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PSEG
Nuclear LLC

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

LOSS OF COOLANT ACCIDENT
PEAK CLAD TEMPERATURE ANNUAL REPORT
SALEM GENERATING STATION, UNIT NOS. 1 AND 2
FACILITY OPERATING LICENSE DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311

In accordance with 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors," paragraph (a)(3)(ii), PSEG Nuclear LLC (PSEG) is submitting the annual report of the Emergency Core Cooling System (ECCS) Evaluation Model changes and errors for Salem Units 1 and 2.

Attachment 1, "Peak Cladding Temperature Rack-Up Sheets," provides updated information regarding the Peak Cladding Temperature for the limiting small break and large break loss-of-coolant accident (LOCA) evaluations for Salem Units 1 and 2.

Attachment 2, "Assessment Notes," contains a detailed description for each change or error reported.

If you have any questions concerning this report, please contact Tom Ross at (856) 339 - 1222.

Sincerely,

Thomas P. Joyce

Thomas P. Joyce
Site Vice President
Salem Station Units 1 and 2

A001

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Attachment 1

SALEM UNITS 1 AND 2

Docket Nos. 50-272 and 50-311

10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors"

Report of the Emergency Core Cooling System Evaluation Model Changes and Errors Assessments

Peak Cladding Temperature Rack-Up Sheets

Peak Cladding Temperature Rack-Up Sheets

PLANT NAME: Salem Unit 1
ECCS EVALUATION MODEL: Small Break Loss of Coolant Accident (SBLOCA)
REPORT REVISION DATE: 6/30/2005
CURRENT OPERATING CYCLE: 17*

ANALYSIS OF RECORD (AOR)

Evaluation Model: NOTRUMP
Calculation: Westinghouse PSE-93-568, March 1993
Fuel: RFA and V5H 17 x 17
Limiting Fuel Type: RFA 17x17
Heat Flux Hot Channel Factor (F_Q) = 2.4
Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}$) = 1.65
Steam Generator Tube Plugging = 10%
Limiting Break Size: 2 inches

Notes: Zr-4 and ZIRLO Clad Fuel

Reference Peak Cladding Temperature (PCT) PCT = 1580°F

MARGIN ALLOCATION

A. PRIOR LOSS OF COOLANT ACCIDENT (LOCA) MODEL ASSESSMENTS

10 CFR 50.46 report dated October 29, 1993 (See Note 1)	ΔPCT = -13°F
10 CFR 50.46 report dated July 27, 1994 (See Note 2)	ΔPCT = -16°F
10 CFR 50.46 report dated December 8, 1994 (See Note 3)	ΔPCT = +109°F
10 CFR 50.46 report dated January 18, 1995 (See Note 4)	ΔPCT = 0°F
10 CFR 50.46 report dated December 7, 1995 (See Note 5)	ΔPCT = 0°F
10 CFR 50.46 report dated August 2, 1996 (See Note 6)	ΔPCT = -8°F
10 CFR 50.46 report dated July 11, 1997 (See Note 7)	ΔPCT = 0°F
10 CFR 50.46 report dated June 10, 1998 (See Note 8)	ΔPCT = 0°F
10 CFR 50.46 report dated April 27, 1999 (See Note 9)	ΔPCT = 0°F
10 CFR 50.46 report dated October 18, 1999 (See Note 10)	ΔPCT = +10°F
10 CFR 50.46 report dated September 21, 2000 (See Note 11)	ΔPCT = +27°F
10 CFR 50.46 report dated August 27, 2001 (See Note 12)	ΔPCT = 0°F
10 CFR 50.46 report dated August 27, 2002 (See Note 13)	ΔPCT = 0°F
10 CFR 50.46 report dated August 08, 2003 (See Note 14)	ΔPCT = 0°F
10 CFR 50.46 report dated July 29, 2004 (See Note 15)	ΔPCT = +40°F

NET PCT **PCT = 1729°F**

B. CURRENT LOCA MODEL ASSESSMENTS

Reactor Coolant Pump Reference Conditions (See Note 16)	ΔPCT = 0°F
General Code Maintenance (NOTRUMP) (See Note 17)	ΔPCT = 0°F

NET PCT **PCT = 1729°F**

* Note that Salem Unit 1, Cycle 18 projected startup date is October 2005.

