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Subject: 10CFR72.48 Biennial Summary Report for 2001/2002

Enclosed is the Yankee Atomic Electric Company (YAEC) 10CFR72.48 Biennial Summary Report for 2001 and 2002. This report summarizes those evaluations which received a YAEC Independent Safety Review through 2002 and is submitted in accordance with 10CFR72.48(d)(2). These evaluations, which supported equipment fabrication, were completed prior to the April 5, 2001 rule change that, in part, allowed certificate holders to perform evaluations pursuant to 10CFR72.48(c)(2).

We trust this information is satisfactory; however, if you have any questions, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

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YANKEE ATOMIC ELECTRIC COMPANY

YANKEE NUCLEAR POWER STATION

(DOCKET NO. 50-29)

(DOCKET NO. 72-31)

10CFR72.48 BIENNIAL SUMMARY REPORT FOR 2001/2002

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Evaluation 00-01

02/27/01

This evaluation addresses minor design changes and clarifications to the NAC-MPC Transfer Adapter Plate as shown on the License drawing (FSAR Drawing No. 455-859) to facilitate fabrication. As a result of these minor changes/clarifications, the final configuration and design capabilities of the Transfer Adapter Plate are unchanged. The proposed changes do not affect or introduce new assumptions to the NAC-MPC FSAR accident analyses, methodology or conclusions. The design function of the transfer adapter assembly is unchanged.

Evaluation 00-03

02/27/01

This evaluation addresses minor design change to the NAC-MPC Transfer Adapter Plate groove depth tolerances as shown on the License drawing (FSAR Drawing No. 455-859) to make the groove depth tolerance consistent with the tolerances of the as-supplied plate. As a result of this minor change, the final configuration and design capabilities of the Transfer Adapter Plate are unchanged. The proposed change does not affect the assumptions to the NAC-MPC FSAR accident analyses, methodology or conclusions. The proposed change does not affect the design or design function of the transfer adapter plate.

Evaluation 00-04

02/27/01

This evaluation addresses a series of minor design changes and clarifications to the NAC-MPC Transfer Cask as shown on License drawing (FSAR Drawing No. 455-860) in order to facilitate fabrication and inspection requirements. The proposed changes do not affect the Transfer Cask functional capabilities of providing shielding and the ability to lift the loaded TSC. The proposed changes to the Transfer Cask do not affect the NAC-MPC FSAR assumptions, methodologies or conclusions.

Evaluation 00-06

02/27/01

This evaluation addresses a design change which corrects an omission of a design detail that was part of the original design. Specifically, the design change adds handling points (tapped holes) to FSAR Drawing No. 455-860, Item 14, the Transfer Cask assembly retaining ring. These tapped holes facilitate fabrication and assembly and do not serve any other function. The proposed changes do not affect the Transfer Cask functional capabilities of providing shielding or the ability

to lift the loaded TSC. The proposed changes do not affect the NAC-MPC FSAR assumptions, methodologies or conclusions. The original design structural capability is maintained.

Evaluation 00-07

03/28/01

This evaluation addresses a design change which corrects an omission of a design detail that was part of the original design. Specifically, the design change adds handling points (tapped holes) to FSAR Drawing No. 455-860, Item 14, the Transfer Cask (TFR) assembly retaining ring. These tapped holes facilitate fabrication and assembly and do not serve any other function. The proposed changes do not affect the Transfer Cask functional capabilities nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The proposed change facilitates handling and assembly of the transfer cask and does not affect the operational use of the TFR. The structural capability of the TFR is maintained.

Evaluation 00-12

02/27/01

This evaluation addresses minor design changes which add two threaded holes in the Vertical Concrete Cask (VCC) and a positioning hex nut to the weldment top flange as shown on FSAR Drawing No. 455-861. These changes support fabrication by allowing for the proper placement and alignment of the vent weldment prior to VCC concrete placement. This change does not affect the final form, fit and function of the VCC nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The proposed changes do not degrade the VCC's functional capability to withstand the challenges imposed by the NAC-MPC FSAR Chapter 11 postulated events. The shielding and decay heat removal characteristics of the VCC are unchanged.

Evaluation 00-13

02/27/01

This evaluation addresses minor changes to support fabrication of the Vertical Concrete Cask (VCC) as shown on FSAR Drawing No. 455-862. The changes provide for minor editorial updates, correction of material specifications for items 11, and 12 and defines the acceptable installation instructions for item 8 (insulation). In addition, FSAR section 1.2.1.2 requires revision to delete reference to "BISCO" fire block. The proposed editorial changes do not affect the final configuration of the as-poured VCC nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The minor editorial updates do not degrade the VCC's ability to withstand the challenges imposed by the postulated events in NAC-MPC FSAR Chapter 11. The shielding and decay heat removal characteristics of the VCC are unchanged.

