete	07/03/02 (C)
• Work Platform	Complete	01/15/03 (IP)
• Cask Pit Stands	Complete	09/23/02 (IP)
• ISFSI Storage Pad	Complete	03/14/03 (IP)
• Transport Roadway	Complete	10/15/02 (IP)
• Auxiliary Bldg Crane Upgrade	09/06/02 (IP)	11/01/02 (IP)
• Electrical Conduit & Grounding	Complete	03/14/03 (IP)
• Security Lighting	Complete	03/14/03 (IP)

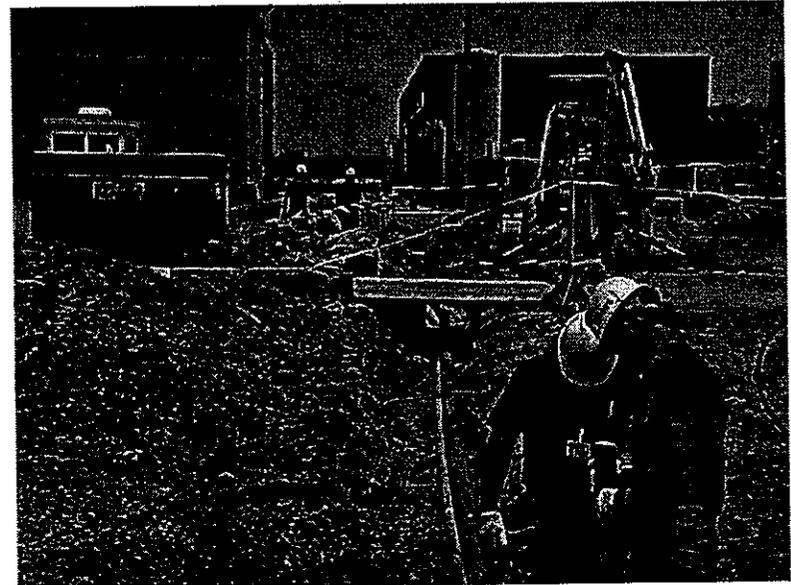
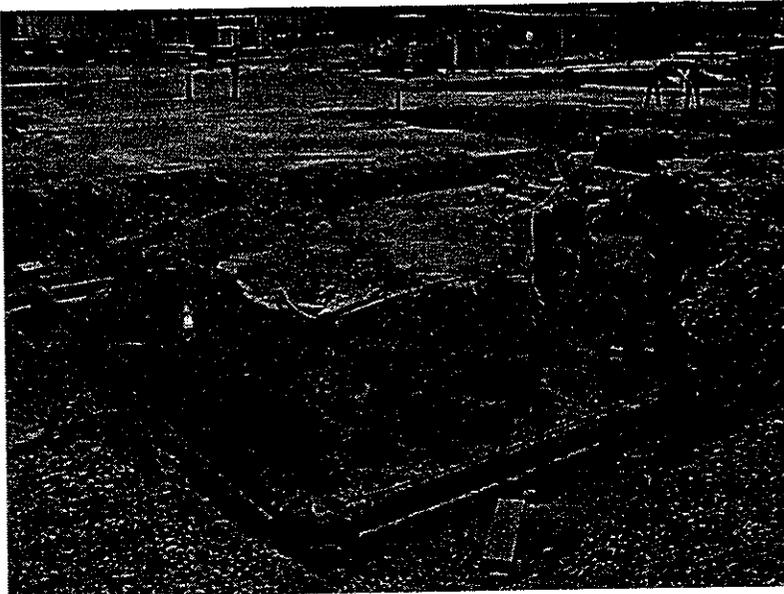
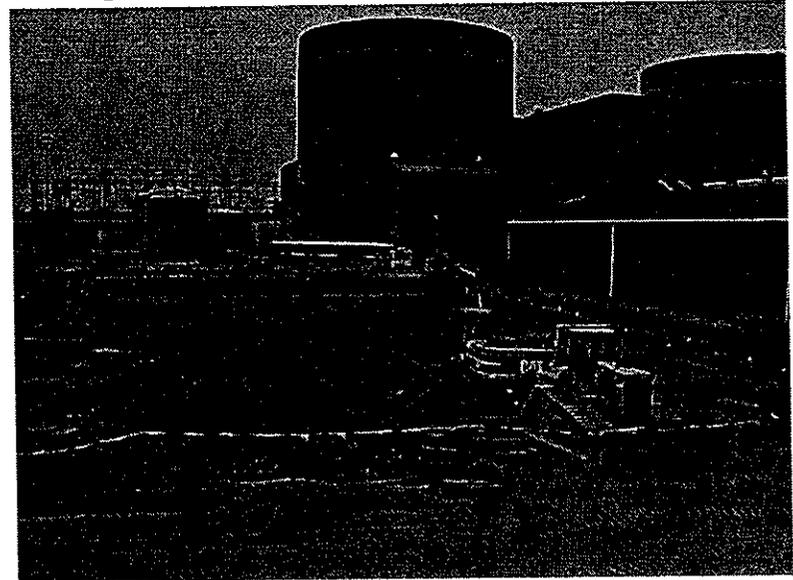
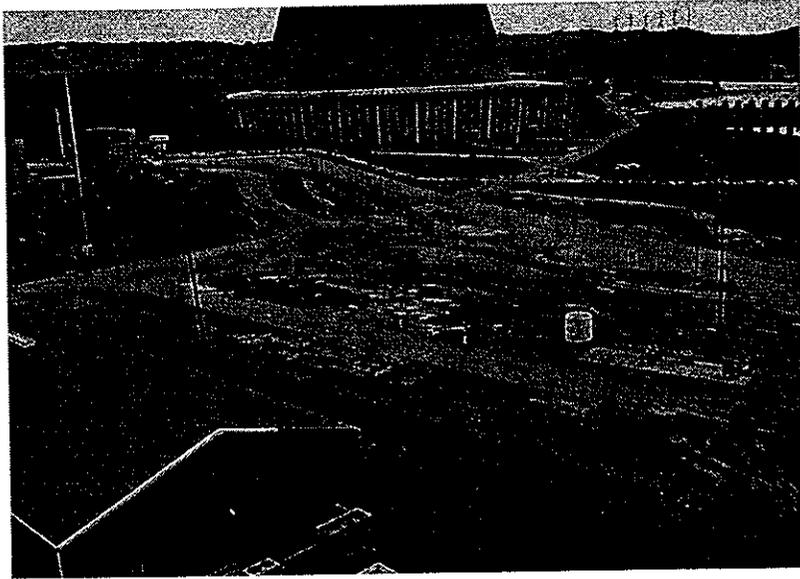
Work Scope Status - Design and Construction