Peak Cladding Temperature Rack-Up Sheets

PLANT NAME: Salem Unit 1
ECCS EVALUATION MODEL: Large Break Loss of Coolant Accident (LBLOCA)
REPORT REVISION DATE: 6/30/2005
CURRENT OPERATING CYCLE: 17*

ANALYSIS OF RECORD (AOR)

Evaluation Model: BASH
Calculation: Westinghouse 93-PSE-G-0080, September 1993
Fuel: RFA and V5H 17 x 17
Limiting Fuel Type: RFA 17x17
Heat Flux Hot Channel Factor (F_Q) = 2.4
Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}$) = 1.65
Steam Generator Tube Plugging = 10%
Limiting Break Size: Cd = 0.4

Notes: Zr-4 and ZIRLO Clad Fuel

Reference Peak Cladding Temperature (PCT) PCT = 1978°F

MARGIN ALLOCATION

A. PRIOR LOSS OF COOLANT ACCIDENT (LOCA) MODEL ASSESSMENTS

10 CFR 50.46 report dated January 18, 1995 (See Note 4)	ΔPCT = +36°F
10 CFR 50.46 report dated December 7, 1995 (See Note 5)	ΔPCT = 0°F
10 CFR 50.46 report dated August 2, 1996 (See Note 6)	ΔPCT = 0°F
10 CFR 50.46 report dated July 11, 1997 (See Note 7)	ΔPCT = +15°F
10 CFR 50.46 report dated June 10, 1998 (See Note 8)	ΔPCT = 0°F
10 CFR 50.46 report dated April 27, 1999 (See Note 9)	ΔPCT = 0°F
10 CFR 50.46 report dated October 18, 1999 (See Note 10)	ΔPCT = +12°F
10 CFR 50.46 report dated September 21, 2000 (See Note 11)	ΔPCT = +9°F
10 CFR 50.46 report dated August 27, 2001 (See Note 12)	ΔPCT = +6°F
10 CFR 50.46 report dated August 27, 2002 (See Note 13)	ΔPCT = +20°F
10 CFR 50.46 report dated August 08, 2003 (See Note 14)	ΔPCT = +7°F
10 CFR 50.46 report dated July 29, 2004 (See Note 15)	ΔPCT = +5°F

NET PCT **PCT = 2088°F**

B. CURRENT LOCA MODEL ASSESSMENTS

Reactor Coolant Pump Reference Conditions (See Note 16)	ΔPCT = 0°F
General Code Maintenance (BASH) (See Note 17)	ΔPCT = 0°F
LOCBART Fluid Property Logic (See Note 18)	ΔPCT = 0°F
Steam Generator Inlet/Outlet Plenum Flow Areas (See Note 19)	ΔPCT = 0°F
Initial Containment Relative Humidity Assumption (See Note 20)	ΔPCT = 0°F

NET PCT **PCT = 2088°F**

* Note that Salem Unit 1, Cycle 18 projected startup date is October 2005.

Peak Cladding Temperature Rack-Up Sheets

PLANT NAME: Salem Unit 2
ECCS EVALUATION MODEL: Small Break Loss of Coolant Accident (SBLOCA)
REPORT REVISION DATE: 6/30/2005
CURRENT OPERATING CYCLE: 15

ANALYSIS OF RECORD (AOR)

Evaluation Model: NOTRUMP
Calculation: Westinghouse PSE-93-568, March 1993
Fuel: RFA 17 x 17
Limiting Fuel Type: RFA 17x17
Heat Flux Hot Channel Factor (F_Q) = 2.4
Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}$) = 1.65
Steam Generator Tube Plugging = 25%
Limiting Break Size: 2 inches

