

Director, Division of Inspection and Regional Support  
Office of the Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001

To whom it may concern,

The purpose of this package is to request a NRC staff review of the grading of my examination that was evaluated on the weeks of March 26, 2012 and April 9, 2012. The U.S. Nuclear Regulatory Commission, Region II, determined that I did not pass the simulator portion of the operating test. This is the second attempt to apply for a senior reactor operator license. It is unclear to the applicant why I was required to retake the operating test. The applicant passed the previous years' simulator test with some margin and scored 100% (pass) on the JPM portion, (see results). Another applicant passed the JPM portion with the minimum score and was granted a waiver. It is understood that a waiver is granted on a case by case basis. If the intent was to deny the waiver then the applicant should have the opportunity to formally submit a waiver for review. If the regional office decides to deny the waiver then per ES-204, Page 2 of 7: "the regional office shall promptly notify the applicant in writing concerning the disposition of the request, and provide an explanation for the denial." Unfortunately this did not occur, The NRC examiners on the current examination team (to include the operating test examiner) were consulted and they strongly discouraged the submittal of a waiver of the operating exam on my behalf. In addition, two of the three examiners were a part of the evaluation team from Hot License 16 examination. I was the only applicant that was re-evaluated from Hot License 16. I did not have the benefit of starting with a clean slate or without preconceived expectations, like the other applicants, and therefore was held to a different standard. This familiarity may have led to my exam being graded too severely.

In addition, the overall exam results are not consistent. The applicant received a score of 3.0 in the areas of Procedure Usage and Directing Operations but received a 1.70 in Interpretation/Diagnosis and a 1.2 in Communication. These areas have a direct impact on the success path for Procedure usage and Directing Operations. In reviewing the comments there were instances where pertinent information was not included in the description of the assessment, allowing the competencies to be downgraded. How is the crew able to be successful when all directions are taken from the Shift Supervisor (role) and requires that individual to be able to interpret, diagnose and communicate to navigate through the various procedures?

In my own personal experience, I felt that the current examination was graded at a much higher level. The applicant had strong results on the rest of the licensing exam to support being successful on this simulator exam (See Exam Chart – for results and grading criteria that was used). The crew performed all critical steps, procedure transition, protected all vital equipment and no actions compromised the health and safety of the public. Several comments that were identified were non consequential, and minimal in nature. NUREG 1021, ES-303, page 7 of 19; step 3b. Identifies how the evaluator is expected to justify in detail Operating Test Comments “every knowledge or ability deficiency that contributed to a failure in any part of the operating test. Provide the specific information, as applicable.” One of the bullets states: “the potential or actual consequences of the applicant’s incorrect action (particularly if the examiner recommends a failure based on a **serious** error that would not normally result in a failing grade.” Why are so many items identified that do not have consequences? The basis for some of the comments, were that the applicant didn’t make a “recommendation”?

I would also like to request that the review team separately evaluate the validity of the communication comments, with an emphasis on if the comments are realistic and was the same standard applied to all applicants that were evaluated in the simulator. Each scenario requires an extensive amount of communications, is it realistic that no other applicant made the same types of communication errors and if they did, were they all evaluated in the same manner? Typically poor communication is indicative of missed critical steps, diagnosis errors and incorrect procedure direction. Some examples of the communication errors that were identified are as follows:

1. Not repeating back a portion of a statement - Evaluator identifies the applicant doesn’t repeat back that the “alarms are consistent with the failure” although it has already been identified that the pump tripped.
2. Not requesting permission from the Shift Manager to place a component back to automatic. Two comments were identified in this area and in each comment it states that the applicant **directed/instructed** the Operator to place a component back in automatic. Each time the crew corrected and ensured that the SM was notified (No actions were performed).

3. Identifying the status of a controller in a briefing as being in automatic, although the discussion centered around the crew taking the controller back to automatic once the briefing was over. It was mention more than once that the controller was in manual and in one sentence the word “automatic” was used. This was a **briefing** and nothing was directed to be performed during the briefing.

Attached is a copy of each portion of the exam that is believed to be graded incorrectly. I have included a copy of the examiners comments as well as the applicant’s response and supporting documentation.

Please review the following for regrade:

Interpretation/Diagnose

- 1b. Ensure Accuracy – Comment on page 8
- 1b. Ensure Accuracy– Comment on page 10
- 1c. Understanding– Comment on page 12
- 1c. Understanding– Comment on page 14

Control Board Operations

- 3a. Locate & Manipulate – Comment on page 18
- 3a. Locate & Manipulate – Comment on page 20
- 3c. Manual Control – Comment on page 21

Communication

Overall Review

If you have any questions, you can contact me at 706-339-1285.

Sincerely,

Charlissa C. Smith

Docket number 55-23694

# Exam Results

	HL 16	HL 17	Comments
Written	SRO: 64	SRO: 92*	*HL 17 - Received the highest score on the SRO section
	RO: 84.93	RO: 88	
	Overall: 79.59	Overall: 89	
JPMS	100%*	100%	* Only applicant to pass 100%
Simulator	1. Interpretation/Diagnosis: 2.50	1. Interpretation/Diagnosis: 1.70	
	2. Procedures: 2.20	2. Procedures 3.00	
	3. Control Board Operations 2.33	3. Control Board Operations 1.99	
	4. Communciation 2.00	<b>4. Communciation 1.20</b>	
	5. Directing Operations 2.80	5. Directing Operations 3.00	
	6. Technical Specifications 3.00	6. Technical Specifications 2.20	

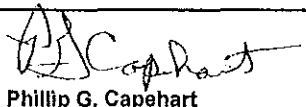
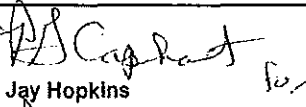

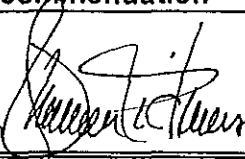
Per NUREG 1021, ES-303, Page 6 of 19

Using the following evaluation criteria, determine whether the applicant's overall performance on the simulator test is satisfactory or unsatisfactory, and document the grade by placing an "S" or a "U" in the "Simulator Operating Test" block of the "Operating Test Summary" on page 1 of Form ES-303-1. Enter "W" if this part of the operating test was waived in accordance with ES-204.

- If the grade for all competencies is greater than 1.8, the applicant's performance is generally satisfactory.
- If the grade for Competency 4, "Communications and Crew Interactions," is less than or equal to 1.8 but greater than 1.0, and the individual grades for all other competencies are 2.0 or greater, the applicant's performance is satisfactory.
- If the grade for Competency 4 is 1.0, or the grade for any other competency is 1.8 or less, the applicant's performance is unsatisfactory.

## PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY

U.S. Nuclear Regulatory Commission Individual Examination Report					
Applicant's Name: <b>Charlissa C. Smith</b>				Docket Number: <b>55-23694</b>	
<input type="checkbox"/>	<input type="checkbox"/>	Examination Type (Initial or Retake)		Facility Name: <b>Vogtle</b>	
		Reactor Operator		<input checked="" type="checkbox"/>	Hot
<input checked="" type="checkbox"/>		Senior Reactor Operator (SRO) Instant			Cold
		SRO Upgrade			BWR
		SRO Limited to Fuel Handling		<input checked="" type="checkbox"/>	PWR

Written Examination Summary					
NRC Author/Reviewer: <b>Daniel X. Bacon</b>			RO/SRO/Total Exam Points: <b>73 / 25 / 98</b>		
NRC Grader/Reviewer: <b>Phillip G. Capehart</b>			Applicant Points: <b>62 / 16 / 78</b>		
Date Administered: <b>04/01/2011</b>			Applicant Grade (%): <b>84.93 / 64.00 / 79.59</b>		
Operating Test Summary					
Administered by: <b>Jay Hopkins</b>			Date Administered: <b>03/16 - 24/2011</b>		
Walk-Through (Overall)					<b>S</b>
Administrative Topics					<b>S</b>
Simulator Operating Test					<b>S</b>
Examiner Recommendations					
Check Blocks	Pass	Fail	Waive	Signature	Date
Written Examination		<b>X</b>		 Phillip G. Capehart	<b>05/04/2011</b>
Operating Test	<b>X</b>			 Jay Hopkins	<b>05/02/2011</b>
Final Recommendation		<b>X</b>		 Phillip G. Capehart	<b>05/02/2011</b>
License Recommendation					
<input checked="" type="checkbox"/>	Issue License	 Malcolm T. Widmann			Date
	Deny License				<b>05/03/11</b>

**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY**

Applicant Docket Number: 55-23694 (Smith)					
<b>Senior Reactor Operator Simulator Operating Test Grading Details</b>					
Competencies/ Rating Factors (RFs)	RF Weights	RF Scores	RF Grades	Comp. Grades	Comment Page No.
1. Interpretation/Diagnosis					
a. Recognize & Attend	0.20	3	0.60	2.50	10
b. Ensure Accuracy	0.20	2	0.40		
c. Understanding	0.30	3	0.90		11
d. Diagnose	0.30	2	0.60		
2. Procedures					
a. Reference	0.30	3	0.90	2.20	12-16
b. EOP Entry	0.30	3	0.90		
c. Correct Use	0.40	1	0.40		
3. Control Board Operations					
a. Locate & Manipulate	0.34	2	0.68	2.33	17
b. Understanding	0.33	3	0.99		
c. Manual Control	0.33	2	0.66		18
4. Communications					
a. Clarity	0.40	2	0.80	2.00	19
b. Crew & Others Informed	0.40	2	0.80		20
c. Receive Information	0.20	2	0.40		21
5. Directing Operations					
a. Timely & Decisive Action	0.30	3	0.90	2.80	22
b. Oversight	0.30	3	0.90		
c. Solicit Crew Feedback	0.20	2	0.40		
d. Monitor Crew Activities	0.20	3	0.60		
6. Technical Specifications					
a. Recognize and Locate	0.40	3	1.20	3.00	
b. Compliance	0.60	3	1.80		

[Note: Enter RF Weights (nominal, adjusted, or "0" if not observed (N/O)), RF Scores (1, 2, 3, or N/O), and RF Grades from Form ES-303-4 and sum to obtain Competency Grades.]

## PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY

Applicant Docket Number: 55-23694 (Smith)		
Walk-Through Grading Details	Evaluation (S or U)	Comment Page Number
<b>Administrative Topics</b>		
a. Critical Safety Function Status Tree Evaluation	S	
b. Evaluate Inoperable AFD Monitor Alarm (Administered by M. Meeks)	S	
c. Determine mode change requirements (Administered by P. Capehart)	S	
d. Life Saving in Emergency Conditions	S	4
e. Classify an Emergency Event (Administered by P. Capehart)	S	
<b>Systems - Control Room</b>		
a. Emergency Borate due to Rods below insertion limits (RIL) (Administered by P. Capehart)	S	5
b. Establish Safety Grade Letdown (Administered by P. Capehart)	S	
c. Depressurize RCS to Reduce Break Flow to Ruptured Steam Generator-Normal Pressurizer Spray Not Available (Administered by P. Capehart)	S	6
d. Isolate a Faulted Steam Generator	S	7
e. Place Containment Hydrogen Monitors in service using 13130-1	S	
f. DG Parallel Operation with voltage regulator failure (Administered by P. Capehart)	S	8
g. Perform Power Range NI ACOT	S	
h. NA		
<b>Systems - In-Plant</b>		
i. Establish RWST Gravity Drain Through RHR Pumps (Administered by M. Meeks)	S	9
j. Response to the Inability to Reset or Block SI	S	
k. Locally Remove Diesel Generator From Service	S	



## VOGTLE ELECTRIC GENERATING PLANT

## EXAMINATION ANSWER SHEET

COURSE TITLE: HL-16 Hot License ClassEXAM TITLE: HL-16 NRC SRO Exam (2011-301)EXAMINER: E. M. ThorntonDATE ADMINISTERED: 4/01/11

## INSTRUCTIONS TO EXAMINEE:

Use a #2 pencil or black pen and this answer sheet to document your answers. Turn in this answer sheet upon completion of the exam. If needed, the exam proctor will provide any additional instructions.

Passing criteria requires a final grade of at least 80% on this exam and an average of at least 70% for the SRO only questions.

Smith, Charlissa C

NAME (Last, First MI)

SMIT8442

PLATEAU USER ID

1. <u>B</u>	18. <u>B</u>	35. <u>C</u>	52. <u>C</u>	69. <u>D</u>	85. <u>C</u>
2. <u>D</u>	19. <u>A</u>	36. <u>A</u>	53. <u>C</u>	<del>XX</del> 70. <u>AC</u>	86. <u>D</u>
<del>XX</del> 3. <u>CA</u>	20. <u>B</u>	<del>XX</del> 37. <u>BA</u>	54. <u>B</u>	71. <u>A</u>	<del>XX</del> 87. <u>BA</u>
4. <u>A</u>	21. <u>D</u>	38. <u>D</u>	55. <u>C</u>	<del>XX</del> 72. <u>AD</u>	88. <u>D</u>
5. <u>B</u>	22. <u>C</u>	39. <u>C</u>	56. <u>B</u>	73. <u>A</u>	<del>XX</del> 89. <u>CD</u>
6. <u>B</u>	23. <u>A</u>	40. <u>D</u>	57. <u>B</u>	74. <u>D</u>	<del>XX</del> 90. <u>AC</u>
<del>XX</del> 7. <u>AC</u>	24. <u>A</u>	41. <u>C</u>	58. <u>D</u>	75. <u>D</u>	91. <u>A</u>
8. <u>B</u>	25. <u>A</u>	42. <u>C</u>	59. <u>A</u>	SRO Only	92. <u>D</u>
9. <u>C</u>	26. <u>A</u>	43. <u>A</u>	60. <u>B</u>	<del>XX</del> 76. <u>CA</u>	<del>XX</del> 93. <u>BD</u>
10. <u>B</u>	27. <u>D</u>	44. <u>D</u>	61. <u>A</u>	77. <u>B</u>	94. <u>B</u>
11. <u>A</u>	28. <u>A</u>	45. <u>D</u>	<del>XX</del> 62. <u>BD</u>	78. <u>C</u>	95. <u>B</u>
<del>XX</del> 12. <u>ACB A</u>	29. <u>D</u>	<del>XX</del> 46. <u>CD</u>	63. <u>D</u>	79. <u>B</u>	96. <u>A</u>
13. <u>A</u>	30. <u>C</u>	47. <u>D</u>	64. <u>B</u>	80. <u>B</u>	<del>XX</del> 97. <u>CD</u>
<del>XX</del> 14. <u>CB</u>	31. <u>C</u>	<del>XX</del> 48. <u>BA</u>	65. <u>A</u>	81. <u>B</u>	<del>XX</del> 98. <u>AC</u>
15. <u>C</u>	32. <u>D</u>	49. <u>B</u>	<del>XX</del> 66. <u>D</u>	82. <u>C</u>	99. <u>C</u>
16. <u>A</u>	<del>XX</del> 33. <u>BA</u>	50. <u>A</u>	67. <u>B</u>	<del>XX</del> 83. <u>CD</u>	100. <u>C</u>
17. <u>D</u>	34. <u>C</u>	51. <u>B</u>	68. <u>B</u>	<del>XX</del> 84. <u>DA</u>	