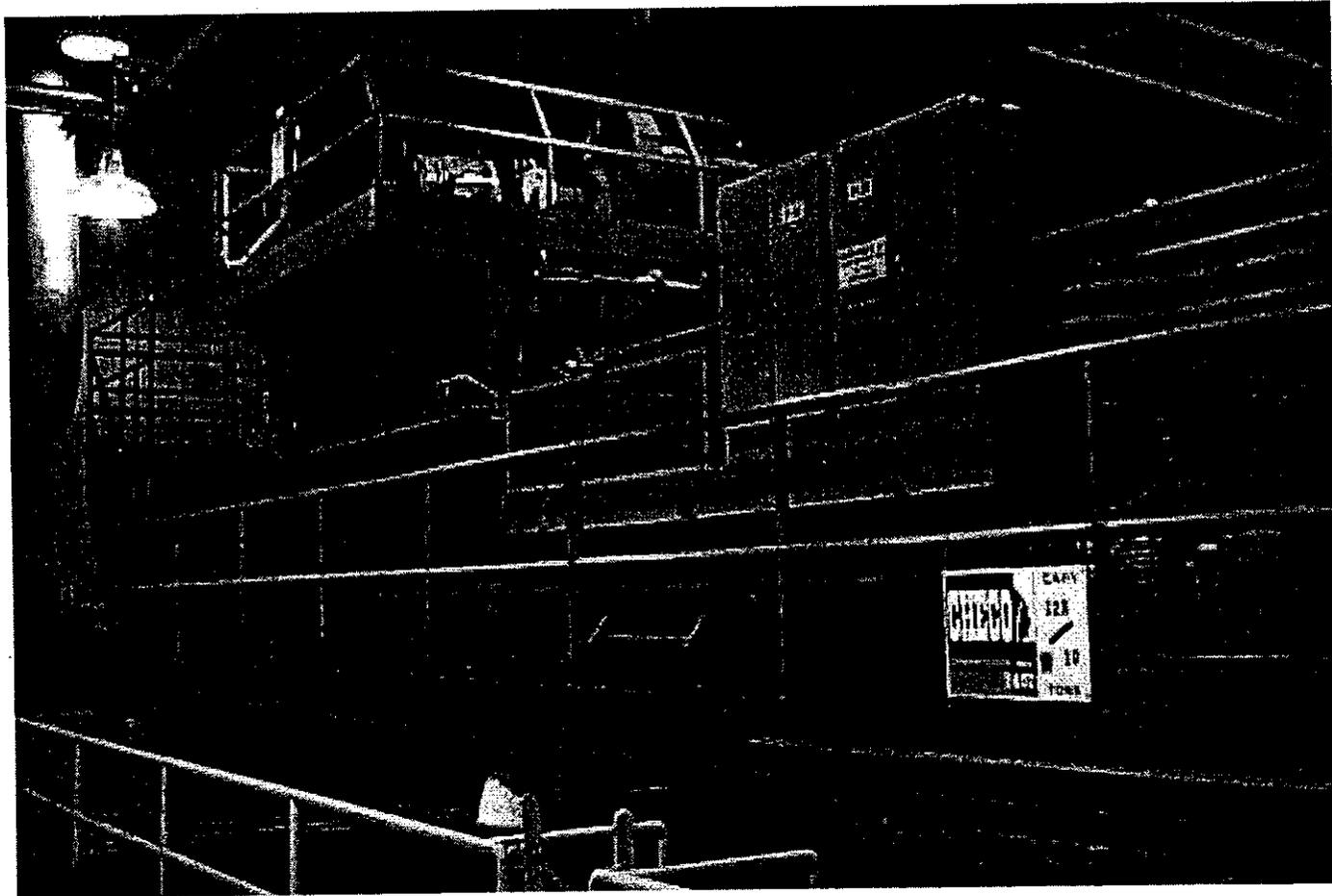
Work Scope Status - Design and Construction



