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United States Nuclear Regulatory Commission
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Washington, D.C. 20555

Attention: Mr. John Hickman, Project Manager
Decommissioning Directorate
Division of Waste Management
and Environmental Protection
Office of Nuclear Material and Safeguards

Reference: License No. DPR-3 (Docket No. 50-29)

Subject: 10CFR50.59 Evaluation Biennial Summary Report for 2003 / 2004

In accordance with 10CFR50.59(d)(2), Yankee Atomic Electric Company (YAEC) herewith submits the enclosed 10CFR50.59 Evaluation Biennial Summary Report for 2003 and 2004. The report briefly describes the facility changes, tests, and experiments implemented at the Yankee Nuclear Power Station (YNPS) without prior NRC approval as allowed under the provisions of 10CFR50.59.

Should you have any questions regarding this submittal, please contact the undersigned at (413) 424-2300.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


Jack D. Rollins
Regulatory Affairs Manager

Enclosure: 10CFR50.59 Evaluation Biennial Summary Report for 2003 / 2004

cc: Mr. R. Bellamy, USNRC, Region I
Mr. J. Kottan, USNRC, Region I Inspector

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YANKEE ATOMIC ELECTRIC COMPANY

YANKEE NUCLEAR POWER STATION

(DOCKET NO. 50-29)

10CFR50.59 EVALUATION BIENNIAL SUMMARY REPORT FOR 2003 / 2004

10CFR50.59 EVALUATION BIENNIAL SUMMARY REPORT FOR 2003 / 2004

TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE</u>
Table of Contents	1
A. Evaluation No. 03-01, Biennial Update of the FSAR for June 2003	2
B. Evaluation No. 03-02 (Rev. 0 and 1), YNPS Demolition Phase I and Phase II (Outside RCA) DCR	3
C. Evaluation No. 03-03 (Rev.0, 1, and 2), YNPS Demolition Phase IA and Phase II (RCA) DCR	3

10CFR50.59 Evaluation Biennial Summary Report for 2003 / 2004

A. Evaluation No. 03-01, Biennial Update of the FSAR for June 2003

An update to the YNPS FSAR was performed in accordance with the requirements of 10CFR50.7(e)(4). Pursuant to this regulation, a revised YNPS FSAR must be submitted to the NRC.

This evaluation was performed in support of the 2003 biennial FSAR update. The majority of the changes that comprise the FSAR update are classified into the following categories:

- Changes that reflect the implementation of Amendment 157 to DPR-3.
- Changes that reflect the completion of the pool to pad transfer of all spent fuel.
- Administrative changes that clarify and/or update existing information.
- Changes to facilitate decommissioning and dismantlement (e.g., removal of the requirement to be able to isolate the Vapor Container, or not requiring filtering and monitoring via the Primary Vent Stack for all decommissioning and dismantlement activities).

Changes to the FSAR resulting from conforming changes associated with Amendment 157 are changes that have already been reviewed by the NRC. Consequently, these changes do not require a 10CFR50.59 evaluation as part of the biennial update process.

The changes that constitute the second and third bullets above are classified as changes that meet the criteria specified in NEI 96-07, Revision 1, Section 4.1.3 for UFSAR changes where 10CFR50.59 need not be applied. As such, these FSAR update changes need not be subjected to the 10CFR50.59 evaluation process.

Therefore, this evaluation addresses only the changes associated with the Vapor Container isolation requirements, removal of the fuel handling design basis accident, transition to no longer using the Primary Vent Stack once no longer required by the ODCM, and the ability to use explosives in support of demolition activities.

This evaluation demonstrates that the June 2003 YNPS FSAR update changes conform to existing license requirements, do not pose undue risk to the health and safety of the public, and do not require review and approval by the NRC prior to implementation.

B. Evaluation No. 03-02, (Rev. 0 and 1), YNPS Demolition Phase I and Phase II (Outside RCA) Design Change Record (DCR)

This DCR covers activities outside the Radiation Control Area (RCA) including:

- Systems, structures, and components (SSC) turnover
- Environmental abatement of all plant structures and areas and decontamination of localized areas in the Turbine Building and Administration Building
- Above and below grade demolition of the Service Building (outside of the RCA), Service Building Annex, Turbine Building (including Control Room, Switchgear Room, and Pump Room), Administration Building, Stores Warehouse, and Screenwell House
- Relocation of the RCA Control Point and Associated Facilities
- The handling, classification, storage, packaging, monitoring, disposal, and documentation of associated hazardous waste, radiological contaminated waste, and mixed waste.
- Phase II demolition of specified subsurface structures including portions of the Circulating Water Intake and Discharge Structures, including the intake pipe

The work performed by this DCR is part of the overall decommissioning of YNPS as described in the FSAR. The activities being performed will have no impact on the spent fuel that has been transferred to dry storage at the ISFSI. All SSCs affected by this change are NNS. Existing FSAR analyses bound all work that will be performed. NRC approval is not required prior to implementation.

C. Evaluation No. 03-03, (Rev. 0, 1, and 2), YNPS Demolition Phase IA and Phase II (RCA) Design Change Record (DCR)

This DCR covers activities within the RCA including:

- ~~SSC turnover and the above and below grade demolition of the Primary Auxiliary Building, Primary Vent Stack, Primary Vent Stack Monitoring House, PCA Warehouse, PCA Storage Buildings 1 and 2, Waste Disposal Building, Compactor Building, Waste Water Evaporator, Vapor Container, Fuel Transfer Enclosure (FTE), Spent Fuel Building, Turbine Building (use of explosives), Safe Shutdown Building, Waste Tank Moat Area, Ion Exchange Pit, Diesel Fire Pump / Fire Water Tank, Service Building (portions in RCA), Yard Area Crane and Support Structure, Fuel Oil Transfer House, VC Access/Elevator Tower, Waste Transfer Pump Pit, Fuel Transfer Pit, Fuel Transfer Chute, Storage Tanks (TK-39 and 81)~~
- The handling, classification, storage, packaging, monitoring, disposal, and documentation of all radiological contaminated waste and mixed waste
- Phase II demolition of specified subsurface structures

The controlled and limited use of explosives is included in the demolition methods utilized in this DCR. FSAR Section 200.3.3 (h) requires a specific safety review for use of explosives. This evaluation is limited to the use of explosives for demolition of the Turbine Building only.

Existing plant ventilation and effluent monitoring systems will be removed during this phase of demolition. Analyses have been performed that demonstrate that a significant radiological source term will no longer exist on site such that effluent releases associated with the remaining demolition activities cannot exceed off-site dose limits. Prior to the removal of the remaining effluent systems (ventilation, monitors, vent stack), the ODCM will be revised to provide alternate means of quantifying effluent source terms and modeling assumptions needed to project off-site doses from plant effluents. The revision will include the addition of requirements for surveys (dose rate and/or contamination) of surface areas to be demolished and airborne monitoring during demolition.

The work performed by this DCR is part of the overall decommissioning of YNPS as described in the FSAR. The activities being performed will have no impact on the spent fuel that has been transferred to dry storage at the ISFSI. All SSCs affected by this change are NNS. Existing FSAR analyses bound all work that will be performed. NRC approval is not required prior to implementation.