PMSTPCOL PEmails

From: Elton, Loree [leelton@STPEGS.COM]
Sent: Wednesday, August 04, 2010 4:23 PM
To: Muniz, Adrian; Wunder, George; Tonacci, Mark; Eudy, Michael; Kallan, Paul; Plisco, Loren; Anand, Raj; Foster, Rocky; Smith, Lona I; Joseph, Stacy; Govan, Tekia; Tai, Tom
Subject: Transmittal of Letter U7-C-STP-NRC-100174
Attachments: U7-C-STP-NRC-100174.pdf

Please find attached a courtesy copy of letter number U7-C-STP-NRC-100174, which provides a supplemental response to Request for Additional Information (RAI) 08.04-4.

The official version of this correspondence will be placed in today's mail. Please call Dick Bense at 215-353-8857 if you have any questions concerning this letter.

Thank you,

Loree Elton
Licensing, STP 3 & 4
leelton@stpegs.com
361-972-4644

Hearing Identifier: SouthTexas34Public_EX
Email Number: 2347

Mail Envelope Properties (C7F098E3C31A0141A02043F0B8E656EE269B56CA2C)

Subject: Transmittal of Letter U7-C-STP-NRC-100174
Sent Date: 8/4/2010 4:22:30 PM
Received Date: 8/4/2010 4:22:38 PM
From: Elton, Loree

Created By: leelton@STPEGS.COM

Recipients:
"Muniz, Adrian" <Adrian.Muniz@nrc.gov>
Tracking Status: None
"Wunder, George" <George.Wunder@nrc.gov>
Tracking Status: None
"Tonacci, Mark" <Mark.Tonacci@nrc.gov>
Tracking Status: None
"Eudy, Michael" <Michael.Eudy@nrc.gov>
Tracking Status: None
"Kallan, Paul" <Paul.Kallan@nrc.gov>
Tracking Status: None
"Plisco, Loren" <Loren.Plisco@nrc.gov>
Tracking Status: None
"Anand, Raj" <Raj.Anand@nrc.gov>
Tracking Status: None
"Foster, Rocky" <Rocky.Foster@nrc.gov>
Tracking Status: None
"Smith, Lona I" <lismith@STPEGS.COM>
Tracking Status: None
"Joseph, Stacy" <Stacy.Joseph@nrc.gov>
Tracking Status: None
"Govan, Tekia" <Tekia.Govan@nrc.gov>
Tracking Status: None
"Tai, Tom" <Tom.Tai@nrc.gov>
Tracking Status: None

Post Office: exgmb1.CORP.STPEGS.NET

Files	**Size**	**Date & Time**
MESSAGE	486	8/4/2010 4:22:38 PM
U7-C-STP-NRC-100174.pdf	373677	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Nuclear Operating Company

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

August 4, 2010
U7-C-STP-NRC-100174

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 STP Nuclear Operating Company (STPNOC) supplemental response to Request for Additional Information (RAI) 08.04-4. This supplemental response supersedes in its entirety the responses provided to RAI 08.04-4 in STPNOC letter U7-C-STP-NRC-100116, dated May 27, 2010 (ML101480124) and RAI 08.04-4, Supplement 1 in STPNOC letter U7-C-STP-NRC-100167, dated July 15, 2010 (ML102010030). The attachment provides the response to the following RAI:

08.04-4, Supplement 2

When a change to the COLA is required, it will be incorporated into the next routine revision of the COLA following NRC acceptance of the RAI response.

There are no commitments in this letter.

If you have any questions, please contact Scott Head at (361) 972-7136, or Bill Mookhoek at (361) 972-7274.

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

Executed on 8/4/2010

Mark McBurnett
Vice President, Oversight & Regulatory Affairs
South Texas Project Units 3 & 4

rhb

Attachment: RAI 08.04-4, Supplement 2

cc: w/o attachments and enclosure except*
(paper copy)

Director, Office of New Reactors
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-8064

Kathy C. Perkins, RN, MBA
Assistant Commissioner
Division for Regulatory Services
Texas Department of State Health Services
P. O. Box 149347
Austin, Texas 78714-9347

Alice Hamilton Rogers, P.E.
Inspection Unit Manager
Texas Department of State Health Services
P. O. Box 149347
Austin, Texas 78714-9347

C. M. Canady
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

*Steven P. Frantz, Esquire
A. H. Gutterman, Esquire
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave. NW
Washington D.C. 20004

*Adrian Muniz
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

(electronic copy)

*George F. Wunder
*Adrian Muniz
Loren R. Plisco
U. S. Nuclear Regulatory Commission

Steve Winn
Joseph Kiwak
Eli Smith
Nuclear Innovation North America

Peter G. Nemeth
Crain, Caton & James, P.C.

Richard Peña
Kevin Pollo
L. D. Blaylock
CPS Energy

08.04-4, Supplement 2

QUESTION:

In response to RAI 08.04-1 regarding the time required to declare the existence of an SBO, the applicant stated that the Station Blackout (SBO) clock (10 minutes) starts after the operators perform the immediate steps in the emergency operating procedures (EOPs) to verify the SCRAM, primary parameters, etc., and the attempt to restore offsite power and start the diesel generators from the control room per the EOPs as discussed in Appendix I to NUMARC 87-00, Rev. 1. The NRC staff notes that during an SBO inspection at one of the operating plants, it took as long as 15 minutes to declare the onset of an SBO after going through the EOPs and bringing the Alternate AC (AAC) power source to the safety-related bus in the next 10 minutes. As a result, this plant was in an unanalyzed condition for almost 25 minutes. This is inconsistent with the requirements of 10 CFR 50.63 which requires that the 10-minute criterion shall start as soon as the plant loses both onsite and offsite power to the emergency buses. Therefore, the staff has determined that no additional time is allowed to restore the offsite power source or restart the emergency diesel generator from the control room in order to determine the onset of an SBO. The staff requests that the applicant revises its response to either demonstrate that the total time to identify the existence of an SBO and bringing the AAC power source to the safety-related bus can be accomplished within the 10-minute criterion or provide AC-independent coping analysis for one hour.