Work Scope Status - Design and Construction



Work Scope Status - Design and Construction

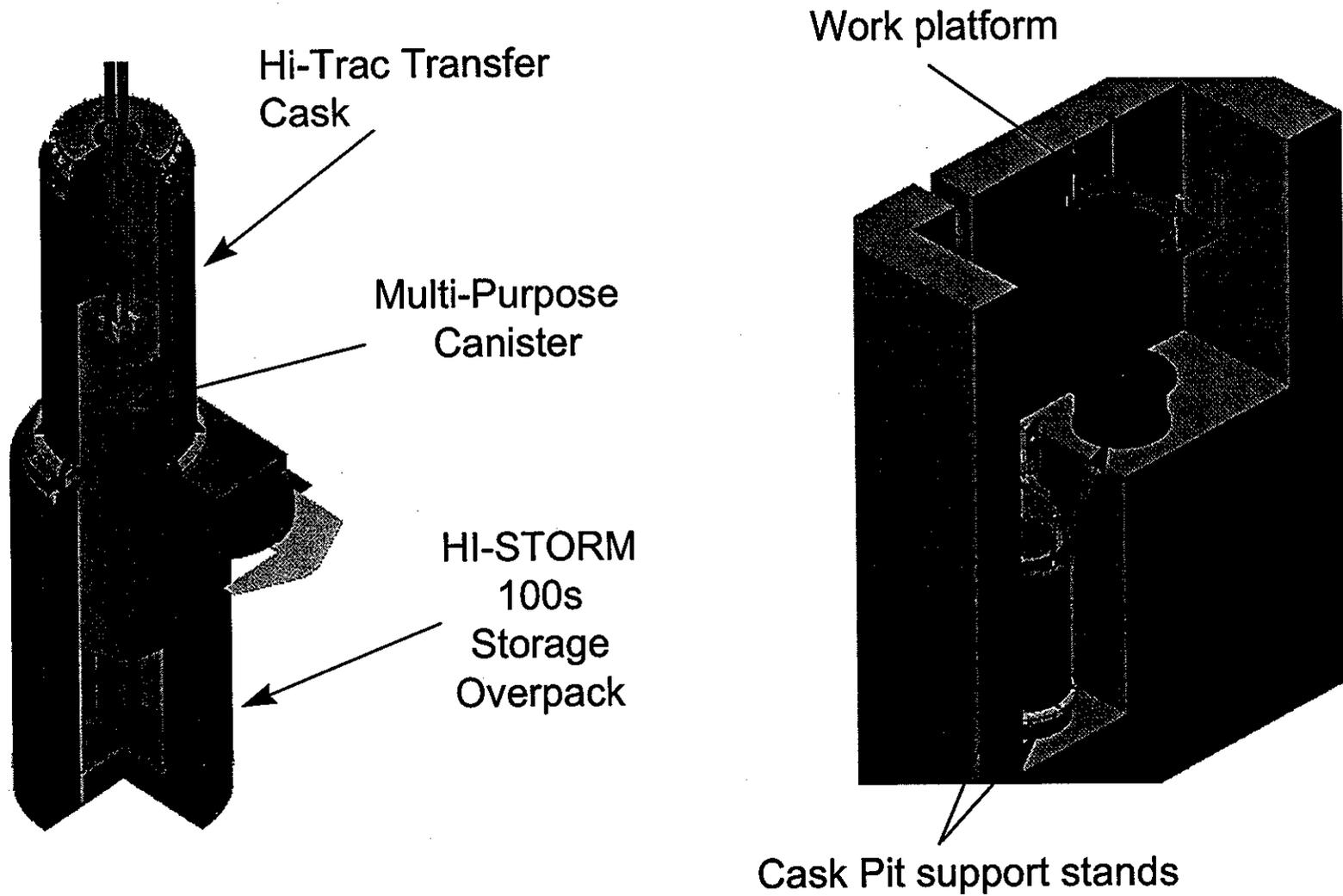


Auxiliary Building Crane Upgrade

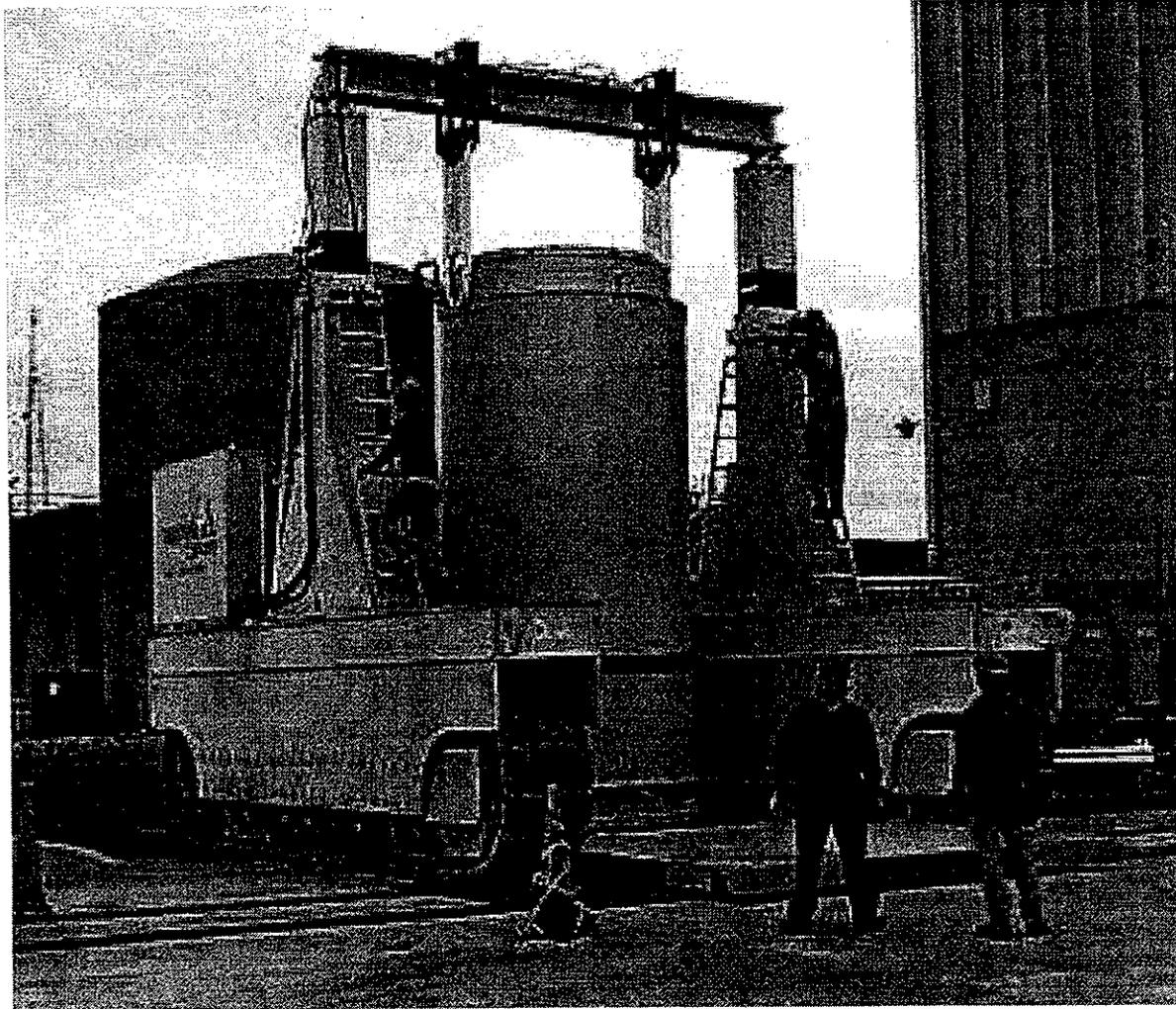
Work Scope Status - Fabrication and Delivery of Storage and Transportation Equipment

	Start	Delivery
• Work Platform	09/15/02	01/20/03
• Cask Support Stands	06/24/02	09/30/02
• (1 st) Multi Purpose Canisters	01/27/03	06/10/03
• Hi -Trac Transfer Cask	12/02/02	06/13/03
• (1 st) Storage Overpacks	03/03/03	06/25/03
• Cask Transporter	08/30/02	07/24/03
• Low Profile Transporter	03/01/03	07/29/03
• Ancillary Equipment	01/01/03	07/29/03
<ul style="list-style-type: none"> – Hi-Trac Lift Yoke, Welding Machine, Vacuum Drying Equipment, Helium Backfill System, and Hydrostatic Test System 		

Work Scope Status - Storage Equipment



Work Scope Status - Transport Equipment



Typical Cask and Low Profile Transporter

Work Scope Status

Administrative Processes and Procedures

	Start	Complete
• Internal Process Revisions	05/2002	06/2003
• O & M Procedures Development	09/2002	02/2003
• Training Program Development	02/2003	05/2003
• Personnel Training	07/2003	09/2003
• Readiness Reviews	09/2003	12/2003
• 10 CFR 72.212 Evaluations	08/2001	03/2004
• NRC Inspections and Demonstrations	TBD	

