

I. OVERVIEW / SIGNATURES**Facility:** Waterford 3 Electric Station**Document Reviewed:** ER-W3-2004-0478-000-00

The following DRNS will be issued with ER-W3-2004-0478-000-00:

DRN 04-1250 for Calculation 3A2LOU3SGXAN Rev. 0

DRN 04-1408 for Calculation 3A2ANLOU6 Rev. 0

DRN 04-1422 for FSAR Chapter 6 Rev. 13.

System Designator(s)/Description: Steam Generator Subcompartment**Description of Proposed Change:**

ER-W3-2004-0478-000-00 evaluates the change in differential pressure across the walls of the steam generator subcompartment due to the added platforms that were added inside the secondary walls (D-Rings). This ER also evaluates how the added platforms affect the containment fan cooler and associated safety related duct in the containment building due to a change in pressure transients due to the added platforms in the steam generator subcompartments.

The steam generator subcompartment is subject to pressure transients and jet impingement forces caused by the mass and energy releases from postulated high energy pipe ruptures within the steam generator subcompartments. Analysis was made prior to start-up to determine the peak pressure that could be produced by a line break discharging into the subcompartment. The controlling break for the steam generator subcompartment is a circumferential break in the suction leg of the reactor coolant pump which creates a break area of 592 in². This is designated as the subcompartment design basis accident (DBA).

According to FSAR 6.2.5, Combustible Gas Control in Containment, the air handling units (AH-1 3A-SA, 3B-SB, 3C-SA, and 3D-SB) and the associated safety related duct work are also affected by the a pressure transient due a design basis accident of a circumferential break of 592 in.² in the pump suction leg in the steam generator subcompartment.

DRN 04-1408 for Calculation 3A2ANLOU6 Rev. 0 calculated the new differential pressure across the walls of the steam generator to be 35.8 psid for the DBA described. The original calculated maximum differential pressure is 21.9 psid for the same design basis accident. The steam generator subcompartment is conservatively designed for a differential pressure of 55.5 psid. Therefore even though the calculated differential pressure increased to 35.8 psid, the steam generator subcompartment is adequately designed.

According to FSAR 6.2-5 and calculation 3A6LOU3DUWPT Rev. 0, the controlling differential pressure occurs between the fan coolers and their surroundings and the safety related ductwork and its surroundings. The break in the suction leg will cause a pressure surge to travel from the non-safety duct work in the steam generator subcompartment to the ring header non-safety duct to the safety related duct and then to the safety related containment fan coolers. The non safety duct is made such that it is designed to withstand less stresses than the safety related duct and fan coolers. Therefore, even if there is an increase in the pressure in the HVAC duct caused by the platforms in the steam generator subcompartment, the non-safety duct will protect the safety related duct by failing first since it is designed for lesser stresses.

50.59 REVIEW FORM

Page 2 of 11

Check the applicable review(s): (Only the sections indicated must be included in the Review.)

<input type="checkbox"/>	EDITORIAL CHANGE of a Licensing Basis Document	Section I
<input type="checkbox"/>	SCREENING	Sections I and II required
<input type="checkbox"/>	50.59 EVALUATION EXEMPTION	Sections I, II, and III required
<input checked="" type="checkbox"/>	50.59 EVALUATION (#: <u>05-005</u>)	Sections I, II, and IV required

Preparer: Maria Rosa Gutierrez / Entergy Ops Inc. / Design Engr. / *MR Gutierrez* 2-24-05
 Name (print) / Signature / Company / Department / Date

Reviewer: Mike Proglor / Entergy Ops. Inc. / Design Engr. / *Mike Proglor* 2-24-05
 Name (print) / Signature / Company / Department / Date

OSRC: R. A. Dodds III / *R. A. Dodds III* 2/24/2005
 Chairman's Name (print) / Signature / Date
 [Required only for Programmatic Exclusion Screenings and 50.59 Evaluations.]

II. SCREENINGS

A. Licensing Basis Document Review

1. Does the proposed activity impact the facility or a procedure as described in any of the following Licensing Basis Documents?