RO/SRO-Only/Total Exam Values

Applicant's Scores

Applicant's Grade

	<u>73</u>	/	<u>25</u>	/	<u>98</u>	Points
-11	<u>62</u>	/	<u>9</u>	<u>16</u>	<u>78</u>	Points
	<u>84.93</u>	/	<u>64.00</u>	/	<u>79.59</u>	Percent
-11	<u>84.93</u>	-9	<u>64.00</u>		<u>79.59</u>	

GRADED BY: \_\_\_\_\_ REVIEWED BY: \_\_\_\_\_

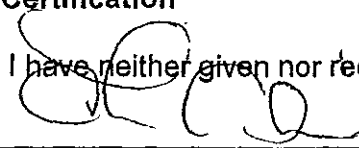


**U.S. Nuclear Regulatory Commission**  
**Site-Specific SRO Written Examination****Applicant Information**Name: Charlissa SmithDate: 4/1/2011Facility/Unit: Vogtle 1 & 2Region: I ☐ II ☒ III ☐ IV ☐Reactor Type: W ☒ CE ☐ BW ☐ GE ☐Start Time: 0815Finish Time: 1510**Instructions**

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination you must achieve a final grade of at least 80.00 percent overall, with 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3 hours if you are only taking the SRO portion.

**Applicant Certification**

All work done on this examination is my own. I have neither given nor received aid.

  
Applicant's Signature**Results**RO/SRO-Only/Total Examination Values 73 / 25 / 98 PointsApplicant's Scores 62 / 16 / 78 PointsApplicant's Grade 84.93 / 64.00 / 79.59 Percent

## PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY

U.S. Nuclear Regulatory Commission Individual Examination Report					
Applicant's Name: Charliessa Carlette' Smith				Docket Number 55-23694	
I	R	Examination Type (Initial or Retake)		Facility Name: Vogtle	
		Reactor Operator		X	Hot
	X	Senior Reactor Operator (SRO) Instant			Cold
		SRO Upgrade			BWR
		SRO Limited to Fuel Handling		X	PWR

Written Examination Summary					
NRC Author/Reviewer: M. Meeks			RO/SRO/Total Exam Points 75 / 25 / 100		
NRC Grader/Reviewer: M. Meeks			Applicant Points 66 / 23 / 89		
Date Administered: April 20, 2012			Applicant Grade (%) 88.00 / 92.00 / 89.00		
Operating Test Summary					
Administered by: M. Bates			Date Administered: March 26– April 13, 2012		
Walk-Through (Overall)					S
Administrative Topics					S
Simulator Operating Test					U
Examiner Recommendations					
Check Blocks	Pass	Fail	Waive	Signature	Date
Written Examination	X			<i>Michael Meeks</i> M. Meeks	05/10/2012
Operating Test		X		<i>Mark C. T. Bates</i> M. Bates	10 MAY 2012
Final Recommendation		X		<i>Michael Meeks</i> M. Meeks	05/10/2012
License Recommendation					
	Issue License	Supervisor's Signature Malcolm T. Widmann			Date 05/10/12
✓	Deny License				

## PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY

Applicant Docket Number: 55-23694					
<b>Senior Reactor Operator Simulator Operating Test Grading Details</b>					
Competencies/ Rating Factors (RFs)	RF Weights	RF Scores	RF Grades	Comp. Grades	Comment Page No.
1. Interpretation/Diagnosis a. Recognize & Attend b. Ensure Accuracy c. Understanding d. Diagnose	0.20 0.20 0.30 0.30	3 1 1 2	0.60 0.20 0.30 0.60	1.70	8, 10 12, 14 16
2. Procedures a. Reference b. EOP Entry c. Correct Use	0.30 0.30 0.40	3 3 3	0.90 0.90 1.20	3.00	
3. Control Board Operations a. Locate & Manipulate b. Understanding c. Manual Control	0.34 0.33 0.33	1 3 2	0.34 0.99 0.66	1.99	18, 19, 20 21
4. Communications a. Clarity b. Crew & Others Informed c. Receive Information	0.40 0.40 0.20	1 1 2	0.40 0.40 0.40	1.20	23, 24, 25 26, 27 28
5. Directing Operations a. Timely & Decisive Action b. Oversight c. Solicit Crew Feedback d. Monitor Crew Activities	0.30 0.30 0.20 0.20	3 3 3 3	0.90 0.90 0.60 0.60	3.00	
6. Technical Specifications a. Recognize and Locate b. Compliance	0.40 0.60	1 3	0.40 1.80	2.20	29, 30, 31

[Note: Enter RF Weights (nominal, adjusted, or "0" if not observed (N/O)), RF Scores (1, 2, 3, or N/O), and RF Grades from Form ES-303-4 and sum to obtain Competency Grades.]

**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY**

Applicant Docket Number: 55-23694		
Walk-Through Grading Details	Evaluation (S or U)	Comment Page Number
<b>Administrative Topics</b>		
a. Perform AFD Monitoring (Administered by M. Meeks)	S	
b. $K_{eff}$ Determination for Shutdown Banks Withdrawn (Administered by M. Meeks)	S	
c. Determine Tagging Requirements (Administered by M. Meeks)	S*	4
d. Determine if Task Can Be Completed Without Exceeding any Radiological Limits (Administered by M. Meeks)	S	
e. Emergency Plan Classification and Notification	S	
<b>Systems: Control Room</b>		
a. Control Rod Operability Test (Administered by M. Meeks)	S*	5
b. Transfer ECCS Pumps to Cold Leg Recirc (Administered by M. Meeks)	S	
c. Depressurize RCS to Reduce Break Flow to Ruptured SG	S	
d. Start an RCP with Subsequent Seal Failure	S*	6
e. Transfer AFW Suction Source to CST 2 (Administered by P. Capehart)	S	
f. Dilute Containment with Service Air (Administered by M. Meeks)	S	
g. Return ESF Bus from Diesel Generator to Normal Supply (Administered by M. Meeks)	S*	7
h. N/A	N/A	
<b>Systems: In-Plant</b>		
i. Establish RWST Gravity Drain Through RHR Pumps to HLs	S	
j. Establish Local Control of 1E Switchgear (Administered by P. Capehart)	S	
k. Placing the RHR 25kVA Inverter 1DD116 in Service	S	



VOGTLE ELECTRIC GENERATING PLANT  
EXAMINATION ANSWER SHEET

COURSE TITLE: HL-17 Hot License Class

EXAM TITLE: HL-17 NRC SRO Exam

EXAMINER: G. Wainwright

DATE ADMINISTERED: 4/20/12

Smith, Charliisa C

NAME (Last, First MI)