Notes: ZIRLO Clad Fuel

Reference Peak Cladding Temperature (PCT) PCT = 1580°F

MARGIN ALLOCATION

A. PRIOR LOSS OF COOLANT ACCIDENT (LOCA) MODEL ASSESSMENTS

10 CFR 50.46 report dated October 29, 1993 (See Note 1)	ΔPCT = -13°F
10 CFR 50.46 report dated July 27, 1994 (See Note 2)	ΔPCT = -16°F
10 CFR 50.46 report dated December 8, 1994 (See Note 3)	ΔPCT = +109°F
10 CFR 50.46 report dated January 18, 1995 (See Note 4)	ΔPCT = 0°F
10 CFR 50.46 report dated December 7, 1995 (See Note 5)	ΔPCT = 0°F
10 CFR 50.46 report dated August 2, 1996 (See Note 6)	ΔPCT = -8°F
10 CFR 50.46 report dated July 11, 1997 (See Note 7)	ΔPCT = 0°F
10 CFR 50.46 report dated June 10, 1998 (See Note 8)	ΔPCT = 0°F
10 CFR 50.46 report dated April 27, 1999 (See Note 9)	ΔPCT = +10°F
10 CFR 50.46 report dated October 18, 1999 (See Note 10)	ΔPCT = 0°F
10 CFR 50.46 report dated September 21, 2000 (See Note 11)	ΔPCT = +27°F
10 CFR 50.46 report dated August 27, 2001 (See Note 12)	ΔPCT = 0°F
10 CFR 50.46 report dated August 27, 2002 (See Note 13)	ΔPCT = 0°F
10 CFR 50.46 report dated August 08, 2003 (See Note 14)	ΔPCT = 0°F
10 CFR 50.46 report dated July 29, 2004 (See Note 15)	ΔPCT = +40°F

NET PCT **PCT = 1729°F**

B. CURRENT LOCA MODEL ASSESSMENTS

Reactor Coolant Pump Reference Conditions (See Note 16)	ΔPCT = 0°F
General Code Maintenance (NOTRUMP) (See Note 17)	ΔPCT = 0°F

NET PCT **PCT = 1729°F**

Peak Cladding Temperature Rack-Up Sheets

PLANT NAME: Salem Unit 2
ECCS EVALUATION MODEL: Large Break Loss of Coolant Accident (LBLOCA)
REPORT REVISION DATE: 6/30/2005
CURRENT OPERATING CYCLE: 15

ANALYSIS OF RECORD (AOR)

Evaluation Model: BASH
Calculation: Westinghouse 93-PSE-G-0080, September 1993
Fuel: RFA 17 x 17
Limiting Fuel Type: RFA 17x17
Heat Flux Hot Channel Factor (F_Q) = 2.4
Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}$) = 1.65
Steam Generator Tube Plugging = 25%
Limiting Break Size: Cd = 0.4

Notes: ZIRLO Clad Fuel

Reference Peak Cladding Temperature (PCT) PCT = 1978°F

MARGIN ALLOCATION

A. PRIOR LOSS OF COOLANT ACCIDENT (LOCA) MODEL ASSESSMENTS

10 CFR 50.46 report dated January 18, 1995 (See Note 4)	ΔPCT = +36°F
10 CFR 50.46 report dated December 7, 1995 (See Note 5)	ΔPCT = 0°F
10 CFR 50.46 report dated August 2, 1996 (See Note 6)	ΔPCT = 0°F
10 CFR 50.46 report dated July 11, 1997 (See Note 7)	ΔPCT = +15°F
10 CFR 50.46 report dated June 10, 1998 (See Note 8)	ΔPCT = 0°F
10 CFR 50.46 report dated April 27, 1999 (See Note 9)	ΔPCT = +24°F
10 CFR 50.46 report dated October 18, 1999 (See Note 10)	ΔPCT = -12°F
10 CFR 50.46 report dated September 21, 2000 (See Note 11)	ΔPCT = +9°F
10 CFR 50.46 report dated August 27, 2001 (See Note 12)	ΔPCT = +6°F
10 CFR 50.46 report dated August 27, 2002 (See Note 13)	ΔPCT = +20°F
10 CFR 50.46 report dated August 08, 2003 (See Note 14)	ΔPCT = +7°F
10 CFR 50.46 report dated July 29, 2004 (See Note 15)	ΔPCT = -45°F