Work Scope Status

Administrative Processes and Procedures

- **Quality Assurance Requirements**
 - Revise Nuclear Quality Assurance Plan
- **Revise Radiological Emergency Plan**
- **Site Security Plan**
 - Revise implementing procedure
- **Records Requirements**
 - Define QA Records and retention requirements
- **Procedure Control Process**
 - Revise procedures controlling administration of site technical procedures

Work Scope Status

Administrative Processes and Procedures

- **Licensing Processes**
 - Revise reporting requirements
 - Develop new procedure to control cask certificate of compliance and cask SAR updates
- **Engineering Processes**
 - Revise plant modifications and engineering change control program
 - Revise qualification-list and UNID control
 - Develop new procedure to address 10 CFR 72.48 change control requirements
- **Maintenance and Operations Procedures**
 - Review and revise existing procedures as appropriate

Work Scope Status

Administrative Processes and Procedures

- Develop O&M Procedures and Training Program for Loading, Sealing and Transporting
 - RFP for procedures and training program developed and proposals received
 - Evaluations in progress
 - Award contract in late August
 - Benefit of “Lessons Learned” from other utilities

Work Scope Status - Readiness Review

- On-Going Self-Assessments
- Perform Dry-Runs of Loading, Sealing, Transporting and Storing to Verify:
 - Equipment operation
 - Site procedures
 - Personnel qualifications
 - Personnel and equipment safety
- Independent Review of Dry-Runs (Peer Reviews)

Project Risks

Risks

- Storage Equipment Fabrication and Delivery Schedule
- Soil Structure Interaction Methodology and Changing NRC Requirements
- Potential Changes to Site Security

Countermeasures

- Working closely with Holtec to establish and maintain the schedule and quality
- Increased TVA Engineering and Licensing oversight
- Working closely with Site Security and Licensing to monitor rulemaking activities for potential security changes

Oversight Activities

- **Dedicated Quality Manager**
 - Working on both SQN and BFN ISFSI Projects
- **Quality Oversight Plan**
 - Developed, reviewed and concurred-with by the ISFSI Project Team and TVA's Nuclear Assurance Organization
 - Oversight Plan objectives
 - Ensure Holtec, US Tool & Die, and TVA Nuclear organizations understand and effectively implement the QA attributes related to 10 CFR 72
 - Ensure industry lessons-learned are incorporated into the TVA programs
 - Identify vendor and TVA quality issues early
- **Assessments of Holtec, US Tool & Die and SQN Site Activities**
- **TVAN will provide an onsite QC Inspector at US Tool & Die**

Oversight Activities

- Participated in 2 audits of Holtec with Entergy and NUPIC
- Assisted in the formation of Holtec Users QA Group (HUQAG)
- Led the first joint utility surveillance of Holtec by the new HUQAG
- On-site NA organization provide additional oversight of site activities
- On going surveillances of US Tool & Die based on work in progress
- On-site self-assessments/readiness assessments to ensure program adequacy