- |                           |                           |                           |                           |  |                           |
|---------------------------|---------------------------|---------------------------|---------------------------|--|---------------------------|
| 1. <u>D</u>               | 18. <u>C</u>              | 35. <u>B</u>              | 52. <u>B</u>              | 69. <u>C</u>                           | 85. <u>B</u>              |
| 2. <u>B</u>               | 19. <u>B</u>              | 36. <u>B</u> <sup>A</sup> | 53. <u>C</u> <sup>A</sup> | 70. <u>C</u> <sup>B</sup>              | 86. <u>C</u>              |
| 3. <u>A</u>               | 20. <u>B</u>              | 37. <u>B</u>              | 54. <u>D</u> <sup>C</sup> | 71. <u>B</u>                           | 87. <u>A</u>              |
| 4. <u>A</u>               | 21. <u>A</u>              | 38. <u>A</u>              | 55. <u>A</u>              | 72. <u>B</u>                           | 88. <u>C</u>              |
| 5. <u>A</u>               | 22. <u>D</u>              | 39. <u>C</u>              | 56. <u>D</u>              | 73. <u>C</u>                           | 89. <u>C</u>              |
| 6. <u>C</u>               | 23. <u>B</u>              | 40. <u>C</u>              | 57. <u>B</u>              | 74. <u>D</u>                           | 90. <u>C</u>              |
| 7. <u>A</u>               | 24. <u>C</u>              | 41. <u>C</u>              | 58. <u>B</u>              | 75. <u>B</u>                           | 91. <u>C</u>              |
| 8. <u>C</u>               | 25. <u>D</u>              | 42. <u>B</u> <sup>A</sup> | 59. <u>C</u>              | SRO Only                               | 92. <u>A</u>              |
| 9. <u>B</u>               | 26. <u>D</u>              | 43. <u>D</u>              | 60. <u>D</u>              | 76. <u>B</u>                           | 93. <u>D</u>              |
| 10. <u>C</u>              | 27. <u>B</u>              | 44. <u>D</u>              | 61. <u>C</u>              | 77. <u>D</u>                           | 94. <u>D</u>              |
| 11. <u>C</u>              | 28. <u>A</u>              | 45. <u>B</u>              | 62. <u>A</u> <sup>B</sup> | 78. <u>D</u> <sup>C</sup> <sup>A</sup> | 95. <u>B</u>              |
| 12. <u>D</u>              | 29. <u>A</u>              | 46. <u>D</u>              | 63. <u>C</u>              | 79. <u>D</u>                           | 96. <u>D</u>              |
| 13. <u>B</u>              | 30. <u>A</u>              | 47. <u>D</u>              | 64. <u>B</u>              | 80. <u>C</u>                           | 97. <u>A</u>              |
| 14. <u>A</u>              | 31. <u>D</u> <sup>C</sup> | 48. <u>A</u>              | 65. <u>B</u>              | 81. <u>D</u>                           | 98. <u>D</u>              |
| 15. <u>B</u>              | 32. <u>D</u>              | 49. <u>D</u>              | 66. <u>B</u>              | 82. <u>A</u>                           | 99. <u>C</u> <sup>A</sup> |
| 16. <u>A</u>              | 33. <u>A</u>              | 50. <u>D</u>              | 67. <u>A</u> <sup>C</sup> | 83. <u>C</u>                           | 100. <u>A</u>             |
| 17. <u>D</u> <sup>C</sup> | 34. <u>B</u>              | 51. <u>C</u>              | 68. <u>C</u>              | 84. <u>A</u>                           |                           |

RO/SRO-Only/Total Exam Values

Applicant's Scores

Applicant's Grade

<u>75</u>	,	<u>25</u>	,	<u>100</u>	Points
<u>66</u>	,	<u>23</u>	,	<u>89</u>	Points
<u>88.00</u>	,	<u>92.00</u>	,	<u>89.00</u>	Percent

## U.S. Nuclear Regulatory Commission

## Site-Specific SRO Written Examination

## Applicant Information

Name: Charlissa Carlette' Smith

Date: 4/20/12

Facility/Unit: Vogtle Units 1 &amp; 2

Region: I ☐ II ☒ III ☐ IV ☐Reactor Type: W ☒ CE ☐ BW ☐ GE ☐

Start Time:

0810

Finish Time:

1517

## Instructions

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination you must achieve a final grade of at least 80.00 percent overall, with 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3 hours if you are only taking the SRO portion.

## Applicant Certification

All work done on this examination is my own. I have neither given nor received aid.



Applicant's Signature

## Results

RO/SRO-Only/Total Examination Values

75, 25, 100 Points

Applicant's Scores

66, 23, 89 Points

Applicant's Grade

88.00, 92.00, 89.00 Percent

Interpret/  
Diagnosis

# Results: Interpretation/Diagnosis

Competency		weight	scores		grades	total	comment page No	
Interpretation/Diagnosis						1.7		
	a. Recognize & Attend	0.2	3		0.6			
	b. Ensure Accuracy	0.2	1		0.2		pg 8	pg 10
	c. Understanding	0.3	1		0.3		pg 12	pg 14
	d. Diagnose	0.3	2		0.6		pg 16	



# Examiner's Comments

**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY**  
**APPLICANT DOCKET NUMBER 55-23694**

**CROSS REFERENCE:**

1.b: Interpretation/Diagnosis – Ensure Accuracy

**SCENARIO/EVENT:**

Scenario 3, Event 5: Main Turbine EHC Pump Tripped and Standby Pump Failed to Auto Start

**EXPECTED ACTION/RESPONSE:**

The applicant, as Senior Reactor Operator (SRO), was expected to recognize that the standby EHC pump did not automatically start after the running EHC pump tripped and EHC pressure reached 1400 psig, at which time the applicant was expected to direct a manual start of the standby EHC pump. Alternatively, the applicant was expected to recognize shortly after the running EHC pump tripped that the standby pump would be required and its automatic start was imminent, and thereby preemptively direct the standby EHC pump to be started prior to its automatic start setpoint (1400 psig) being reached.

**APPLICANT ACTION/RESPONSE:**

The applicant incorrectly diagnosed that EHC pressure had dropped below 1400 psig, which is the standby EHC pump automatic start setpoint. The applicant correctly directed the start of the standby pump, but the applicant provided this direction because she believed the standby pump had failed to automatically start. The EHC pressure had not dropped below 1400 psig at the time the applicant directed the start of the standby pump. The scenario was designed for the automatic start of the standby pump to fail, but EHC pressure had not yet lowered to 1400 psig where the automatic start would have been demanded. During the scenario, the applicant directed C&T to investigate the automatic start feature on the standby EHC pump. After the scenario, the applicant was asked to explain her directives. The applicant stated that the standby EHC pump should have automatically started; which was incorrect. The applicant was downgraded in this competency because she misdiagnosed the failure of the automatic start of the standby EHC pump when pressure had not yet decayed to less than 1400 psig, which is when an automatic start of the standby pump would have been demanded.

The applicant made two non-critical errors in this rating factor; therefore, a score of "1" was assigned.

**LACK OF ABILITY/KNOWLEDGE:**

The applicant demonstrated a weakness in her ability to obtain accurate EHC pressure data on which to base her diagnosis.

**POTENTIAL CONSEQUENCES:**

The potential consequences of this error are related to an operator's ability to obtain accurate and complete information on which to base a diagnosis that subsequently requires an operator action based on that diagnosis. Potential consequences include starting equipment unnecessarily before it is demanded to start, as well as not starting equipment when a demand is present.

**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY**

**APPLICANT DOCKET NUMBER 55-23694**

**K/A (SRO IMPORTANCE RATING): 045G2.1.7 (4.7)**

**10CFR55.45(a)(4):** Identify the instrumentation systems and the significance of facility instrument readings.

# Applicant Response

#### APPLICANT ACTION/RESPONSE

The examiner identifies that the applicant incorrectly diagnosed that the EHC pressure had dropped below 1400 psig, which is when the standby pump automatically starts.

The event starts with an alarm on the electrical panel (due to pump trip). The RO quickly reports to the SRO that the EHC pump tripped. There were no alarms on ALB20 illuminated when the EHC pump was recognized as being in a tripped condition. The applicant directed the UO to pull the ARP for ALB20 D05 HYD FLUID LO PRESS because it was the anticipated alarm. As the ARP was reviewed, the alarm came in for ALB20 D05 as expected. Shortly afterwards the applicant directed the UO to start the second EHC pump. The pump was starting using procedure guidance per the ARP.