Evaluation 00-15

02/27/01

This evaluation addresses minor editorial changes associated with the VCC shield plug as shown on FSAR Drawing No. 455-864. Specifically, these changes consist of replacing a specific reference to an Ameron PSX 738 Siloxane coating with a general reference. This change also adds a new note regarding the neutron shield, corrects a weld callout and the BOM for Item #3, and corrects the VCC shield plug angle tolerance. These editorial changes support fabrication and do not affect the final form, fit and function of the VCC shield plug nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The final as-poured configuration of the VCC is unchanged. The proposed changes do not degrade the VCC's ability to withstand the challenges imposed by the postulated events in NAC-MPC FSAR Chapter 11. The shielding and decay heat removal characteristics of the VCC are unchanged.

Evaluation 00-17

04/04/01

This evaluation addresses changes to the mounting hardware for the inlet and outlet screens associated with the VCC as shown on FSAR Drawing No. 455-866. Specifically, these changes consist of updating graphics, revision to certain BOM items and the addition or revision of certain drawing notes in order to aid in the installation of the screens. The screen material and flow area have not been modified. The changes to the VCC screen mounting hardware neither affect the final form, fit and function of the VCC screens nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The final as-poured configuration of the VCC is unchanged. The proposed changes do not degrade the VCC's ability to withstand the challenges imposed by the postulated events in NAC-MPC FSAR Chapter 11. The shielding and decay heat removal characteristics of the VCC are unchanged.

Evaluation 00-26 Rev. 1

04/04/01

This evaluation addresses reducing a 5/16 inch groove weld for the TSC lid support ring to 1/8 inch to facilitate fabrication by reducing weld distortion as shown on FSAR Drawings 455-871 and 455-872. Structural analysis demonstrates that the 1/8 inch groove weld will assure that the as-designed structural capability is maintained. The use of this 1/8 inch groove weld neither affects the confinement or shielding characteristics of the TSC nor the challenges to barrier integrity imposed by postulated design basis events. The proposed weld change does not affect the final form, fit and function of the TSC nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The proposed change does not adversely affect the confinement and shielding characteristics of the TSC.

Evaluation 00-28

02/27/01

This evaluation addresses minor changes relating to weld symbols, angle tolerances, notes and certain details in support of the fabrication of the TSC fuel tubes as shown on FSAR Drawing No. 455-881. The design function and capability of the TSC fuel tubes to withstand the challenges imposed by the postulated design basis accidents are unchanged. These changes improve ease of fabrication and have no impact on occupational exposure. The minor fuel tube changes associated with the TSC do not alter plant operations associated with loading or TSC transfer to the VCC. The proposed change does not affect the assumptions to the NAC-MPC FSAR accident analyses, methodology or conclusions.

Evaluation 00-30

04/05/01

This evaluation addresses a modification to a TSC fuel tube to flange weld detail and a change to laser welding the boron cladding to the fuel tubes in lieu of the 1/8" spot weld on 8" centers as shown on FSAR Drawing 455-881. Structural analysis demonstrates that the reduced weld sizes are adequate to assure that the as-designed structural capability is maintained. The modified welds neither affect the confinement or shielding characteristics of the TSC nor the challenges to barrier integrity imposed by postulated design basis events. The proposed weld changes do not affect the final form, fit and function of the TSC nor the NAC-MPC FSAR assumptions, methodologies or conclusions. The reduced weld sizes do not affect the functional ability of the TSC to withstand the challenges imposed by the off-normal events and postulated accidents included in NAC-MPC FSAR Chapter 11.

Evaluation 00-52

03/21/01

This evaluation addresses transfer adapter assembly drawing change requests as well as the incorporation of an existing note relating to the coating system onto the BOM. In addition, this activity adds a note pertaining to seal welding open seams associated with items 3, 4, and 5. Finally, this activity rotates the lifting lugs (item 7) to line up with the center point of assemblies 98 and 99. The subject design changes appear on FSAR Drawing No. 455-859. The proposed changes do not affect the form, fit or function of the adapter plate assembly. None of the FSAR Chapter 11 events involve the adapter plate assembly. The structural and shielding characteristics of the adapter plate assembly are not affected by the proposed changes. The proposed changes do not degrade the functional capabilities of other storage system components from the challenges imposed by the off-normal and accident events postulated in the NAC-MPC FSAR. The proposed changes do not affect the assumptions to the NAC-MPC FSAR accident analyses, methodology or conclusions.

