NAC INTERNATIONAL

Atlanta Corporate Headquarters
3930 East Jones Bridge Road, Suite 200
Norcross, GA 30092
Phone 770-447-1144
Fax 770-447-1797
www.nacintl.com

February 28, 2018

U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

Attn: Document Control Desk

Subject: Submission of a Request to Amend the U.S. Nuclear Regulatory Commission Certificate of Compliance No. 1025 for the NAC-MPC® Cask System

Docket No. 72-1025

References:
1. U.S. Nuclear Regulatory Commission (NRC) Certificate of Compliance (CoC) No. 1025 for the NAC International Multi-Purpose Cask (MPC) System, Amendment No. 6, October 18, 2010
2. NAC-MPC System Final Safety Analysis Report (FSAR), Revision 10, NAC International, January 2014

NAC International (NAC) hereby submits a request to revise Reference 1, Appendix A and associated bases presented in Reference 2. The following summarizes the changes requested:

1. Reference 1, Section A 3.1.6, "CONCRETE CASK Heat Removal System"
   a. Revised LCO 3.1.6 "CONDITION" A to CONCRETE CASK Heat Removal System Inoperable.
   b. Added new LCO REQUIRED ACTION A.1 "Ensure adequate heat removal to prevent exceeding short-term temperature limits" with an Immediate COMPLETION TIME
   c. Revised LCO REQUIRED ACTION A.1 to A.2 "Restore CONCRETE CASK Heat Removal System to OPERABLE status" with a COMPLETION TIME of 25 days
   d. Deleted LCO REQUIRED ACTION B.1
   e. Revised LCO REQUIRED ACTION B.2.1 to B.1 with a revised COMPLETION TIME of 5 days
   f. Revised LCO REQUIRED ACTION B2.2 to B.2 with a revised COMPLETION TIME of 5 days
2. Reference 1, Section A 3.2.2, "CONCRETE CASK Average Surface Dose Rates"
   a. Revised "APPLICABILITY" to say "Prior to STORAGE OPERATIONS"
3. Reference 1, Section A 5.3, "Surveillance After an Off-Normal, Accident, or Natural Phenomena Event"
   a. Deleted section in its entirety as response surveillance is in principle, covered by existing Limited Condition for Operations (LCO) surveillance requirements and frequencies

NMSSZ6

NAC INTERNATIONAL

Consistent with NAC administrative practice, this proposed FSAR revision is numbered to uniquely identify the applicable changed pages. Revision bars mark the FSAR text changes on the Revision 18B pages. The included List of Effective Pages identifies the revision level of all pages in the Reference 2 FSAR with Revision 18B pages.

In order to better facilitate the review process, NAC is providing the Revision 18B change pages with appropriate backing pages. In accordance with NAC's administrative practices, upon final acceptance of this application, the 18B changed pages will be reformatted and incorporated into the next revision of the NAC-MPC FSAR.

Note, this amendment application is to be treated as a separate case from the existing amendment request for the NAC-MPC which is currently before the NRC. The current amendment application before the NRC is being referred to as "Amendment 7". This new amendment application is being referred to as "Amendment 8".

If you have any comments or questions, please contact me on my direct line at 678-328-1236.

Sincerely,

Wren Fowler
Director, Licensing
Engineering

Enclosures:

Enclosure 1 – List of FSAR Changes for the NAC-MPC FSAR, Amendment 8
Enclosure 2 – Proposed Changes for the NAC-MPC Technical Specifications, Amendment 8
Enclosure 3 – FSAR Changed Pages and LOEP for NAC-MPC FSAR, Amendment 8

February 2018

Revision 18B

NAC-MPC

NAC Multi-Purpose Cask

Amendment 8 Proposed Changes to the Technical Specifications

Docket No. 72-1025

NAC INTERNATIONAL

Atlanta Corporate Headquarters: 3930 East Jones Bridge Road, Norcross, Georgia 30092 USA
Phone 770-447-1144, Fax 770-447-1797, www.nacintl.com

Enclosure 1

List of Changes

NAC-MPC FSAR, Amendment 8

(Docket No. 72-1025)

NAC International

February 2018

List of Changes, NAC-MPC FSAR, Amendment 8

Chapter 1

- No changes.

Chapter 2

- No changes.

Chapter 3

- No changes.