NET PCT **PCT = 2038°F**

B. CURRENT LOCA MODEL ASSESSMENTS

Reactor Coolant Pump Reference Conditions (See Note 16)	ΔPCT = 0°F
General Code Maintenance (BASH) (See Note 17)	ΔPCT = 0°F
LOCBART Fluid Property Logic (See Note 18)	ΔPCT = 0°F
Steam Generator Inlet/Outlet Plenum Flow Areas (See Note 19)	ΔPCT = 0°F
Initial Containment Relative Humidity Assumption (See Note 20)	ΔPCT = 0°F

NET PCT **PCT = 2038°F**

Attachment 2

SALEM UNITS 1 AND 2

Docket Nos. 50-272 and 50-311

10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors"

Report of the Emergency Core Cooling System Evaluation Model Changes and Errors Assessments

Assessment Notes

Assessment Notes

1. Prior Loss-of-Coolant Accident (LOCA) Model Assessment

The 10 CFR 50.46 report dated October 29, 1993, implemented the current Analysis of Record for the SBLOCA evaluation model (PCT = 1580°F), in support of the Fuel Upgrade / Margin Recovery Program. However, three PCT assessments were also included, resulting in a PCT benefit of -13°F. The first assessment entailed a +150°F penalty that resulted from explicitly modeling safety injection into the broken loop in the NOTRUMP model. The second assessment entailed a -150°F benefit that resulted from the implementation of an improved condensation model. The third assessment entailed a -13°F benefit that resulted from the correction of drift flux flow regime errors.

2. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated July 27, 1994, reported an assessment to the SBLOCA model which resulted in a -16°F PCT benefit. This PCT benefit was a result of corrections made to the reactor vessel and steam generator geometric and mass calculations in the VESCAL subroutine if the LUCIFER code.

3. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated December 8, 1994, reported evaluations for the SBLOCA model due to three errors, for a penalty of +109°F. The first assessment entailed a +85°F PCT penalty that was a result of correcting nodalization and overall fluid conservation errors in the SBLOCTA code and implementing a revised transient fuel rod internal pressure model. The second assessment entailed a -6°F PCT benefit that was a result of error corrections made to the boiling heat transfer regime correlations in NOTRUMP. The third assessment entailed a +30°F PCT penalty as a result of errors affecting the steam line isolation logic in the SBLOCA evaluation model.

4. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated January 18, 1995, reported no changes in the SBLOCA model which caused the PCT to remain unchanged. The current Analysis of Record for the LBLOCA evaluation model (PCT = 1978°F) was implemented in support of the Fuel Upgrade / Margin Recovery Program. However, three PCT assessments were also included, resulting in a PCT penalty of +36°F. The first assessment entailed a +94°F PCT penalty that resulted from the absence of Intermediate Flow Mixers (IFMs) in the core. The second assessment was a PCT benefit of -52°F that resulted from four changes to the LOCBART code; including modifications made to convert the LOCBART code from a Cray to a Unix platform, corrections made to the rod heat-up code, the addition of a new model used to determine zircaloy cladding burst behavior above 1742°F, and the implementation of a revised burst strain limit model for the rod heat-up codes. The third assessment entailed a PCT benefit of -6°F that resulted from corrections made to the LUCIFER code.

5. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated December 7, 1995, reported no changes in the SBLOCA and LBLOCA models for both Salem Units 1 and 2 which caused the PCTs to remain unchanged.

6. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated August 2, 1996, reported no changes in the LBLOCA model which caused the PCT to remain unchanged. The SBLOCA model was assessed a -8°F PCT benefit as a result of three assessments. The first assessment was a +20°F PCT penalty due to an error in the specific enthalpy equation in NOTRUMP. The second assessment was a +10°F PCT penalty due to an error in the Fuel Rod Initialization algorithm of the SBLOCTA code, as well as several changes in the fuel rod creep and strain model. The third assessment was a -38°F PCT benefit as a result of an error in the relative loop seal elevation of the crossover leg.

7. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated July 11, 1997, reported no changes in the SBLOCA model which caused the PCT to remain unchanged. The LBLOCA model was assessed a +15°F PCT penalty as a result of translating the fluid conditions used for subchannel analysis of the fuel rods from one computer code (SATAN) to another computer code (LOCTA).

8. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated June 10, 1998, reported no changes in the SBLOCA and LBLOCA models for both Salem Units 1 and 2 which caused the PCTs to remain unchanged.

9. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated April 27, 1999, reported no changes in the Salem Unit 1 SBLOCA and LBLOCA models which caused the PCTs to remain unchanged. However, unit- and cycle-specific PCT assessments were applied to Salem Unit 2. For the Salem Unit 2 SBLOCA evaluation model, a generic PCT penalty of +10°F was assessed due to the impact of fully enriched annular pellets. For the Salem Unit 2 LBLOCA evaluation model, a partial re-analysis was performed that incorporated the effects of Intermediate Flow Mixers (IFMs), features of the Robust Fuel Assembly (RFA), and other model updates. The cumulative impact of these PCT changes resulted in an increase in the Salem Unit 2 LBLOCA PCT of +24°F.

10. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated October 18, 1999, reported evaluations for the SBLOCA and LBLOCA models for both Salem Units due to three errors. The first error resulted from the use of incorrect geometric data related to the accumulator lines and the pressurizer surge line. The second error was discovered in the length-averaging logic for heat transfer coefficient calculations in the LOCBART code. The third error was found in the Baker-Just metal-water reaction calculation in the LOCBART code. These errors were assessed together on a plant-specific basis and resulted in a -12°F PCT benefit for LBLOCA and no change (0°F) in the PCT for SBLOCA for both Salem Units. Thus, the Salem Unit 2 SBLOCA PCT remained unchanged, while the Salem Unit 2 LBLOCA PCT decreased by -12°F. In addition to the assessment above, further unit- and cycle-specific PCT assessments were applied to Salem Unit 1. For the Salem Unit 1 SBLOCA evaluation model, a generic PCT penalty of +10°F was assessed due to the impact of fully enriched annular pellets. For the Salem Unit 1 LBLOCA evaluation model, a partial re-analysis was performed that incorporated the effects of the Robust Fuel Assembly (RFA) features, Intermediate Flow Mixers (IFMs), and other model updates. In addition, a generic transition core PCT penalty was assessed to account for the effects of mixed fuel types (RFA and V5H) in the core. The cumulative impact of all of these PCT changes resulted in an increase in the Salem Unit 1 LBLOCA PCT of +12°F.

11. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated September 21, 2000, reported evaluations for SBLOCA model changes which resulted in a +27°F PCT increase. This increase consisted of a +14°F PCT assessment due to an error in the feedwater line volume calculation and a +13°F PCT assessment due to the discovery of several closely related errors dealing with mixture level tracking and region depletion errors in NOTRUMP. The LBLOCA model was assessed a +9°F PCT penalty as a result of an error in the LOCBART vapor film flow regime heat transfer correlation.

12. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated August 27, 2001, reported no changes in the SBLOCA model which caused the PCT to remain unchanged. The LBLOCA model was assessed a +6°F PCT penalty as a result of using non-conservative cladding surface emissivity values in LOCBART.

13. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated August 27, 2002, reported no changes in the SBLOCA model which caused the PCT to remain unchanged. The LBLOCA model was assessed a +20°F PCT penalty as a result of using a non-conservative assumption for accumulator water temperature.

14. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated August 8, 2003, reported no changes in the SBLOCA model which caused the PCT to remain unchanged. A partial re-analysis was performed for the LBLOCA transient using the latest BASH-EM code version that incorporated the "LOCBART transient extension method," that ensured adequate termination of the fuel rod cladding temperature and oxidation transients predicted by LOCBART. This partial re-analysis allowed several prior PCT "generic evaluation" assessments (Accumulator Line / Pressurizer Surge Line Data Error, LOCBART Spacer Grid Single Phase Heat Transfer Error, LOCBART Zirc-Water Oxidation Error, LOCBART Vapor Film Flow Regime Heat Transfer Error, LOCBART Cladding Emissivity Error, Changes due to RFA Fuel Features, and Non-Conservative Accumulator Water Temperature Evaluation) to be replaced with a plant-specific analytical estimation. In addition, a +15°F PCT penalty was assessed to the LBLOCA model that resulted from corrections to the LOCBART ZIRLO Cladding Specific Heat Model. As a result of this penalty and the partial re-analysis, the LBLOCA PCT increased by +7°F.

15. Prior LOCA Model Assessment

The 10 CFR 50.46 report dated July 29, 2004, reported a +40°F increase in the PCT of the SBLOCA evaluation model as a result of inconsistency corrections made to the NOTRUMP Bubble Rise and Drift Flux models. The Salem Unit 1 LBLOCA model was assessed a +5°F PCT penalty as a result of the correction of discrepancies in the LOCBART Fluid Property Logic. The Salem Unit 2 LBLOCA model was also assessed this +5°F penalty, in addition to the removal of a +50°F Transition Core Penalty that resulted from operating with a mixed core of V5H and RFA fuel types, for a decrease in the PCT of -45°F.

16. Reactor Coolant Pump Reference Conditions

Various discrepancies were identified in the reference conditions used with the reactor coolant pump homologous curves. The differences were evaluated for impact on current licensing-basis analysis results and will be incorporated into the plant-specific input databases on a forward-fit basis. These changes represent a closely-related group of Non-Discretionary Changes to the BASH and NOTRUMP evaluation models in accordance with Section 4.1.2 of WCAP-13451. The identified discrepancies were evaluated as having a negligible effect on analysis results and will be assigned a 0°F PCT impact.

17. General Code Maintenance (BASH / NOTRUMP)

Various changes in code input and output format have been made to enhance usability and help preclude errors in analyses. This includes both input changes (e.g., more relevant input variables defined and more common input values used as defaults) and input diagnostics designed to preclude unreasonable values from being used, as well as various changes to code output which have no effect on calculated results. In addition, various updates were made to eliminate inactive coding, improve active coding, and enhance commenting, both for enhanced usability and to facilitate code debugging when necessary. These changes are Discretionary Changes that will be implemented on a forward-fit basis in accordance with Section 4.1.1 of WCAP-13451. The nature of these changes leads to an estimated PCT impact of 0°F.

18. LOCBART Fluid Property Logic

Several minor discrepancies related to the LOCBART fluid property logic were discovered and corrected. For example, the routine used to calculate the enthalpy and specific volume of superheated steam was renamed to resolve a naming conflict with a library routine that uses logic to calculate the same parameters. These changes represent a closely-related group of Non-Discretionary Changes in accordance with Section 4.1.2 of WCAP-13451. Representative plant calculations using the LOCBART code generally showed either no effect or a negligible effect on results, which leads to an estimated PCT impact for the Salem Units of 0°F.

19. Steam Generator Inlet/Outlet Plenum Flow Areas

The basis for calculating the steam generator inlet and outlet plenum flow areas used with the SATAN-VI momentum flux model has been redefined as the average area over the plenum height. This change resolves a discrepancy in the original calculation and provides a more appropriate basis for the corresponding flow area terms. This change represents a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451. Calculations using the SATAN-VI code indicated that this change has a negligible effect on the blowdown thermal-hydraulic transient results and will be assigned a 0°F PCT impact.

20. Initial Containment Relative Humidity Assumption

Large break LOCA analyses have historically used maximum initial relative humidity in specifying the initial containment air and steam partial pressures. This assumption is conservative for a given total initial containment pressure, but is non-conservative for a given initial containment air partial pressure. The historical assumption has been revised to reflect this distinction, and the analysis input guidelines have been updated accordingly. This change represents a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451. An evaluation concluded that no PCT assessments are required, leading to an estimated PCT effect of 0°F.