Operating License	YES	NO	CHANGE # and/or SECTIONS IMPACTED
Operating License	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
TS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
NRC Orders	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>

If "YES", obtain NRC approval prior to implementing the change by initiating an LBD change in accordance with NMM ENS-LI-113. (See Section 5.2[13] for exceptions.)

LBDs controlled under 50.59	YES	NO	CHANGE # (if applicable) and/or SECTIONS IMPACTED
FSAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DRN 04-1422 for Table 6.2-2, Table 6.2-3, Table 6.2-15,
TS Bases	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
Technical Requirements Manual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
Core Operating Limits Report	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
NRC Safety Evaluation Report and supplements for the initial FSAR ¹	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
NRC Safety Evaluations for amendments to the Operating License ¹	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>

If "YES", perform an Exemption Review per Section III OR perform a 50.59 Evaluation per Section IV OR obtain NRC approval prior to implementing the change. If obtaining NRC approval, document the LBD change in Section II.A.5; no further 50.59 review is required. However, the change cannot be implemented until approved by the NRC. AND initiate an LBD change in accordance with NMM ENS-LI-113.

LBDs controlled under other regulations	YES	NO	CHANGE # (if applicable) and/or SECTIONS IMPACTED
Quality Assurance Program Manual ²	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
Emergency Plan ^{2,3}	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
Fire Protection Program ^{3,4} (includes the Fire Hazards Analysis)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>
Offsite Dose Calculations Manual ^{3,4}	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>(Insert change # and/or impacted sections.)</i>

If "YES", evaluate any changes in accordance with the appropriate regulation AND initiate an LBD change in accordance with NMM ENS-LI-113. No further 50.59 review is required.

¹ If "YES," see Section 5.2[5]. No LBD change is required.

² If "YES," notify the responsible department and ensure a 50.54 Evaluation is performed. Attach the 50.54 Review.

³ Changes to the Emergency Plan, Fire Protection Program, and Offsite Dose Calculation Manual must be approved by the OSRC in accordance with NMM OM-119.

⁴ If "YES," evaluate the change in accordance with the requirements of the facility's Operating License Condition or under 50.59, as appropriate.

2. Does the proposed activity involve a test or experiment not described in the FSAR? Yes
 No

If "yes," perform a 50.59 Evaluation per Section IV OR obtain NRC approval prior to implementing the change AND initiate an LBD change in accordance with NMM LI-113. If obtaining NRC approval, document the change in Section II.A.5; no further 50.59 review is required. However, the change cannot be implemented until approved by the NRC.

3. Basis

Explain why the proposed activity does or does not impact the Operating License/Technical Specifications and/or the FSAR and why the proposed activity does or does not involve a new test or experiment not previously described in the FSAR. Discuss other LBDs if impacted. Adequate basis must be provided within the Screening such that a third-party reviewer can reach the same conclusions. Simply stating that the change does not affect TS or the FSAR is not an acceptable basis.

• Operating License:

The Operating License authorizes power operation of Waterford 3. The Operating License states the various regulations and additional conditions that Waterford 3 has met to meet the requirements of the Operating License. None of the license conditions contained in the operating license is impacted by this ER.

• Technical Specifications:

A review of the Technical Specification found no sections that addressed subcompartment pressurization in containment. The technical specifications do not control or specify requirements of the differential pressure across the walls of the steam generator subcompartment, containment fan coolers, or safety related HVAC duct. In addition, the evaluation provided in this ER does not create a system configuration or operating condition such that a Technical Specification or surveillance requirement is no longer adequate. Therefore, the evaluations associated with this ER evaluation do not impact meeting the requirements of any Technical Specification.

• Technical Specification Bases:

The Technical Specifications Bases do not specifically address the steam generator subcompartment. Therefore, this evaluation will have no adverse effect on plant operation since the operation of the plant will not be changed and the initial conditions assumed in the accident analyses will not be invalidated. Therefore, no Technical Bases are impacted by this activity.

• Technical Requirements Manual (TRM):

The TRM does not specifically address the steam generator subcompartments. Therefore, no change to the TRM is required.