Chapter 4

- No changes.

Chapter 5

- No changes.

Chapter 6

- No changes.

Chapter 7

- No changes.

Chapter 8

- No changes.

Chapter 9

- Page 9.2-1, modified the fifth paragraph on the page in Section 9.2.
- Page 9.A.3-1, modified the third paragraph of Section 9.A3.1.

Chapter 10

- No changes.

Chapter 11

- Page 11.2.2-15, modified the second line of Section 11.2.2.5.
- Page 11.2.3-2, modified Sectin 11.2.3.5.
- Page 11.2.6-9, modified Section 11.2.6.5.

Chapter 12

- Page 12.C.3-30, modified "Actions" for A.1 and A.2.
- Page 12.C.3-31, modified "Actions" for B.1 and B.2.
- Page 12.C.3-43, modified "Surveillance Requirements" for SR 3.2.2.1

Chapter 13

- No changes.

Chapter 14

- No changes.

Chapter 15

- No changes.

Enclosure 2

Proposed Changes for the

NAC-MPC Technical Specifications, Amendment 8

(Docket No. 72-1025)

NAC International

February 2018

A 3.1 NAC-MPC SYSTEM Integrity

A 3.1.6 CONCRETE CASK Heat Removal System

LCO 3.1.6 The CONCRETE CASK Heat Removal System shall be OPERABLE.

APPLICABILITY: During STORAGE OPERATIONS

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each NAC-MPC SYSTEM.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CONCRETE CASK Heat Removal System Inoperable	A.1 Ensure adequate heat removal to prevent exceeding short-term temperature limits AND A.2 Restore CONCRETE CASK Heat Removal System to OPERABLE status	Immediately 25 days
B. Required Action A.1 or A.2 and associated Completion Time not met	B.1 Perform an engineering evaluation to determine that the CONCRETE CASK Heat Removal System is OPERABLE OR B.2 Place the NAC-MPC SYSTEM in a safe condition	5 days 5 days

(continued)

A 3.2 NAC-MPC SYSTEM Radiation Protection

A 3.2.2 CONCRETE CASK Average Surface Dose Rates

LCO 3.2.2

A. The average surface dose rates of each YANKEE-MPC CONCRETE CASK shall not exceed:

- 50 mrem/hour (neutron + gamma) on the side (on the concrete surfaces);
- 55 mrem/hour (neutron + gamma) on the top; and,
- 200 mrem/hour (neutron + gamma), an average of the measurements at air inlets and outlets.

B. The average surface dose rates of each CY-MPC CONCRETE CASK shall not exceed:

- 170 mrem/hour (neutron + gamma) on the side (on the concrete surfaces);
- 100 mrem/hour (neutron + gamma) on the top; and,
- 110 mrem/hour (neutron + gamma), an average of the measurements at air inlets and outlets.

C. The average surface dose rates of each MPC-LACBWR CONCRETE CASK shall not exceed the following limits unless required ACTIONS A.1 and A.2 are met:

- 20 mrem/hour (neutron + gamma) on the side (on the concrete surfaces);
- 25 mrem/hour (neutron + gamma) on the top;
- 100 mrem/hour (neutron + gamma), an average of the measurements at air inlets and outlets.

APPLICABILITY: Prior to STORAGE OPERATIONS

ACTIONS

----------NOTE----------

Separate Condition entry is allowed for each NAC-MPC SYSTEM.

(continued)

A 5.2 Preoperational Testing and Training Exercises (continued)

a. CONCRETE CASK shield plug and lid (or lid only for MPC-LACBWR) installation
b. Transport of the CONCRETE CASK to the ISFSI
c. CANISTER unloading, including reflooding and weld removal or cutting
d. CANISTER removal from the CONCRETE CASK

A 5.3 [DELETED]

(continued)

Enclosure 3

LOEP and FSAR Change Pages

NAC-MPC FSAR, Revision 18B

(Docket No. 72-1025)

NAC International

February 2018

February 2018

Revision 18B

NAC-MPC

NAC Multi-Purpose Cask

FINAL SAFETY ANALYSIS REPORT

Volume 1 of 2

Docket No. 72-1025

NAC INTERNATIONAL

Atlanta Corporate Headquarters: 3930 East Jones Bridge Road, Norcross, Georgia 30092 USA
Phone 770-447-1144, Fax 770-447-1797, www.nacintl.com