The scenario was designed for the automatic start of the standby pump to fail once pressure lowered to less than 1400 psig. The crew responded quickly and the second pump was placed in service in a timely matter. The examiner states that the applicant correctly directed the start of the standby pump but provided the direction because she believed the standby pump had failed to start. The applicant did not start the second pump because the standby pump did not start. The applicant started the second pump because there were only two pumps (this is directed per the ARP direction). If one pump trips, pressure will drop. The expectation is not to wait for an automatic action to occur if time permits. Per NMP-OS-007-001 Conduct of Operations Standards and Expectations, step 6.21.9 under *Manual Operator Actions and Early Operator Action* states (See supporting documents): “Crews may take early operator actions per site specific direction that mitigate the consequences of the event but do not interfere with recovery strategies.”

The priority was to get pressure trending back up and stabilized to prevent a Turbine trip which would cause the Reactor to Trip. If it is known that pressure will continue to lower (until a pump starts at 1400 psig or the turbine will trip at 1100 psig as identified in the ARP 17020-See supporting documents) then it is expected for the operator to mitigate the situation, in this case starting the backup pump.

The examiner states that the pressure had not fallen below 1400 psig, the applicant is downgraded because of a statement in which she identifies that the second pump did not start. The increments on the pressure gauge, especially from a distance, are not as precise as reading a digital meter and could be easily determined to be below a set point versus above it (See supporting documents for pictures). No actions were performed based on that statement.

If the pressure were not low enough, the impact would be that when investigated it would be determined that the pump was operating properly. It appears that the applicant was penalized for “stating” that the second EHC pump did not start versus recognizing the impact and directed the UO to pull the annunciator response before the alarm even illuminated. The applicant’s biggest concern was to ensure that the second pump was started to prevent a Turbine trip. In addition, the Annunciator Response Procedure initial operator action states (See supporting documents):

1. If a reactor trip occurs, Go to 19000-C
2. Verify standby EHC Fluid Pump is on, if needed

Step 2 **does not** state to start the second pump only if you are below the setpoint for the second pump to start. It identifies to verify it is on, IF NEEDED.

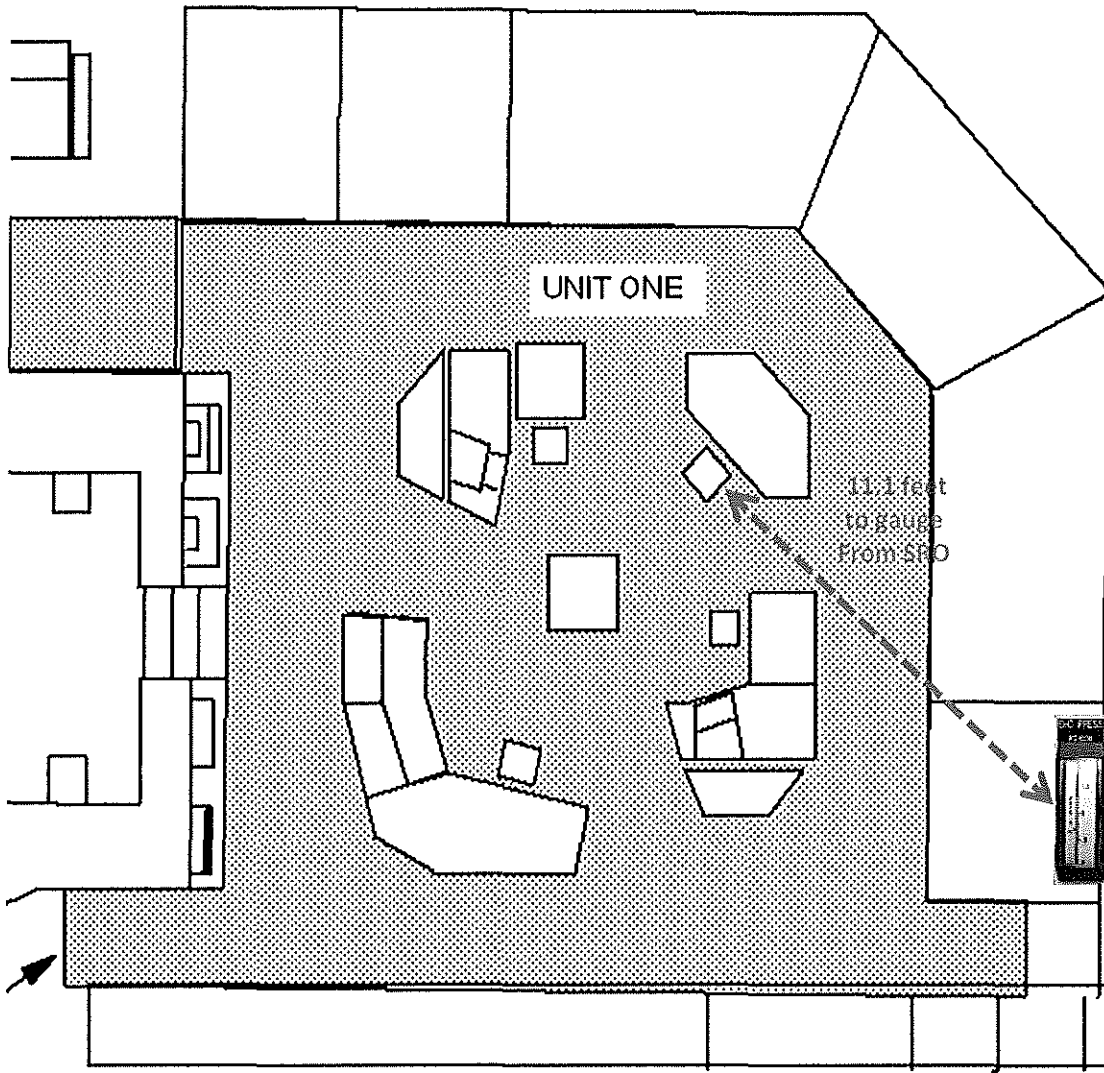
#### LACK OF ABILITY/KNOWLEDGE

The examiner states that the potential consequences would be starting equipment unnecessarily before it is demanded to start as well as not starting equipment when a demand is present. There were no potential consequences to starting the second EHC pump prior to any automatic actions. The second EHC pump would have been started if:

1. The second pump did not start automatically  
and
2. If one EHC pump is in service and trips

**In both cases the procedure directs that the standby EHC pump is started**

In addition, it should be noted that the applicant performed this scenario with a surrogate operator and due to the restrictions in place this individual is limited in his ability to function as a normal team member (NRC required this alignment, 17 total applicants available for crew assignments). If another candidate was performing the UO position a better flow of information and crew member exchange takes place and the applicant would not be required to perform in this more isolated mode. The pressure gauge, annunciator panel, and EHC Pump control handswitchs are on the far end of panel B which limits the SRO's view, this makes the information exchange between the operator and SRO all the more important. I would like for the NRC examiner to reconsider this deduction in light of this crew alignment and the additional burden placed on the applicant.



Also looking at the NRC reviewed and approved simulator scenario outline (Form ES-D-1) you will find the following:

**Verifiable Actions:**

***UO – Starts EHC pump B prior to Main Turbine / Reactor trip on low EHC pressure of 1100 psig. This will prevent an unnecessary Turbine / Reactor trip and transient on the plant.***

Note; the candidate met this criteria and it appears the NRC examiner went well outside this approved outline with the expected candidate actions for his comments and point deductions. (The NRC examiner was the Chief-Of-Record for this exam and there as part of the pre-test review team that reviewed and approved the expected actions and response above).