• NRC Orders:

A review of the NRC orders did not identify any order that related to subcompartment pressurization in steam generator subcompartment. Waterford 3 has received NRC Orders pertaining to plant security and reactor vessel head inspections. Due to the scope of this ER, this ER does not impact the NRC Orders and the NRC orders do not impact the modifications within the scope of this ER.

• FSAR:

The tables listed in Section II are required to be revised as a result of this ER evaluation. Table 6.2-2, Calculated Values for Containment Parameters, is revised to add the revised calculated differential pressure across the wall of the steam generator subcompartment. The revised calculated differential pressure is increased from 21.9 psid to 35.8 psid. A note is also added to the table giving the original peak differential pressure of the steam generator subcompartment and stating that the current pressure is computed using conservative analysis.

Table 6.2-3, Principal Containment Design Parameters, is revised to show the reduced margin between the calculated and the design steam generator compartment design wall loading. The walls of the steam generator subcompartment remain qualified since analysis has shown that the calculated differential pressure across the walls has not exceeded the design value the walls were designed for; i.e. 55.5 psid.

Table 6.2-15, Steam Generator Subcompartment Relap Input Data, is revised to add a note that the data in the table is the RELAP-3 Mod 68 input data used to compute the original peak calculated value. The note also states figures 6.2-23 thru 6.2-27 correspond to the analysis performed using RELAP-3 Mod 68 computer code.

According to FSAR 6.2.5, Combustible Gas Control in Containment, the air handling units located on elevation -4 and +21 (AH-1 3A-SA, 3B-SB, 3C-SA, and 3D-SB) and the associated safety related duct work are affected by the pressure transient in the steam generator subcompartment. According to calculation 3A6LOU3DUWPT Rev. 3 and the FSAR, the controlling differential pressure occurs between the fan coolers and their surroundings and the safety related ductwork and its surroundings. The differential pressures were also calculated using RELAP 3 Mod 68 Computer Code. The break in the suction leg will cause a pressure surge to travel from the non-safety duct work in the steam generator subcompartment to the ring header non-safety duct to the safety related duct and then to the safety related containment fan coolers. The non safety duct is made such that it is designed to withstand less stresses than the safety related duct and fan coolers. Therefore, even if there is an increase in the pressure in the HVAC duct caused by the platforms in the steam generator subcompartment, the non-safety duct will protect the safety related duct by failing first since it is designed for lesser stresses.

- Core Operating Limits Report:

This evaluation does not impact COLR since it makes no changes in the operation of the plant, does not impact the type of fuel used and does not impact the limits defined in the COLR. Therefore, this ER evaluation will not affect the ability to maintain compliance with any Core Operating Limit.

- NRC Safety Evaluation Reports:

A review of the NRC Safety Evaluation Reports did not identify any SER associated with steam generator subcompartment pressurization. Therefore this ER evaluation does not impact the facility as described in any NRC Safety Evaluation Report (SER).

- Quality Assurance Program Manual:

Entergy Quality Assurance Program Manual (QAPM) is not impacted by this ER evaluation. This evaluation does not affect any commitments contained in the QAPM. Therefore, this ER evaluation does not require a change to the QAPM.

- Emergency Plan:

This ER evaluation does not impact the interaction of Waterford 3 personnel and offsite agencies in response to an emergency. This ER evaluation makes no changes to the Emergency Plan. Therefore, the Emergency Plan is not affected.

- Fire Protection Program

This ER evaluation has no effect on the Fire Protection Program or any potential to affect the Fire Protection Program. No new combustibles are added nor are any existing combustibles added. This ER evaluation does not affect any sprinkler system or fire area. Therefore, no change to the Fire Protection Program is required.

- Offsite Dose Calculation Manual

The ODCM contains the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents. This ER evaluation does not impact radioactive gaseous or liquid effluents. Therefore, no changes to the ODCM are required.

- Test or Experiment Not Described in the FSAR

This ER evaluation does not involve a test or experiment. There is no physical work associated with this ER. This ER evaluates the effect on the differential pressurization of the steam generator subcompartment due to the addition of the maintenance platforms.

