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March 19, 2014
U7-C-NINA-NRC-140007

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

South Texas Project
Units 3 and 4
Docket Nos. 52-012 and 52-013
Response to Request for Additional Information

Attached is the Nuclear Innovation North America, LLC (NINA) response to the NRC staff question in Request for Additional Information (RAI) letter number 442 related to SRP Section 1.05. The attachment to this letter contains the response to the following RAI question:

01.05-32

The COLA change documented in this submittal will be made in the next routine revision of the COLA.

There are no commitments in this submittal.

If you have any questions, please contact me at (979) 316-3011 or Bill Mookhoek at (979) 316-3014.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 3/15/14

Scott Head
Manager, Regulatory Affairs
NINA STP Units 3&4

Attachment:

RAI 01.05-32

D091
NRO

cc: w/o attachment except*
(paper copy)

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QUESTION

In the "Integrated Plan", it states the following relating to the long term water supply. After 36 hours, Phase 3 has started and once the water in the FWSTs is depleted, operator action would be necessary to shift ACIWA suction to the volume of water in the UHS basin. (Appendix 1E). A permanent piping connection to allow the ACIWA System to take suction from the water volume in the UHS Basins will be installed with the appropriate separation of safety related and non-safety related systems.

Reactor Service Water and Residual Heat Removal Systems (including pumps) which are located below grade are designed to survive all defined BDBEEs. The approximately 16 million gallon UHS is rendered inoperable solely due to the loss of AC power. (FSAR Subsection 9.2.5)

Please clarify the following question to demonstrate the design capability of the water being transported from UHS basin to the ACIWA connection in RHR system.

a) Clarify whether the water from UHS basin to ACIWA connection at RHR system is through planned "permanent piping connection" or through installed safety-related piping and pumps of the Reactor Service Water (RSW) system.

b) Clarify the equipment qualification of the "permanent piping connection" to justify that it can survive a designed BDBEE and perform its intended function for long term water supply.

c) Update the integrated plan accordingly.

RESPONSE

a) The permanent piping connection discussed in FSAR Appendix 1E, Subsection 2.4 to allow the ACIWA System to take suction from the water volume in the UHS Basins will be robust, sub-surface piping installed during plant construction with the appropriate separation of safety related and non-safety related systems.

b) The permanent piping to allow the ACIWA system to take suction from the UHS basin will be seismically designed consistent with the design requirements of the ACIWA system as described in DCD Subsection 19I.4 which states: "The ACIWA (firewater) system (Figure 19I-8) is designed to inject water into the reactor if the ECCS systems are not available. It is also the only means of water injection in case of a station blackout beyond 8 hours. Although firewater is not a Class 1E safety system, because of the safety function described above, the firewater diesel-driven pump, the firewater tank, valves, and related piping will have seismic margin above the SSE." Since this piping will be sub-surface, it will be protected from site hazards.

c) It is not necessary to update the Integrated Plan to reflect the responses to the above questions; however, FSAR Appendix 1E, Subsection 2.4 will be revised in the next revision of the COLA as shown in shaded text below to clarify the design requirements of the planned piping installation.

- ~~A p~~Permanent piping ~~connection~~ to allow the ACIWA System to take suction from the water volume in the UHS Basins will be sub-surface piping installed during plant construction with the appropriate separation of safety related and non-safety related systems. This piping will be robust and consistent with the design requirements of the ACIWA system (Reference DCD Subsection 19I.4).