# Supporting Documentation

Approved By S. E. Prewitt	<b>Vogtle Electric Generating Plant</b> 	Procedure Number Rev 17020-1 51
Date Approved 10/18/2010	ANNUNCIATOR RESPONSE PROCEDURES FOR ALB 20 ON PANEL 1B2 ON MCB	Page Number 41 of 78

WINDOW D05

ORIGIN

SETPOINT

1-PISL-6338A  
1-PISL-6338B

1500 psig

HYD FLUID  
LO PRESS

1.0 **PROBABLE CAUSE**

1. Failure of Electrohydraulic Control (EHC) Fluid Pumps.
2. Clogged strainers and filters in pump suction or discharge.
3. EHC Fluid System leak.

2.0 **AUTOMATIC ACTIONS**

1. If pressure drops below 1400 psig, the standby EHC Fluid Pump will start.
2. If pressure continues to drop to 1100 psig, the Turbine will trip.

3.0 **INITIAL OPERATOR ACTIONS**

1. IF a reactor trip occurs, **Go To** 19000-C, "E-0 Reactor Injection."
2. **Verify** standby EHC Fluid Pump is on, if needed.


If needed start EHC Pump, if no pump is currently in service then it would be needed.

4.0 **SUBSEQUENT OPERATOR ACTIONS**

**CAUTION**

EHC fluid is a fire resistant fluid that may be harmful to personnel. Observe proper safety precautions when in contact with this fluid.

1. **Dispatch** an operator to the Hydraulic Power Unit to **check** for system leaks or pump failure.
2. IF equipment failure is indicated, **initiate** maintenance as required.

Southern Nuclear Operating Company			
	<b>Nuclear Management Instruction</b>	Conduct of Operations Standards and Expectations	NMP-OS-007-001 Version 9.0 Page 40 of 53

#### 6.21.9 Manual Operator Actions and Early Operator Actions

If the condition is recognized in sufficient time, crews are expected to take manual actions prior to reaching the automatic setpoint for prescribed ESF actuations. The determination of whether to manually initiate an anticipated automatic action would include consideration of parameter trends and applicable plant parameter values being near the setpoint. Taking manual action prior to reaching a setpoint shall be communicated to the control room crew prior to taking the action. Permission prior to acting is not required. Peer checks are encouraged but not required.

Operators are generally expected to take manual action to address ESF components which fail to actuate when required (site specific exceptions are allowed). No permission is required prior to acting. The Shift Supervisor should be informed as soon as possible after initiating the manual action.

Crews may take early operator action per site specific direction that mitigate the consequence of the event but do not interfere with recovery strategies. The Shift Supervisor will be notified prior to the commencement of early operator action. Applicable procedures will be referenced.

#### 6.21.10 Immediate Actions

Qualified operators are capable of performing the immediate actions in Emergency Operating and Abnormal Operating Procedures from memory. The immediate action designation means that the operator must be capable of performing the intent of those steps from memory, without reference to the written procedure.

#### 6.21.11 Skill of the Craft

Qualified operators may perform certain routine tasks without a procedure in-hand, provided that applicable procedure level-of-use requirements are adhered to. Activities that may be considered skill of the craft and not require in-hand procedure use include:

- Chart recorder paper change out
- Removal of caps, flanges, plugs, or drain lines
- Resetting of alarm panels
- Checking equipment oil levels
- Obtaining system fluid samples

This list is not all-inclusive. Operations Management may allow additional exceptions on a case basis.

ANNUNCIATOR  
1 OF 16  
RECALLING

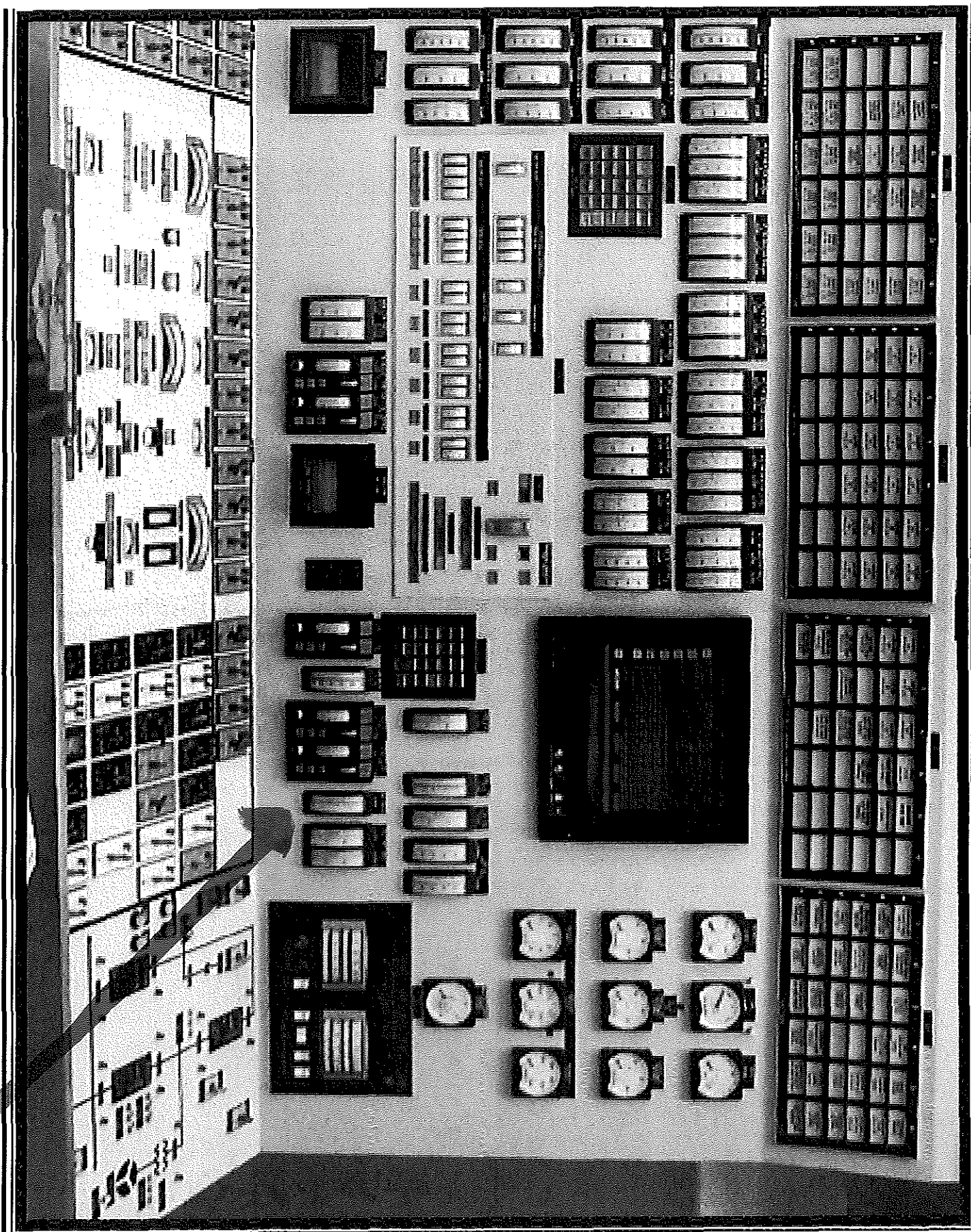
	1	2	3	4	5	6
A	SHAFT OIL PWR LO DISCH PRESS TURB TRIP	STEAM SEAL PRESSURE TROUBLE	ENG OIL LO PRESS TURB TRIP	TURB WTR SUCT PMP RUNNING	CRACK SHAFT FAILURE	ISO PHASE BUS CLB TROUBLE
B	HIGH VIBRATION TURB TRIP	TURB ENG LOSS OF POWER		TURB WTR SUCT PMP OVERLOAD	LO OIL FLUID PMP RUNNING	TURB ENG FLUID HI/LO LVL
C	TEST BRG WEAR DETECTOR TURB TRIP	TURB STA PWD EXH WTR HI LVL OR LO VAC	TURB EXOP RUNNING		WTR AND FLUID PMP A/B NOT IN AUTO	W/O FLUID PMP A OR B OVERLOAD
D	LOW ETS PRESS TURB TRIP	LOSS OF STATION COOLANT TURB TRIP	TURB EXOP OVERLOAD		W/O FLUID LO PRESS	TURB ENG FLUID HI TEMP
E	TURBINE/GEN TROUBLE	TURB VAP EXTRACTOR FAILURE	TURB EXOP TROUBLE OR NOT IN AUTO	COOLING SYSTEM TROUBLE	W/O FLUID LO PRESS TURB TRIP	TURB ENG FLUID LO TEMP
F	THRUST/MB MONITOR TROUBLE	TURB EXERG FLUID HI LVL	TURB ENG OIL LO HDR PRESS	W/O FLUID OIL PMP TRIPPED	W/O FLUID OIL PMP OVL OR LOSS OF PWR	TURB EXERG OIL PMP RUNNING