Licensing Activities

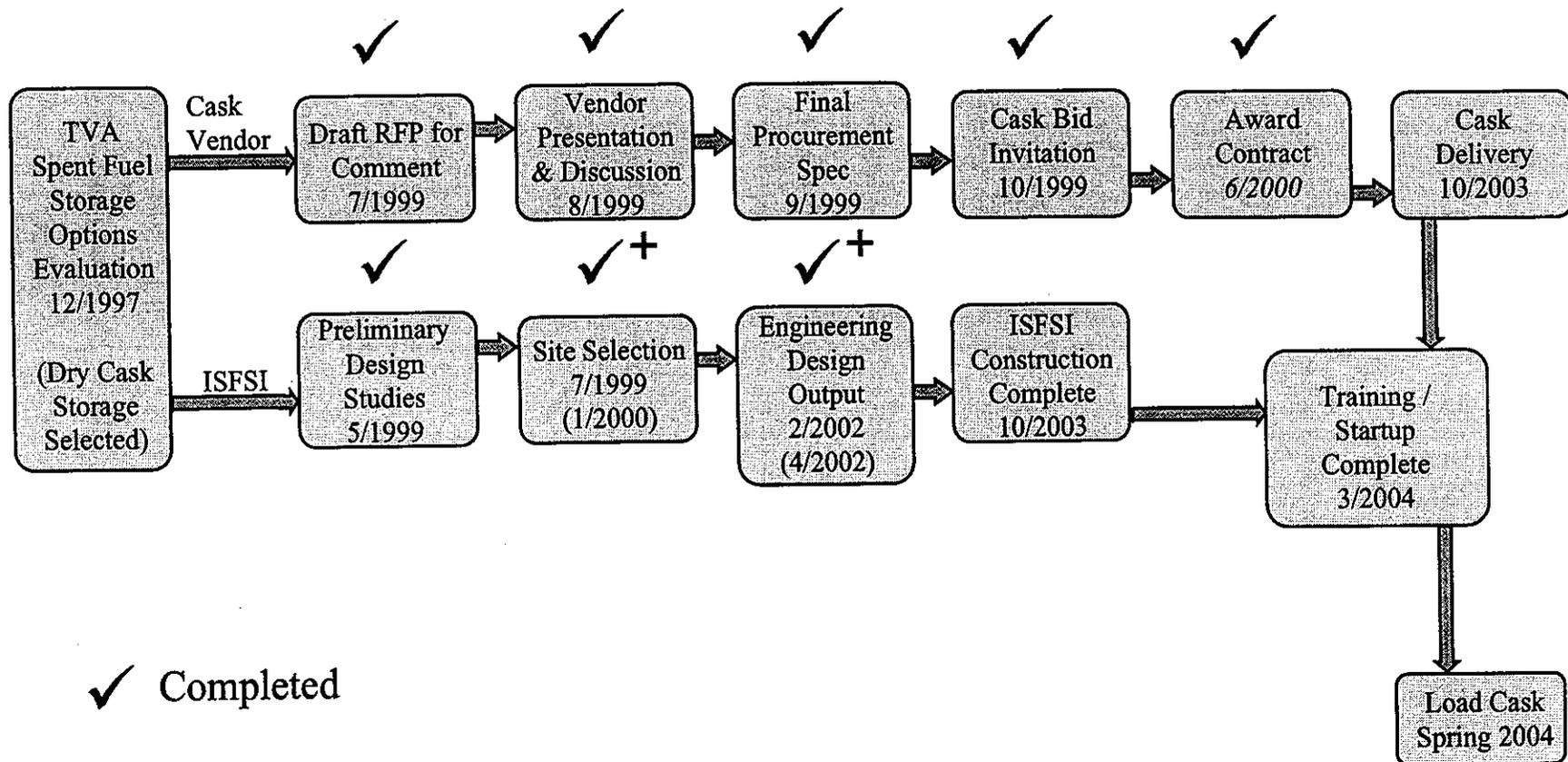
- NRC ISFSI Inspections
 - Inspection of pad design adequacy prior to concrete pours
 - Preoperational and Operational ISFSI Dry-Runs
 - 10 CFR 72.212 Evaluation Report
 - 10 CFR 72.48 Evaluations
- Submit 90-Day General License Notification to Support Spring 2004 Operation

NRC Review Considerations

- TVA will be revising the Radiological Emergency Plan
 - Submit to NRC
- TVA is reviewing the Security Plan and submitting to NRC, as appropriate
- TVA appreciates NRC efforts towards a timely review and approval of Amendment 1 to HI-STORM 100 Certificate of Compliance 1014
- NRC approval of LAR 2 to HI-STORM 100 CoC 1014
 - Critical element for SQN is update to the MPCs thermal rating
 - Holtec submitted for NRC review on March 4, 2002
 - TVA requests NRC approval by Spring 2003

Project Overview

- Project Schedule Previously Presented to NRC on June 29, 1999, August 23, 2000, and October 11, 2001



Summary

- ISFSI Project is on Schedule
- NRC Inspections and Dry-Runs to be Scheduled