Evaluation 00-53

03/15/01

This evaluation addresses transfer cask (TFR) drawing change requests as well as the incorporation of existing notes relating to the coating system, a spent fuel pool compatible lubricant, and the use of commercial grade lead wool onto the BOM. In addition, this activity adds the steel/stamp engraving information, which already existed on the design drawing. The subject drawing changes appear on FSAR Drawing No. 455-860. The proposed changes do not affect the form, fit or function of the TFR. The final configuration and shielding efficacy of the TFR is unaffected by the proposed changes. The addition of the steel/stamp engraving information, which already existed on the design drawing, does not degrade the functional capabilities of other storage system components from meeting the challenges imposed by the off-normal and accident events postulated in the NAC-MPC FSAR. The proposed changes do not affect the assumptions to the NAC-MPC FSAR accident analyses, methodology or conclusions.

Evaluation 00-54 Rev. 1

04/04/01

This evaluation addresses the addition of the inlet and outlet screen details associated with the VCC. In addition some delta notes have been added to aid in fabrication. Finally this change also editorially corrects some BOM and item descriptions. The subject drawing changes appear on FSAR Drawing No. 455-866. The screen material and flow area have not been modified. The addition of the inlet and outlet screen details, as well as the BOM and item description corrections, neither affects the final form, fit and function of the VCC screens nor the NAC-MPC FSAR assumptions, methodologies or conclusions.

Evaluation 00-55

02/13/01

This evaluation addresses a modification to the four corners of each boron cladding sheet contained in the TSC. This change will allow an egress path for water that could potentially leak into the enclosed volume containing the boron and potentially pressurize the volume resulting in distortion of the cladding and fuel tube. This design modification appears on FSAR Drawing No. 455-881. The shielding function of the TSC is not affected by this change although the draining and drying times could be increased. The proposed cutting of the cladding corners does not affect the design function of the TSC fuel tubes nor the NAC-MPC FSAR assumptions, methodologies or conclusions. Exposure of the boron to the fuel pool's borated water may increase the amount of hydrogen generated in the TSC, however, operational controls will assure that any hydrogen is vented prior to welding.

Evaluation 00-56

02/27/01

This evaluation addresses a minor drawing deviation affecting the relative flatness of the VCC liner base plate. This out of tolerance condition only exists at the outer periphery for a distance ranging from 8" to 13" from an outer diameter of 71".

This VCC liner base plate is shown on FSAR Drawing 455-861. This nonconformance is geometry based and not a reduction in material thickness. As such, shielding efficacy is unchanged. The base weldment, as configured, will meet all design, form, fit and functional requirements. The decay heat removal capabilities (via internal air pathways) of the VCC are unchanged due to this deviation. The base plate dimensional deviations do not affect the NAC-MPC FSAR accident analyses, methodology or conclusions. This nonconformance was deemed acceptable.

Evaluation 00-60

03/15/01

This evaluation addresses minor changes that facilitate fabrication of the shielded transfer cask based on lessons learned during fabrication of the Maine Yankee TFR. These changes, as shown on FSAR Drawing 455-860, include identifying the distance from the TFR top plate to the lead brick as a reference dimension in lieu of an actual dimension, providing an option to place identification of the TFR on a stainless steel nameplate, adding dowel pins to stop the TFR doors at their midpoint, adding chamfers to the TFR doors and rails, and increasing the hole diameter of the TFR door lock bolts. These proposed changes do not affect the form, fit or function of the TFR. These proposed changes do not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The proposed changes have no effect on the structural or shielding characteristics of the TFR. The final configuration and design function of the TFR is unchanged.

Evaluation 00-62

03/15/01

This evaluation addresses a drawing deviation, as shown on FSAR Drawing 455-860, where the transfer cask (TFR) door lock clearance holes were drilled oversized (0.667" dia. vs. 0.53" dia.) on two rails. The hole's only function is to provide clearance for the door lock bolt. As such, the oversize door lock clearance holes do not affect the form, fit, or function of the TFR. The structural and shielding characteristics of the TFR are unchanged by this minor deviation. These proposed changes do not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The proposed changes have no effect on the structural or shielding characteristics of the TFR. The final configuration and design function of the TFR is unchanged. The deviation was accepted "as-is".