List of Effective Pages

Chapter 1

61 drawings (see Chapter 1)

Appendix 1.A

17 MPC-LACBWR drawings
(see Appendix 1.A)

List of Effective Pages (continued)

Chapter 2

Appendix 2.A

Chapter 3

List of Effective Pages (continued)

List of Effective Pages (continued)

List of Effective Pages (continued)

Chapter 6

Appendix 6.A

Chapter 7

Appendix 7.A

List of Effective Pages (continued)

List of Effective Pages (continued)

Appendix 10.A

Chapter 11

List of Effective Pages (continued)

List of Effective Pages (continued)

Chapter 13

THIS PAGE INTENTIONALLY LEFT BLANK

February 2018

Revision 18B

NAC-MPC

NAC Multi-Purpose Cask

FINAL SAFETY ANALYSIS REPORT

Volume 2 of 2

Docket No. 72-1025

NAC INTERNATIONAL

Atlanta Corporate Headquarters: 3930 East Jones Bridge Road, Norcross, Georgia 30092 USA
Phone 770-447-1144, Fax 770-447-1797, www.nacintl.com

List of Effective Pages

Chapter 1

61 drawings (see Chapter 1)

Appendix 1.A

17 MPC-LACBWR drawings
(see Appendix 1.A)

List of Effective Pages (continued)

Chapter 2

Appendix 2.A

Chapter 3

List of Effective Pages (continued)

List of Effective Pages (continued)

List of Effective Pages (continued)

Chapter 6

Appendix 6.A

Chapter 7

Appendix 7.A

List of Effective Pages (continued)

List of Effective Pages (continued)

Appendix 10.A

Chapter 11

List of Effective Pages (continued)

List of Effective Pages (continued)

Chapter 13

THIS PAGE INTENTIONALLY LEFT BLANK

9.2 Maintenance Program

The NAC-MPC storage system is a passive system. There are no active components or systems incorporated in the design. Consequently, there is a minimal amount of maintenance that is required over its lifetime.

The system has no valves, gaskets, rupture discs or seals, and there are no accessible penetrations. Consequently, there is no maintenance associated with these types of features.

The routine thermal performance surveillance requirements for a loaded NAC-MPC system are described in the Technical Specifications of Appendix A, LCO 3.1.6 of the Certificate of Compliance.

The continuing operability of the concrete cask is verified on a 24-hour frequency by completion of SR 3.1.6.1, which allows verification by visual inspection of the inlet and outlet vents for blockage, or verification by measurement of the air temperature difference between ambient and outlet average. If the operable status of the concrete cask is reduced, the concrete cask will be returned to an operable status as specified in LCO 3.1.6.

Following an off-normal, accident or natural phenomena event, the user shall perform a Response Surveillance of the NAC-MPC systems in use at the ISFSI and take corrective actions, as required, in accordance with the requirements as specified in LCO 3.1.6 of the Technical Specifications.

An annual inspection of the vertical concrete cask exterior is required, and includes:

- Visual inspection of concrete surfaces for chipping, spalling or other surface defects. Any defects larger than one inch in diameter (or width) and deeper than one inch shall be regrouted, according to the grout manufacturer's recommendations.

- Reapplication of corrosion-inhibiting (external) coatings on accessible surfaces.

THIS PAGE INTENTIONALLY LEFT BLANK

9.A.3 Maintenance Program

This section presents the maintenance requirements for the MPC-LACBWR system and the transfer cask.

9.A.3.1 MPC-LACBWR System Maintenance

The MPC-LACBWR system is a passive system. No active components or systems are incorporated in the design. Consequently, only a minimal amount of maintenance is required over its lifetime.

The MPC-LACBWR system has no valves, gaskets, rupture discs, seals, or accessible penetrations. Consequently, there is no maintenance associated with these types of features.

Following an off-normal, accident or natural phenomena event, the user shall perform a Response Surveillance of the MPC-LACBWR systems in use at the ISFSI and take corrective actions, as required, in accordance with the requirements specified in LCO 3.1.6 of the Technical Specifications.