4. References

Discuss the methodology for performing LBD searches. State the location of relevant licensing document information and explain the scope of the review such as electronic search criteria used (e.g., key words) or the general extent of manual searches per Section 5.5.1[5](d) of LI-101. **NOTE: Ensure that manual searches are performed using controlled copies of the documents. If you have any questions, contact your site Licensing department.**

LBDs/Documents reviewed via keyword search:

Keywords:

The License Basis Documents listed in Section II.A.1 were searched electronically using Autonomy for Waterford 3.

Compartment, 592, circumferential

LBDs/Documents reviewed manually:

Chapter 6 of the FSAR and Operating License were reviewed manually

5. Is the validity of this Review dependent on any other change?

Yes

No

If "YES", list the required changes/submittals. The changes covered by this 50.59 Review cannot be implemented without approval of the other identified changes (e.g., license amendment request). Establish an appropriate notification mechanism to ensure this action is completed.

(List the required changes / submittals.)

B. ENVIRONMENTAL SCREENING

If any of the following questions is answered "yes," an Environmental Review must be performed in accordance with NMM Procedure ENS-EV-115, "Environmental Evaluations," and attached to this 50.59 Review. Consider both routine and non-routine (emergency) discharges when answering these questions.

Will the proposed Change being evaluated:

- | | <u>Yes</u> | <u>No</u> | |
|-----|--------------------------|-------------------------------------|--|
| 1. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve a land disturbance of previously disturbed land areas in excess of one acre (i.e., grading activities, construction of buildings, excavations, reforestation, creation or removal of ponds)? |
| 2. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve a land disturbance of undisturbed land areas (i.e., grading activities, construction, excavations, reforestation, creating, or removing ponds)? |
| 3. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve dredging activities in a lake, river, pond, or stream? |
| 4. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Increase the amount of thermal heat being discharged to the river or lake? |
| 5. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Increase the concentration or quantity of chemicals being discharged to the river, lake, or air? |
| 6. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Discharge any chemicals new or different from that previously discharged? |
| 7. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Change the design or operation of the intake or discharge structures? |
| 8. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify the design or operation of the cooling tower that will change water or air flow characteristics? |
| 9. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify the design or operation of the plant that will change the path of an existing water discharge or that will result in a new water discharge? |
| 10. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify existing stationary fuel burning equipment (i.e., diesel fuel oil, butane, gasoline, propane, and kerosene)? ¹ |
| 11. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve the installation of stationary fuel burning equipment or use of portable fuel burning equipment (i.e., diesel fuel oil, butane, gasoline, propane, and kerosene)? ¹ |
| 12. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve the installation or use of equipment that will result in a new or additional air emission discharge? |
| 13. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve the installation or modification of a stationary or mobile tank? |
| 14. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve the use or storage of oils or chemicals that could be directly released into the environment? |
| 15. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Involve burial or placement of any solid wastes in the site area that may affect runoff, surface water, or groundwater? |

¹ See NMM Procedure ENS-EV-117, "Air Emissions Management Program," for guidance in answering this question.

C. SECURITY PLAN SCREENING

If any of the following questions is answered "yes," a Security Plan Review must be performed by the Security Department to determine actual impact to the Plan and the need for a change to the Plan.

Could the proposed activity being evaluated:

- | | <u>Yes</u> | <u>No</u> | |
|-----|--------------------------|-------------------------------------|--|
| 1. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Add, delete, modify, or otherwise affect Security department responsibilities (e.g., including fire brigade, fire watch, and confined space rescue operations)? |
| 2. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Result in a breach to any security barrier(s) (e.g., HVAC ductwork, fences, doors, walls, ceilings, floors, penetrations, and ballistic barriers)? |
| 3. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Cause materials or equipment to be placed or installed within the Security Isolation Zone? |
| 4. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Affect (block, move, or alter) security lighting by adding or deleting lights, structures, buildings, or temporary facilities? |
| 5. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify or otherwise affect the intrusion detection systems (e.g., E-fields, microwave, fiber optics)? |
| 6. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify or otherwise affect the operation or field of view of the security cameras? |
| 7. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify or otherwise affect (block, move, or alter) installed access control equipment, intrusion detection equipment, or other security equipment? |
| 8. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify or otherwise affect primary or secondary power supplies to access control equipment, intrusion detection equipment, other security equipment, or to the Central Alarm Station or the Secondary Alarm Station? |
| 9. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify or otherwise affect the facility's security-related signage or land vehicle barriers, including access roadways? |
| 10. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Modify or otherwise affect the facility's telephone or security radio systems? |

Documentation for accepting any "yes" statement for these reviews will be attached to this 50.59 Review or referenced below.

