



River Bend Station – 5485 US Highway 61 – St. Francisville, LA 70775

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December 10, 2010

Mr. Steve Garchow  
US Nuclear Regulatory Commission Region IV  
612 East Lamar Blvd., Suite 400  
Arlington, TX 76011-4125

SUBJECT: River Bend Station – Unit 1  
Docket No. 50-458  
License No. NPF-47  
DECEMBER 2010 EXAM KEY CHALLENGE

Mr. Garchow:

This letter transmits the exam analysis required by ES-403-1 for questions missed by >50% of the candidates as well as justification for accepting an alternate answer for question numbers 55 and 88 on the River Bend Station NRC Initial License Examination administered on December 2, 2010.

If you have any questions or require additional information, please feel free to contact me by phone at (225) 378-3530 or by e-mail at [jfralick@entergy.com](mailto:jfralick@entergy.com) or Angie Orgeron at 225-378-3561 or [aorgero@entergy.com](mailto:aorgero@entergy.com).

Sincerely,

A handwritten signature in black ink, appearing to read "John Fralick".

John Fralick  
Superintendent Operations Initial Training  
River Bend Station

Enclosures: As stated

Exam Question #	# of students who missed and %	Discussion	Remediation
9	9/14 = 64%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
12	12/14 = 85%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
54	7/14 = 50%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
58	7/14 = 50%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
61	7/14 = 50%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
81	6/8 = 75%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
88	6/8 = 75%	The station is proposing that this question has two correct answer. Justification is below.	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.
95	4/8 = 50%	The station has reviewed the question and believes it to be valid and have only one correct answer. This knowledge item(s) was presented during the training program	The individuals who had a knowledge gap associated with the question were remediated on 9/13/2010.

From this review the following challenge is presented for questions number 55 and 88 of the exam. The justification for the challenge is below:

Question #55 - River Bend recommends both B & D be taken as acceptable answers. The question and the basis for accepting B & D follows:

*“The plant is operating at 100% power. A loss of RPS bus “B” has occurred. Restoration of isolation has NOT been completed.*

*What is the expected response if a Recirculation Flow Control Runback occurs?*

- A. Both FCVs runback to minimum position.*
- B. Both FCVs runback to the 60% drive flow position.*
- C. ‘A’ FCV runback to minimum position*
- D. ‘A’ FCV runback to the 60% drive flow position.*

Justification for B & D being correct:

‘A’ and ‘C’ are clearly wrong because a FCV runback causes the FCVs to runback to 60% drive flow – not minimum position.

The question clearly tests the candidates knowledge of how a loss of RPS B affects FCV operation but in order to answer the question a assumption has to be made concerning procedure implementation.

The question stem states "Restoration of isolation has NOT been completed." Upon a loss of RPS B there is an isolation of 10 systems / sub-systems. The answer is dependent on the assumption the candidate makes concerning how much of the restoration has been completed per Abnormal Operating Procedure (AOP) 0010 "Loss of One RPS Bus". There is not enough information given in the stem to determine how many of the isolations caused by the loss of RPS B have been verified / restored - just that the isolation restoration is not complete. B would be correct if the FCV isolation had been reset. D would be correct if the isolation had not been reset. Additionally the restoration of the FCV isolation would be restored relatively early in AOP implementation. Recommendation is to accept both B & D answers as correct.

Question #88 – River Bend recommends both C & D be taken as acceptable answers. The question and the basis for accepting C & D follows:

*A plant startup is in progress per GOP-001, PLANT STARTUP with the plant in Mode 2. All IRMs are on Range 8.*

*IRM 'A' is inoperable because it failed to cause an upscale trip during surveillance testing.*

*Subsequently IRM 'C' experienced a power supply failure causing the instrument to be inoperable.*

*Which of the following describes the Technical Specification requirements and the effect on plant startup and entry into Mode 1?*

- A. The startup can not continue. Conduct an orderly shutdown per GOP-0002, PLANT SHUTDOWN. Be in Mode 3 in 12 hours.*
- B. The channel or trip system must be placed in trip within 6 hours. Mode change is not allowed. Remain in GOP-0001, PLANT STARTUP but stabilize at the current power level until one of the IRMs ins restored to operable.*
- C. The channel or trip system must be placed in trip within 12 hours. Continue the plant startup per GOP-0001, PLANT STARTUP. No further actions required. Entry into Mode 1 is allowed since the actions taken may continue for an unlimited period of time.*
- D. The channel or trip system must be placed in trip within 12 hours. Continue startup per GOP-0001, PLANT STARTUP after bypassing IRM C. Entry into Mode 1 is allowed since IRMs are not required in Mode 1.*

Justification for C & D being correct:

Each choice (A-D) has individual statements that must be determined to be correct or incorrect. A & B contain clearly wrong statements. A is wrong because a startup can continue. B is wrong because the requirement to place the channel in trip is 12 hours not 6 and a Mode change is allowed. The individual statement intended to make C incorrect is "No further actions required". This statement, based upon question construction, can be assumed to state that no further Tech Spec actions are required and this is correct. It could also be assumed that GOP-0001 PLANT STARTUP does not require any further action and this is correct. It is understood that IRM C will have to be bypassed to continue raising reactor power but this action is not directed by Tech Specs or GOP-0001 PLANT STARTUP. The construction of the question leads the candidate to answer based upon administrative requirements of Tech Specs and/or GOP-0001 PLANT STARTUP and not actual plant control manipulations. Recommendation is to accept both C & D answers as correct.