Annually, or on a frequency established by the user based on the environmental conditions at the ISFSI (i.e., higher inspection frequency may be appropriate at ISFSIs exposed to marine environments, lower frequency for sites located in dry environments, etc.), a program of visual inspections and maintenance of the loaded MPC-LACBWR systems in service shall be implemented. The concrete cask(s) shall be inspected as described herein.

- Visually inspect exterior concrete surfaces for chipping, spalling or other defects. Minor surface defects (i.e., approximately one cubic inch) shall be repaired by cleaning and regrouting.
- Visually inspect accessible exterior coated carbon steel surfaces for loss of coating, corrosion or other damage. The repair of corroded surfaces or surfaces missing coating materials shall be done by cleaning the areas and reapplying corrosion-inhibiting coatings in accordance with the coating manufacturer's recommendations. Exterior surface coatings authorized for use on the exposed carbon steel surfaces of concrete cask are not limited to those defined in Chapter 3 of the MPC FSAR or specified on the original design drawings. The user shall select coating appropriate to the ability to clean and recoat the affected surface areas.

- Visually inspect the installed lid bolts for presence of external corrosion. Excessively corroded, or missing, bolting shall be replaced with approved spare parts.
- Visually inspect the attachment hardware and the integrity of the inlet and outlet screens. Damaged or missing components shall be repaired or replaced with approved spare parts.
- Significant damage or defects identified during the visual inspections that exceed routine maintenance shall be processed as nonconforming items.

The schedule, results and corrective actions taken during the performance of the MPC-LACBWR system inspection and maintenance program shall be documented and retained as part of the system maintenance program.

9.A.3.2 Transfer Cask Maintenance

The transfer cask trunnions and shield door assemblies shall be visually inspected for gross damage and proper function prior to each use.

Annually (or a period not exceeding 14 months), an inspection and testing program shall be performed on the transfer cask in accordance with the requirements of ANSI N14.6. The following actions or alternatives shall be performed:

- Visually inspect the lifting trunnions, shield doors and shield door rails for permanent deformation and cracking. Carbon steel-coated surfaces will be inspected for chipped, cracked or missing areas of coating, and repaired by reapplication of the approved coating(s) in accordance with the coating manufacturer's recommendations.
- In addition, one of the following testing/inspection methods shall be completed.
- Perform a load test equal to or greater than 300% of the maximum service load and a post-test visual inspection of major load-bearing welds and critical components for defects, weld cracking, material displacement or permanent deformation; or
- If surface cleanliness and conditions permit, perform a dimensional and visual inspection of load-bearing components, and a nondestructive examination of major load-bearing welds.

11.2.2.4 NAC-MPC Performance

This analysis shows that the design basis earthquake does not affect the NAC-MPC vertical concrete cask performance. The vertical concrete cask does not tip over for the design-basis earthquake having ground accelerations of 0.25g.

11.2.2.5 Recovery and/or Corrective Actions

Response Surveillance of the storage casks at the ISFSI is required following an earthquake accident in accordance with the requirements specified in LCO 3.1.6 of the Technical Specifications to verify the heat removal systems of the casks are operable. While the cask does not tip over, there is a potential for movement of a cask relative to other casks and for superficial damage at the bottom edge due to that movement.

THIS PAGE INTENTIONALLY LEFT BLANK

11.2.3 Explosion

The flood analysis presented in Section 11.2.6 shows that the NAC-MPC system would not experience adverse effects due to a pressure of 22 psig applied to the canister. The vertical concrete cask will also be unaffected. This pressure is considered to bound any explosions occurring in the vicinity of the ISFSI.

11.2.3.1 Cause of Accident

An explosion is an unlikely event because administrative controls will exclude explosive substances in the vicinity of the ISFSI. No flammable or explosive substances are stored or used at the storage facility; therefore, an explosion affecting the site is extremely unlikely. This evaluation is provided in order to provide a bounding pressure that could be used in the event that the potential of an explosion must be considered at a given site.

11.2.3.2 Evaluation of the Explosion Event

The NAC-MPC canister shell was evaluated in Section 11.2.6 for the effects of a flood having a depth of 50 feet. The water exerts an external hydrostatic pressure of 22 psig on the canister, which results in stress in the canister shell.

The concrete cask is a monolithic structure that is not affected by the explosion overpressure.