License Amendment Determination

Does the proposed Change being evaluated represent a change to a method of evaluation Yes
ONLY? If "Yes," Questions 1 – 7 are not applicable; answer only Question 8. If "No," answer No
 all questions below.

Does the proposed Change:

1. Result in more than a minimal increase in the frequency of occurrence of an accident Yes
 previously evaluated in the FSAR? No

BASIS:

The accident that is relevant to this evaluation is caused by the mass and energy releases from postulated high energy pipe ruptures within the steam generator subcompartments (Loss of Coolant Accident). Analysis was made prior to start-up to determine the peak pressure that could be produced by a line break discharging into the subcompartment. The controlling break for the steam generator subcompartment is a circumferential break in the suction leg of the reactor coolant pump which creates a break area of 592 in².

This ER evaluation does not change the cause of the high energy pipe rupture or the frequency of the high energy pipe rupture. This ER evaluation reanalyzes the results of a LOCA on the steam generator subcompartment due to the addition of platforms in the subcompartment. Adding platforms is not an initiator of the LOCA or any other analyzed event. Therefore, there is no increase in the frequency of occurrence of an accident previously evaluated in the FSAR.

2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a Yes
 structure, system, or component important to safety previously evaluated in the FSAR? No

BASIS:

The walls of the steam generator subcompartment are designed for 55.5 psid. The subcompartment differential pressure following a LOCA that is recalculated to include added platforms does not exceed this design basis value. However, the calculated differential pressure across the walls of the steam generator subcompartment has increased to 35.8 psid from 21.6 psid. The containment fan coolers (CFC) and safety related duct will not be over pressurized since the non safety duct which is designed to withstand less stresses will be pressurized prior to the pressure reaching the safety related duct or CFCs and will protect the safety related duct and CFCs by failing first. The design of the non-safety duct has not changed. It is not credited to function during a design basis accident or designed to withstand the differential pressure from a pressure transient. Furthermore, the non-safety duct and safety related ductwork is seismically supported such that the duct will remain in place.

Since the design values of the steam generator subcompartment remain the same and CFC and safety related ductwork will not be over pressurized, there is no increase likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the FSAR.

3. Result in more than a minimal increase in the consequences of an accident previously Yes
 evaluated in the FSAR? No

BASIS:

The proposed change does not affect the postulated dose caused by the mass and energy releases from postulated high energy pipe ruptures within the steam generator subcompartments that results from a circumferential break in the suction leg of the reactor coolant pump which creates a break area of 592 in². This break is designated as the subcompartment design basis accident (DBA). The steam generator subcompartment is subject to pressure transients and jet impingement forces caused by the mass and energy releases from postulated high energy pipe ruptures within the steam generator subcompartments. Analysis was made prior to start-up to determine the peak pressure that could be produced by a line break discharging into the subcompartment. The controlling break for the steam generator subcompartment is a circumferential break in the suction leg of the reactor coolant pump which creates a break area of 592 in².

The associated ER evaluated the effect of a break within the steam generator subcompartment, and evaluated the differential pressure across the walls of the steam generator subcompartments, the containment fan coolers, and safety related duct inside containment. The design values of the steam generator subcompartment remain the same. The containment fan coolers (CFC) and safety related duct will not be over pressurized since the non safety duct which is designed to withstand less stresses will be pressurized prior to the pressure reaching the safety related duct or CFCs and will protect the safety related duct and CFCs by failing first. This change does not affect the mitigation of a LOCA by any system, structure, or component associated with this change. Therefore this change does not result in more than a minimal increase in the consequences of an accident previously evaluated in the FSAR.