ALB20 TURBINE

20

Annunciator

ZHC Pressure





# Examiner's Comments



**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY**  
**APPLICANT DOCKET NUMBER 55-23694**

**CROSS REFERENCE:**

1.b: Interpretation/Diagnosis – Ensure Accuracy

**SCENARIO/EVENT:**

Scenario 3, Event 7: DBA Steam Generator Tube Rupture on SG #1

**EXPECTED ACTION/RESPONSE:**

The applicant, as Senior Reactor Operator (SRO), was expected to direct low steam line pressure SI/SLI to be blocked when pressurizer pressure was less than 2000 psig, as indicated by the P-11 status lights, in accordance with procedure 19030-C, "E-3 Steam Generator Tube Rupture," Step 12.

**APPLICANT ACTION/RESPONSE:**

The applicant directed the Reactor Operator (RO) to block SI/SLI when pressurizer pressure was approximately 2007 psig, but his actions were not successful. At the time the applicant gave this initial direction to block SI/SLI, the P-11 status lights also indicated that blocking of SI/SLI would not be successful. A few minutes elapsed and the RO successfully blocked SI/SLI. After the scenario, the applicant was asked to explain why blocking SI/SLI was not initially successful. The applicant stated that she thought pressurizer pressure was 1998 psig. She stated that P-11 must not have been at that same point. The SRO was downgraded in this competency because she did not ensure the appropriate interlock was met (pressurizer pressure below 2000 psig) when first attempting to block SI/SLI.

The applicant made two non-critical errors in this rating factor; therefore, a score of "1" was assigned.

**LACK OF ABILITY/KNOWLEDGE:**

The applicant demonstrated a weakness in her ability to ensure the collection of correct and accurate pressurizer pressure data.

**POTENTIAL CONSEQUENCES:**

The potential consequences of this error are related to an operator's ability to obtain accurate and complete information on which to base a diagnosis and subsequent operator actions that result from that diagnosis. Potential consequences may include challenges to coordinating multiple control room activities that must occur within a short period of time. This was demonstrated during the scenario when the RO was required to hold both HS-0500A and HS-0500B handswitches in BYPASS INTERLOCK at the same time SI/SLI was required to be blocked. An accurate initial diagnosis would have been conducive to providing clear direction to both board operators to accomplish both actions in a more controlled manner, thereby reducing the potential for human error during control board manipulations.



**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY**

**APPLICANT DOCKET NUMBER 55-23694**

**K/A (SRO IMPORTANCE RATING): 006A4.09 (4.2)**

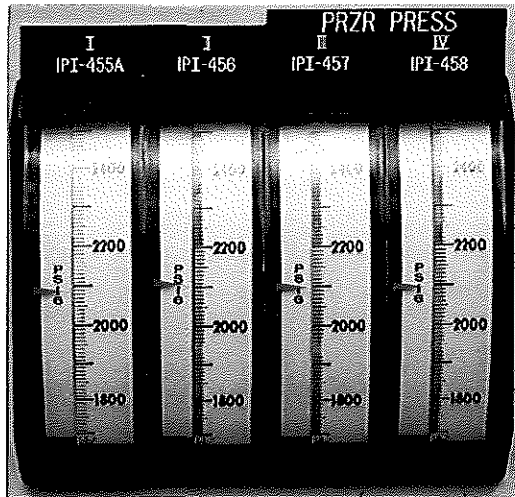
**10CFR55.45(a)(4):** Identify the instrumentation systems and the significance of facility instrument readings.

# Applicant Response

In response to, 1b: Interpret/Diagnosis – Ensure Accuracy (comment on page 10)

#### APPLICANT ACTION/RESPONSE

The event description states that the applicant directed the RO to block SI/SLI when pressurizer pressure was at approximately 2007 psig, but his actions were not successful. The examiner also identifies that the applicant stated that she thought pressurizer pressure was 1998 psig.



Pressurizer Pressure  
Instruments

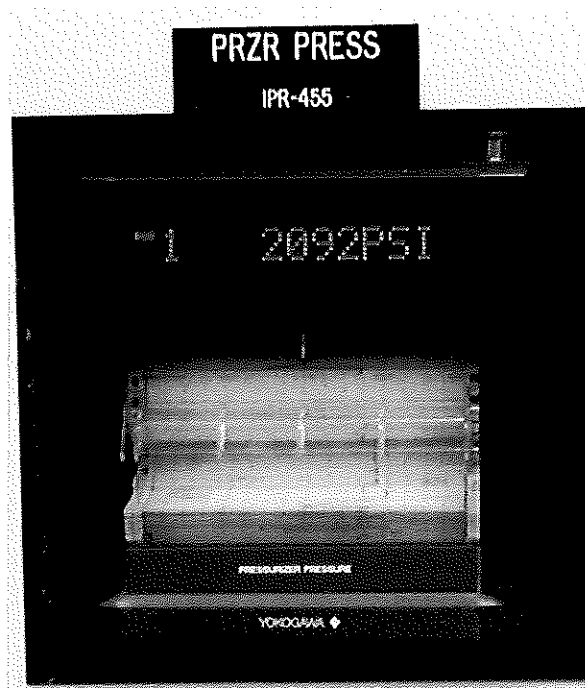
Note; reading the following values for the SRO desk would be very difficult NRC Examiner indicated he observed 2007 psig.

The NRC examiners event description is not accurate in reference to the attempt to block SI/SLI. When the applicant reached step 12 of 19030 and asked the RO if pressurizer pressure was less than 2000 psig. The RO's response was no and he identified that we were currently at a value slightly above the setpoint. The applicant directed the RO to notify her when pressure was less when 2000 psig so that SI/SLI can be blocked. The applicant also identified that this was a continuous action step. As soon as the pressure was less than 2000 psig, the RO notified the applicant that Pressurizer pressure was at 1998 psig. The applicant looked at the digital readout on PR 455 to verify that we were at 1998 psig (below the P-11 setpoint). Once verified, the applicant immediately directed the RO to block SI/SLI using the guidance from the RNO at step 12b of 19030, which states: "When PRZR pressure is less than 2000 psig and the high steam pressure rate alarms are clear then block low steamline pressure SI/SLI by performing 12 d." 12d:

**Block low steamline pressure SI/SLI using the following**

- HS - 40068
- HS - 40069

When the RO attempted to block the SI/SLI, the applicant did not see a status light change on the BPLB and identified that the block did not occur (Note; that using multiple/diverse plant indications and expected responses is normally considered a positive attribute for operator response and is not normally discouraged by the NRC). In addition, the applicant immediately looked up and noticed that the status of all the bistables did not change to meet the coincident for P-11 which was required to block P-11. Only one channel was extinguished (meaning that it was less than 2000 psig). The one channel that was extinguished provided input to the PR-455 recorder (that was verified prior to the action). Recognizing that the expected response was not obtained the SRO directed the initiation of the required blocks.