11.2.3.2.1 Yankee-MPC Canister Stress Due to the Explosion Event

The maximum primary membrane stress calculated in the canister is 8.82 ksi. The allowable stress for accident conditions is 40.08 ksi. The margin of safety for primary membrane stress is + 3.54.

The maximum primary membrane plus bending stress calculated in the canister is 19.18 ksi. The allowable primary membrane plus bending stress for accident conditions is 60.12 ksi. The margin of safety for primary membrane plus bending stress is + 2.13.

Consequently, there is no adverse consequence to the canister as a result of the 22 psig external pressure. This pressure conservatively bounds an explosion event.

11.2.3.2.2 CY-MPC Canister Stress Due to the Explosion Event

The maximum primary membrane stress calculated in the canister is 3.91 ksi. The allowable stress for accident conditions is 40.08 ksi. The margin of safety for primary membrane stress is +9.26.

The maximum primary membrane plus bending stress calculated in the canister is 15.18 ksi. The allowable primary membrane plus bending stress for accident conditions is 60.12 ksi. The margin of safety for primary membrane plus bending stress is +2.96.

Consequently, there is no adverse consequence to the canister as a result of the 22 psig external pressure. This pressure conservatively bounds an explosion event.

11.2.3.3 Radiological Consequences

There are no radiological consequences for this accident.

11.2.3.4 NAC-MPC Performance

This analysis shows that the NAC-MPC system performance is not affected by explosion over pressure.

11.2.3.5 Recovery and/or Corrective Actions

Response Surveillance of the storage casks at the ISFSI in accordance with the requirements specified in LCO 3.1.6 of the Technical Specifications is required following an explosion event to verify the heat removal systems of the casks are operable.

11.2.6.5 Recovery and/or Corrective Actions

Response Surveillance of the NAC-MPC systems at the ISFSI shall be performed following the flood accident in accordance with the requirements specified in LCO 3.1.6 of the Technical Specifications to verify the heat removal systems of the casks are operable. Corrective actions will be taken, as required, to clear blockage of the inlet and outlet screens of each concrete cask.

THIS PAGE INTENTIONALLY LEFT BLANK

C 3.1 NAC-MPC SYSTEM Integrity

C 3.1.6 CONCRETE CASK Heat Removal System

BASES

BACKGROUND

The CONCRETE CASK Heat Removal System is a passive, air-cooled convective heat transfer system, which ensures that heat from the CANISTER is transferred to the environment by the upward flow of air through the CONCRETE CASK. Relatively cool air is drawn into the annulus between the CONCRETE CASK and the CANISTER through the four air inlets at the bottom of the CONCRETE CASK. The CANISTER transfers its heat from the CANISTER surface to the air via natural convection. The buoyancy created by the heating of the air creates a chimney effect and the air flows back into the environment through the four air outlets at the top of the CONCRETE CASK.

APPLICABLE SAFETY ANALYSIS

The thermal analyses of the CONCRETE CASK take credit for the decay heat from the spent fuel assemblies being ultimately transferred to the ambient environment surrounding the CONCRETE CASK. Transfer of heat away from the fuel assemblies ensures that the fuel cladding and CANISTER component temperatures do not exceed applicable limits. Under normal storage conditions, the four air inlets and four air outlets are unobstructed and full air flow (i.e., maximum heat transfer for the given ambient temperature) occurs.

Analyses have been performed for the complete obstruction of all of the air inlets and outlets. The complete blockage of all air inlets and outlets stops air cooling of the CANISTER. The CANISTER will continue to radiate heat to the relatively cooler inner shell of the CONCRETE CASK. With the loss of air cooling, the CANISTER component temperatures will increase toward their respective short-term temperature limits. The limiting component is the CANISTER basket support and heat transfer disks, which, by analysis, approach their temperature limits in 24 hours for Yankee-MPC and CY-MPC systems, if no action is taken to restore air flow to the heat removal system.

The MPC-LACBWR analysis for all inlets and outlets blocked shows system temperatures remain below long-term limits for the 4.5 kW total heat load. Thermal performance of the MPC-LACBWR system is provided by radiation between the CANISTER and CONCRETE CASK, and air cooling convection heat transfer is not required to maintain system safety limits.