RESPONSE:

The response below supersedes in its entirety the responses provided in RAI 08.04-4, (STPNOC letter U7-C-STP-NRC-100116, dated May 27, 2010 (ML101480124)) and RAI 08.04-4, Supplement 1 (STPNOC letter U7-C-STP-NRC-100167, dated July 15, 2010 (ML102010030)).

During the first 10 minutes of an SBO, the reactor will have automatically tripped, the Main Steam Isolation Valves (MSIVs) closed, and the Reactor Core Isolation Cooling (RCIC) actuated. The RCIC system will automatically control reactor coolant level. Any necessary relief valve operation will also be automatic. Within the 10 minute SBO interval, none of the above actions will require AC power or manual operator actions.

In response to a Loss of Preferred Power, the Combustion Turbine Generator (CTG) will automatically progress through its starting sequence in parallel with the operator performing the immediate steps in the EOPs. This sequence is described in FSAR Subsection 8.3.1.1.7 (9) as follows:

> *In such an event, the combustion turbine generator (CTG) will automatically start and achieve rated speed and voltage ~~within two~~* in less than ten *minutes. The CTG will then automatically assume pre-selected loads on the plant investment protection (PIP) buses. With the diesel generators unavailable, the reactor operator will manually shed PIP loads and connect the non-Class 1E CTG with the required shutdown loads within ten minutes*

of the event initiation. Specifically, the operator will energize one of the Class 1E distribution system buses by closing each of the ~~two~~ circuit breakers (via controls in the main control room) between the CTG unit and the Class 1E bus. The ~~circuit breaker closest to the CTG is non-Class 1E and the~~ circuit breaker closest to the Class 1E bus is Class 1E, and the other breakers are non-Class 1E. Later, the operator will energize other safety-related and non-safety-related loads, as appropriate, to complete the shutdown process.

These actions (i.e., the CTG start sequence, automatic connection to the PIP bus, operator actions to verify or establish the appropriate conditions for energization of a Class 1E bus, and closing breakers to energize the Class 1E bus) must be completed in less than 10 minutes from the start of the SBO event. All circuit breakers required to perform these tasks are operable from the Main Control Room.

FSAR Subsection 14.2.12.1.45.4 (3) (m), which describes the pre-operational testing of the combustion turbine generator (CTG), will confirm that this sequence can be completed within the specified time limit as shown below:

Capability of the combustion turbine generator (CTG) to automatically start, accelerate to rated speed, reach nominal voltage, and begin accepting load within the time limit specified in Subsection 9.5.11. This test shall also demonstrate the capability of connecting the CTG to any one of the emergency buses using manually controlled breakers.

The time requirement is detailed in FSAR Subsection 9.5.11.1. Note that during development of this RAI, a minor editorial change was required to bring FSAR Subsection 9.5.11.1 into agreement with the single-line diagram presented in FSAR Figure 8.3-1. This change is shown below:

(2) The CTG shall be capable of being manually connected to SBO shutdown loads (via any one of the Class 1E diesel generator buses) from the main control room within ten minutes from the beginning of the event. The CTG shall also be capable of being manually connected to the Class 1E buses. However, the CTG shall not be normally connected to plant safety buses nor require any external AC power to operate. There shall be two circuit breakers (one Class 1E and one non-class 1E) in series between the bus automatically connected to the *CTG and each Class 1E bus.*

Therefore, in accordance with 10 CFR 50.63(c)(2), a station blackout coping analysis is not required because the alternate ac source (i.e., the CTG) will "be demonstrated by test to be available to power the shutdown buses within 10 minutes of the onset of station blackout." The need for additional minor editorial changes was identified during the development of this response. FSAR Subsection 9.5.13.19 (3) will be modified as shown below:

One Class 1E circuit breaker and ~~one~~ four *non-Class 1E circuit breakers exist and are functional between each of the Class 1E diesel generator buses and the CTG. (Note that ~~only the circuit breakers for the preselected division are racked in. The remaining two divisions have their Class 1E breakers normally racked out, as shown in Figure 8.3.1~~*

~~both~~ the Class 1E and non-Class 1E breakers, which provide the connection from the CTG bus to the diesel generator buses, are normally open and ~~they~~ have no automatic function. The operator must manually align ~~the CTG to the diesel generator buses~~ this connection.*)*

FSAR Tier 2, Table 1C-3 will be modified as shown below:

Requirements	Compliance
Appendix A – Definitions ALTERNATE AC POWER SOURCE. An alternating current (AC) power source that is available to and located at or nearby a nuclear power plant and meets the following requirements: *(i) Is connectable to but not normally connected to the preferred or onsite emergency AC power systems*	*(i) The design is connectable to (but not normally connected to) the preferred or onsite emergency AC power sources.* At least ~~*T*~~*two normally open breakers separate the AAC CTG from the safety-related onsite emergency power buses.* ~~*A single*~~ Non-Class 1E *normally open* ~~*breaker separates*~~ breakers separate *the AAC CTG from the non-safety-related PIP buses (preferred power) (See Figure 8.3-1).*

The above FSAR changes are additional text changes to bring the FSAR into conformance with the changes previously described in Departure STD DEP 8.3-1.