Evaluation 00-63

02/27/01

This evaluation addresses a fabrication deviation where the VCC liner has localized areas of wall thinning as a result of shell rolling, forming and grinding of clamp marks. The wall thinning of all areas involved is less than 0.05 inches. The areas involved are very small when compared to the overall shell surface area. The slight wall thinning of the VCC liner does not significantly affect the shielding characteristics of the VCC as the increase in dose rates at the VCC concrete surface will be negligible. The VCC liner shell tolerances are identified on FSAR Drawing 455-861. The VCC liner shell thinning does not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The proposed changes have no affect on the structural characteristics of the VCC. The final configuration and design function of the VCC is unchanged. The VCC liner wall thickness deviation was accepted "as-is".

Evaluation 00-64

03/15/01

This evaluation addresses a fabrication deviation where two of the VCC liner outlet slots (at 90 and 270 degrees) were cut oversized by up to 0.12 inches above the drawing dimension of 4.9" +/- 0.1". Actual widths are 5.120" and 5.077" respectively. The deviation extends for the full length of each outlet slot (42.9"). The VCC liner shell tolerances are identified on FSAR Drawing 455-861. The final configuration and shielding characteristics of the VCC is unchanged. The VCC liner outlet slots dimensional deviations do not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The VCC liner outlet slots dimensional deviation does not alter the flow area of the VCC cooling outlets. The VCC liner outlet slots dimensional deviations were accepted "as-is".

Evaluation 00-65

03/15/01

This evaluation addresses minor dimensional deviations during fabrication of the shielded transfer cask bottom plate (see FSAR Drawing 455-860). The TFR bottom plate dimensions of 84.50" +/- 0.06" and 78.50" +/- 0.06" were fabricated below the low limit by up to 0.16" and 0.06" respectively. These dimensional variances do not neither affect the TFR's fit, form or function. These dimensional variances will not affect the assembly of the TFR's mating parts which are welded. These proposed changes do not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The bottom plate dimensional variances have no affect on the structural or shielding characteristics of the TFR. The final configuration and design function of the TFR is unchanged. The dimensional variances of the TFR bottom plate were accepted "as-is".

Evaluation 00-66

02/27/01

This evaluation addresses a fabrication nonconformity associated with a slight over-machining of one side of one hole in the bottom weldment of the Transportable Storage Canister (TSC) as shown on FSAR Drawing No. 455-891. There is no significant change in the final configuration of the TSC. These proposed changes do not affect the form, fit or function of the TFR. The slight increase in the bottom weldment hole size does not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The design function of the TFR is unchanged. The over-machining of the TSC bottom weldment hole size beyond tolerance was accepted "as-is".

Evaluation 00-68

04/04/01

This evaluation addresses the addition of general notes that allow minor grinding of the transfer adapter base plate and rails, as shown on FSAR Drawing No. 455-859, to remove any interference and provide transition chamfers with the interface points for the transfer cask and doors. The minor grinding to allow for proper clearance and operation of components does not affect the design or functionality of the transfer adapter base plate or transfer cask. The addition of the general notes to allow minor grinding of the base plate and rails does not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR.

Evaluation 00-69

03/28/01

This evaluation addresses the addition revision of notes associated with the manufacture of the NAC-MPC Vertical Concrete Cask (VCC) nameplate. The changes allow for the use of thinner gauge steel and mounting holes to facilitate installation. These changes also provide for certain customer and cask identification information to be added to the nameplate. The subject drawing changes appear on FSAR Drawing No. 455-856. The proposed changes do not affect the form, fit or function of the VCC. The proposed nameplate changes do not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The final configuration and shielding efficacy of the VCC is unaffected by the nameplate changes.

This evaluation addresses minor dimensional deviations during fabrication of one of the four VCC Liner jack base components, as shown on FSAR Drawing No. 455-861, being ground below specified tolerances during fabrication. The width of the jack base at one location varies from 5.91" to 5.58", undersize by as much as 0.22". The location of the jack gusset at one location also varies from 0.52" to 0.79" which is above tolerance by as much as 0.19". The primary load path for the jacking adjustment screw is unaffected by these tolerance deviations. The tolerance deviations do not result in a reduction in material thickness. The final configuration and shielding efficacy of the VCC is unaffected by these deviations. These tolerance deviations do not neither affect the VCC's fit, form or function. All primary load path interfaces are maintained to drawing requirements. The proposed changes do not affect the analyses, methodology, or conclusions as detailed in Chapter 11 of the NAC-MPC FSAR. The tolerance deviations of the VCC liner jack base weldment were accepted "as-is".