(continued)

CONCRETE CASK Heat Removal Rate
C 3.1.6

LCO	The CONCRETE CASK Heat Removal System must be verified to be OPERABLE for Yankee-MPC and CY-MPC systems to preserve the assumptions of the thermal analyses. Operability of the heat removal system ensures that the decay heat generated by the stored fuel assemblies is transferred to the environment at a sufficient rate to maintain fuel cladding and CANISTER component temperatures within design limits for the Yankee-MPC and CY-MPC systems.
APPLICABILITY	The LCO is applicable during STORAGE OPERATIONS. Once a CONCRETE CASK containing a CANISTER loaded with spent fuel has been placed in storage, the heat removal system must be OPERABLE to ensure adequate heat transfer of the decay heat away from the fuel assemblies for the Yankee-MPC and CY-MPC systems.
ACTIONS	A note has been added to ACTIONS that states for this LCO, separate Condition entry is allowed for each CONCRETE CASK. This is acceptable since the Required Actions for each Condition provide appropriate compensatory measures for each CONCRETE CASK not meeting the LCO. Subsequent CONCRETE CASKs that do not meet the LCO are governed by subsequent Condition entry and application of associated Required Actions. A.1 If the CONCRETE CASK heat removal system has been determined to be inoperable, actions shall be taken immediately to ensure adequate heat removal is occurring in order to prevent the limiting CONCRETE CASK component temperatures do not exceed their short term allowable limits. Immediately, defined as the required action to be pursued without delay and in a controlled manner, provides a reasonable period of time (i.e., within the design basis time limit as presented in Section 11.2.8 or within the time limit for a less than design basis heat load case, as evaluated) to take action to remove the obstructions in the air flow path. AND A.2 If the CONCRETE CASK heat removal system has been determined to be not OPERABLE, it must be restored to a fully OPERABLE status within 25 days.

(continued)

ACTIONS (continued)

B.1

If Required Action A.1 or A.2 cannot be met, an engineering evaluation is performed to verify that the CONCRETE CASK heat removal system is OPERABLE. The Completion Time for this Required Action of 5 days will ensure that the CANISTER remains in a safe, analyzed condition.

OR

B.2

Place the affected NAC-MPC SYSTEM in a safe condition. The Completion Time for this Required Action of 5 days will ensure that the NAC-MPC SYSTEM is maintained in a safe condition.

SURVEILLANCE REQUIREMENTS

SR 3.1.6.1

The long-term integrity of the stored fuel is dependent on the ability of the CONCRETE CASK to reject heat from the CANISTER to the environment. Visual observation that all four air inlet and outlet screens are unobstructed and intact ensures that air flow past the CANISTER is occurring and heat transfer is taking place. Complete blockage of more than two air inlet or outlet screens or the equivalent effective screen area renders the heat removal system not OPERABLE and this LCO is not met. Partial blockage of less than two air inlet or outlet screens or the equivalent effective screen area does not result in the heat removal system being not OPERABLE. However, corrective actions should be taken promptly to remove the obstruction and restore full flow through the affected air inlet and outlet screens. Alternatively, based on the thermal analyses, if the air temperature rise is less than the limits stated in the SR, adequate air flow and, therefore, adequate heat transfer is occurring to provide assurance of long-term fuel cladding integrity. The reference ambient temperature used to perform this Surveillance shall be measured at the ISFSI facility.

The Frequency of 24 hours is reasonable based on the time necessary for CONCRETE CASK and CANISTER components to heat up to unacceptable temperatures assuming design basis heat loads, and allowing for corrective actions to take place upon discovery of the blockage of the air inlet and outlet screens.

(continued)

CONCRETE CASK Heat Removal Rate
C 3.1.6

REFERENCES

1. FSAR Chapter 4, Appendix 4.A and Chapter 11, Section 11.1.1, Section 11.2.8 and Appendix 11.A.

SURVEILLANCE REQUIREMENTS	SR 3.2.2.1 This SR ensures that the CONCRETE CASK average surface dose rates are within the LCO limits prior to STORAGE OPERATIONS. This Frequency is acceptable as corrective actions can be taken before off-site dose limits are compromised. The surface dose rates are measured approximately at the locations indicated on Figure A.3-1, following standard industry practices for determining average surface dose rates for large containers.
REFERENCES	1. 10 CFR Parts 20 and 72. 2. FSAR Sections 5.1, 5.A.1, 8.2 and 8.A.2.

THIS PAGE INTENTIONALLY LEFT BLANK