4. Result in more than a minimal increase in the consequences of a malfunction of a structure, system, or component important to safety previously evaluated in the FSAR? Yes No

BASIS:

There will no increase in consequences of malfunction because the structural integrity of the steam generator subcompartment meet the design allowables contained in the calculations referenced in Section 1 of this 10 CFR 50.59 evaluation. The containment fan coolers (CFC) and safety related duct will not be over pressurized since the non safety duct which is designed to withstand less stresses will be pressurized prior to the pressure reaching the safety related duct or CFCs and will protect the safety related duct and CFCs by failing first.

5. Create a possibility for an accident of a different type than any previously evaluated in the FSAR? Yes No

BASIS:

This change reanalyzes the steam generator subcompartment differential pressure following a LOCA because additional platforms were added within the steam generator subcompartment per DCP 3285, DCP 3101, and SMP 1356. The platforms were qualified per the design packages that approved their installation.

This change does not affect operation of any systems, structure or component. The possibility to create an accident of a different type is not possible since the structural integrity of the steam generator subcompartment containment meet the design allowables contained in the calculations referenced in Section 1 of this 10CFR 50.59 evaluation. The containment fan coolers (CFC) and safety related duct will not be over pressurized since the non safety duct which is designed to withstand less stresses will be pressurized prior to the pressure reaching the safety related duct or CFCs and will protect the safety related duct and CFCs by failing first. Therefore, this change does not create a possibility for an accident of a different type.

6. Create a possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the FSAR? Yes No

BASIS:

The possibility to create a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the FSAR is not possible since the structural integrity of the steam generator subcompartment meets the design allowables contained in the calculations referenced in Section 1 of this 10 CFR 50.59 evaluation. The containment fan coolers (CFC) and safety related duct will not be over pressurized since the non safety duct which is designed to withstand less stresses will be pressurized prior to the pressure reaching the safety related duct or CFCs and will protect the safety related duct and CFCs by failing first. Furthermore, this evaluation does not affect the operation of any system, structure, or component and therefore does not create the possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the FSAR.

7. Result in a design basis limit for a fission product barrier as described in the FSAR being exceeded or altered? Yes No

BASIS:

This ER evaluation does not result in a design basis limit for a fission product barrier as described in the FSAR being exceeded or altered since this ER does not affect the fuel, reactor coolant system, or the containment building. The structural integrity of the steam generator subcompartment meet the design allowables contained in the calculations referenced in Section 1 of this 10 CFR 50.59 evaluation. The containment fan coolers (CFC) and safety related duct will not be over pressurized since the non safety duct which is designed to withstand less stresses will be pressurized prior to the pressure reaching the safety related duct or CFCs and will protect the safety related duct and CFCs by failing first. Therefore, any fission product barrier that may be dependent on one of the evaluated structures is not affected.

8. Result in a departure from a method of evaluation described in the FSAR used in establishing the design bases or in the safety analyses? Yes No

BASIS:

This change recalculates the steam generator subcompartment wall differential pressure and evaluates the effect on the containment fan coolers and safety related duct inside containment due to the addition of platforms within the steam generator subcompartment. The results of the calculation increase the differential pressure across the walls but are well below the design pressure, i.e. the calculate value of 38.5 psid is less than design value of 55.5 psid. The results also showed no adverse affect on the containment fan coolers or safety related duct inside containment.

The calculated method used in the re-analysis uses a hand calculation which is more conservative than using the current method (Computer Code Relap-3 Mod 68). Even though the current calculation method is not described in the FSAR, the hand calculation uses basic engineering principals that are used within the compute code. The differential pressure was conservatively recalculated using mathematical computations by hand using the existing free flow areas and compartment free volumes, modified free flow areas compartment free volumes, and existing differential pressure in the steam generator subcompartment. The current calculation method is not described in the FSAR; however, this change will add a footnote which references current calculation method and the current values.

Since the method used in the calculation is more conservative and the design limits are not challenged, this change does not result in a departure from a method of evaluation described in the FSAR used in establishing the design bases or in the safety analysis.

If any of the above questions is checked "YES", obtain NRC approval prior to implementing the change by initiating a change to the Operating License in accordance with NMM Procedure ENS-LI-113.