

November 5, 2012

Mr. Scott Head, Manager  
Regulatory Affairs  
STP Units 3 & 4  
Nuclear Innovation North America, LLC  
122 West Way, Suite 405  
Lake Jackson, TX 77566

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 419 RELATED TO  
SRP SECTION 08.02 FOR THE NUCLEAR INNOVATION NORTH AMERICA,  
LLC COMBINED LICENSE APPLICATION

Dear Mr. Head:

By letter dated September 20, 2007, South Texas Project (STP) submitted for approval a combined license application pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. In order to minimize delays to the current licensing schedule, we request that you respond within 30 days of receipt of this RAI. However, Nuclear Innovation North America staff has requested 60 days to respond and the NRC has accepted this request.

If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes. If you have any questions or comments concerning this matter, I can be reached at 301-415-3104 or by e-mail at [michael.eudy@nrc.gov](mailto:michael.eudy@nrc.gov).

Sincerely,

**/RA/**

Michael Eudy, Project Manager  
Licensing Branch 3  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 052-012, 052-013

eRAI Tracking No. 6883

Enclosure: Request for Additional Information

Mr. Scott Head, Manager  
Regulatory Affairs  
STP Units 3 & 4  
Nuclear Innovation North America, LLC  
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Lake Jackson, TX 77566

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Enclosure:  
Request for Additional Information

ADAMS Accession No.: ML12307A265

NRO-002

OFFICE	TR: DE/EEEE	BC: DE/EEEE	OGC	LPM: DNRL/LB3	LA: DNRL/LB3	PM DNRL/LB3
NAME	TMartinez-Navedo	JAnderson	MSpencer	GWunder	SGreen	MEudy
DATE	10/9/2012	10/9/2012	10/15/12	10/26/12	11/05/2012	11/05/2012

\*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Letter to Scott Head from Michael A. Eudy dated November 5, 2012

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SRP SECTION 08.02 FOR THE NUCLEAR INNOVATION NORTH AMERICA,  
LLC COMBINED LICENSE APPLICATION

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TMartinez-Navedo, NRR

JAnderson, NRR

## Request for Additional Information 419

Application Title: South Texas Projects Units 3 and 4  
Operating Company: South Texas Project Nuclear Operating Co  
Docket Nos. 52-012 and 52-013  
Review Section: 08.02 - Offsite Power System

### QUESTION

08.02-25

On July 27, 2012, the NRC issued Bulletin 2012-01, "Design Vulnerability in Electric Power System," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12074A115) to all holders of operating licenses and combined licenses for nuclear power reactors requesting information about the facilities' electric power system designs, in light of the recent operating experience that involved the loss of one of the three phases of the offsite power circuit (single-phase open circuit condition) at Byron Station, Unit 2 to verify compliance with applicable regulations and to determine if further regulatory action is warranted.

In order to verify the applicants of new reactors have addressed the design vulnerability identified at Byron in accordance with the requirements specified in General Design Criterion (GDC) 17, "Electric Power Systems," in Appendix A, "General Design Criteria for Nuclear Power Plants," and the design criteria for protection systems under 10 CFR 50.55a(h)(3), please provide the following information:

- Describe the protection scheme design for important to safety buses (non-safety or safety-related) to detect and automatically respond to a single-phase open circuit condition or high impedance ground fault condition on credited offsite power circuits.
- If the important to safety buses are not powered by offsite power sources during at power condition, then explain how the surveillance tests are performed to verify that a single-phase open circuit condition or high impedance ground fault condition on an off-site power circuit is detected.
- Describe the plant operating procedures, including off-normal operating procedures, that specifically call for verification of the voltages on all three phases of the ESF buses.

Enclosure