Docket No. 50-213
B16187

Attachment 3

Haddam Neck Plant

Configuration Management Project

Description Of Activities

February 6, 1997

Connecticut Yankee CMP Decommissioning

ACCIDENT ANALYSIS

GRPI

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Date

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Date

Revision 0

Accident Analysis
GRPI

Goals:

The goal of this effort is to revise the UFSAR for the accidents which are applicable to decommissioning activities and to the Spent Fuel Pool Island.

Roles:

The following groups, as shown in Table 1, will participate in the definition and calculation of the applicable accidents, and in the revision of the UFSAR.

The roles and responsibilities for personnel associated with the tasks are as follows:

- The Director of Engineering will appoint one person to monitor all the accident analysis tasks to completion.
- The "P" Group department head will appoint a task leader and support personnel for each task.
- The "P" task leader will be responsible for preparation, coordination, and issuance of the task deliverable.
- The "R" Group department head will appoint a reviewer for the task.
- The reviewer of the task will be responsible for review and comment on the task deliverable, and for dispositioning all comments to the mutual acceptance of the task leader and task reviewer.

Process:

The following steps are those considered necessary to produce the accident analyses which are applicable to decommissioning and the spent fuel island.

1. Decommissioning

    A. Release of Surface Contamination

    - Define the equipment which will be removed from the site
    - Determine whether or not the equipment will be decontaminated
    - Determine by health physics surveys the radioactive isotopes that are adhering to the surfaces of the equipment

- Perform a calculation of the amount of radioactivity that, if released, would yield the maximum allowable site boundary dose, and the maximum allowable worker dose.
- Prior to lifting the equipment with adhering radioactivity above the maximum limit, develop protective measures to reduce potential doses due to a drop accident (e.g., wrapping, enclosure with filtration, etc.)

B. Liquid Radwaste Failure

- Determine the liquid radwaste and resin transfer systems that will be utilized.
- Calculate site boundary dose due to the radioactive isotopes that may be released due to a radwaste/resin system failure. See Reference 1.

2. Spent Fuel Island

a. Define the accidents which are applicable during operation of the spent fuel island. The accidents have been identified in Reference 1 and are in the following categories:

- Design Basis Accidents
- External Hazards
- Internal Hazards
- Anticipated Operational Occurrences
- Beyond Design Basis Accidents

b. Identify the safety related functions of systems, structures, and components (SSCs). See Reference 2.

c. Determine the regulatory requirements and commitments made with respect to the accident mitigating features of the SSCs. See Reference 3.

The tasks to be performed for each accident category are as follows:

- Design Basis Accidents

Prepare accident analyses for the design basis accidents, with and without taking credit for mitigating features. For radiological accident analyses, calculate worst case off-site and on-site doses.

Revise Section 15 of the UFSAR to address the design basis accidents.

- External Hazards

  Evaluate the capability of structures, systems, and components to withstand the effects of external hazards.

  Revise Sections 2 and 3 of the UFSAR to address the external hazards.

- Internal Hazards

  Evaluate the capability of systems, structures, and components to withstand the effects of the internal hazards. An input required for this task is a list of the buildings, systems and components which will be operational to support the Spent Fuel Island. This list is required to determine whether or not the effects of pipe whip, jet impingement and flooding due to pipe breaks need to be considered.

  Revise Sections 3, 9 and 10 of the UFSAR to address the internal hazards, as applicable.

- Anticipated Operational Occurrences

  Evaluate the capability of the Spent Fuel Island to withstand anticipated operational occurrences.

  Revise the UFSAR to address these occurrences. The sections which will require a revision will most likely be the sections which describe the affected system (e.g., failure effects table).

- Beyond Design Basis Accidents

  Evaluate the capability of the Spent Fuel Island to withstand accidents which are beyond the design basis, but which have been previously evaluated during the operation of the plant. These accidents are considered part of severe accident management such as Emergency Plan response.

  The evaluations of these accidents will not be addressed in the UFSAR revision for the Spent Fuel Island.

Interpersonal Relations:

The following interpersonal relationship guideline should be used to improve efficiency of the project and prevent duplication of efforts.

- Personnel in the groups shown in the table in this GRPI will perform as indicated. The preparers shall maintain an open line of communication with other groups who have an interest, or who can provide expertise, in the task.

Interfaces with Other GRPIs:

The accident analysis tasks as outlined in this GRPI can be accomplished successfully with the following inputs and outputs from/to other GRPIs.

Inputs Required From:

- Nuclear Island Design Specification GRPI (for identification of SSCs)
- Post-Shutdown Decommissioning Activities Report (PSDAR) GRPI (for identification of decontamination source terms and liquid radwaste systems).

Outputs Submitted To:

- Emergency Plan GRPI (for radiological accident consequences and beyond design basis accidents)
- UFSAR GRPI (for revisions to the UFSAR)
- Environmental Assessment (for revisions to Environmental Impact Statement)

References:

1. DECY 96-1210, CY Definition of Accidents for Mode Defueled, dated December 4, 1966.
2. DECY 96-1213, Definition of Safety Related Functions for Mode Defueled, dated December 17, 1996.
3. DECY XX-XXXX, Applicability of the NRC General Design Criteria to Mode Defueled (later).

Table 1 -- Groups Responsible for Accident Analysis Tasks

Group	TASK	Definition of Accidents Related to Decomm/Decon Only	Definition of Accidents Related to Spent Fuel Island	Prepare Accident Analyses (Radiological)	Prepare Accident Analyses (Thermal/Hydraulic)	Prepare Draft UFSAR Write-up	Revise UFSAR
Design		P	P		R		
Radiation Assessment		R	R	P		P	
Safety Integration and Analysis			R		P	P	
Systems Eng.		R	R	R	R	R	
Operations		R	R	R	R	R	
Health Physics		R	R	R	R	R	
Licensing		R	R	R	R	R	P

P = Lead Group Responsible for Preparation and Approval of the Task
R = Group Responsible for Review of the Task