The SRO's actions in this case points to a good understanding of plant design using the correct procedure in a timely manner to perform multiple complex equipment operations with good communication between crew members in transient conditions.

# Supporting Documentation

Pg. 10 response:

Carla (SRO) asked me (RO) if pressurizer pressure was less than 2000psig. I informed her it was not at the time and she directed me, per continuous action step 12 of 19030-C, to block SI/SLI when pressure was below 2000psig:

**WHEN PRZR pressure is less than 2000 psig and the high steam pressure rate alarms are clear,  
THEN block low steamline pressure SI/SLI by performing Step 12.d.**

At approximately 1998 psig as read on the pressurizer pressure digital recorder Carla directed me, per the continuous action step, to block SI/SLI. I attempted to block it at this time, but was unsuccessful due to P-11 status lights still being lit while all indications of pressure were below 2000psig. After verifying the P-11 status lights were extinguished I was able to successfully block SI/SLI per step 12.d.

Approved By J. B. Stanley	<b>Vogtle Electric Generating Plant</b>	Procedure Number Rev 19030-C 37.1
Date Approved 2/18/10	<b>E-3 STEAM GENERATOR TUBE RUPTURE</b>	Page Number 10 of 56

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_c. Use intact SG ARV(s) for dumping steam.

\_\_\_ IF at least one intact SG can NOT be isolated from any ruptured SG,  
THEN go to 19131-C, ECA-3.1 SGTR WITH LOSS OF REACTOR COOLANT: SUBCOOLED RECOVERY DESIRED.

**CAUTIONS**

- This procedure should be performed in a timely manner to assure that break flow in the ruptured SG(s) is terminated before water enters the SGs main steam piping.
- Any ruptured SG that is also faulted, should remain isolated during subsequent recovery actions unless needed for RCS cooldown or SG activity sample.

**\*10. Check ruptured SG(s) level:**

\_\_\_a. SG NR level - GREATER THAN 10% [32% ADVERSE].

\_\_\_a. Maintain feed flow to ruptured SG(s).

\_\_\_ WHEN ruptured SG(s) level greater than 10% [32% ADVERSE],  
THEN stop feed flow to ruptured SG(s).

\_\_\_ Go to Step 11.

\_\_\_b. Stop feed flow to ruptured SG(s).

°  
°  
°

Approved By J. B. Stanley	<b>Vogtle Electric Generating Plant</b>	Procedure Number Rev 19030-C 37.1
Date Approved 2/18/10	<b>E-3 STEAM GENERATOR TUBE RUPTURE</b>	Page Number 11 of 56

ACTION/EXPECTED RESPONSE

- \_\_\_11. Check ruptured SG(s) pressure -  
GREATER THAN 290 PSIG.

RESPONSE NOT OBTAINED

- \_\_\_11. Go to 19131-C, ECA-3.1 SGTR  
WITH LOSS OF REACTOR  
COOLANT: SUBCOOLED  
RECOVERY DESIRED.

NOTE

When the low steamline pressure SI/SLI signal is blocked, main steamline isolation will occur if the high steam pressure rate setpoint is exceeded.

**\*12. Check if low steamline pressure  
SI/SLI should be blocked:**

\_\_\_a. Steam Dumps - AVAILABLE.

\_\_\_a. Go to Step 14.

\_\_\_b. PRZR pressure - LESS THAN  
2000 PSIG.

\_\_\_b. WHEN PRZR pressure is  
less than 2000 psig and the  
high steam pressure rate  
alarms are clear,  
THEN block low steamline  
pressure SI/SLI by  
performing Step 12.d.

\_\_\_ Go to Step 13.

\_\_\_c. High steam pressure rate alarms  
- CLEAR.

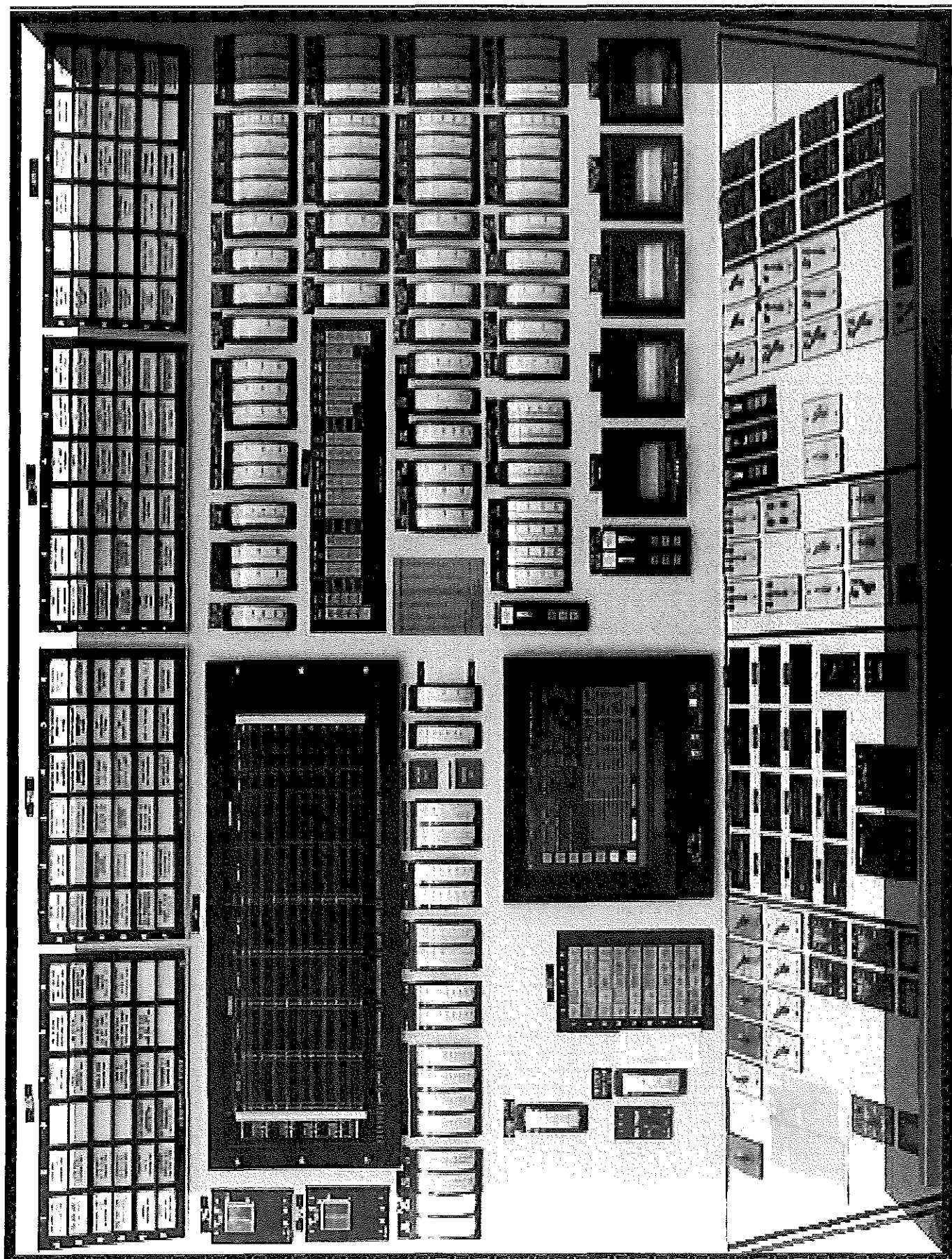
d. Block low steamline pressure  
SI/SLI using the following:

\_\_\_• HS-40068

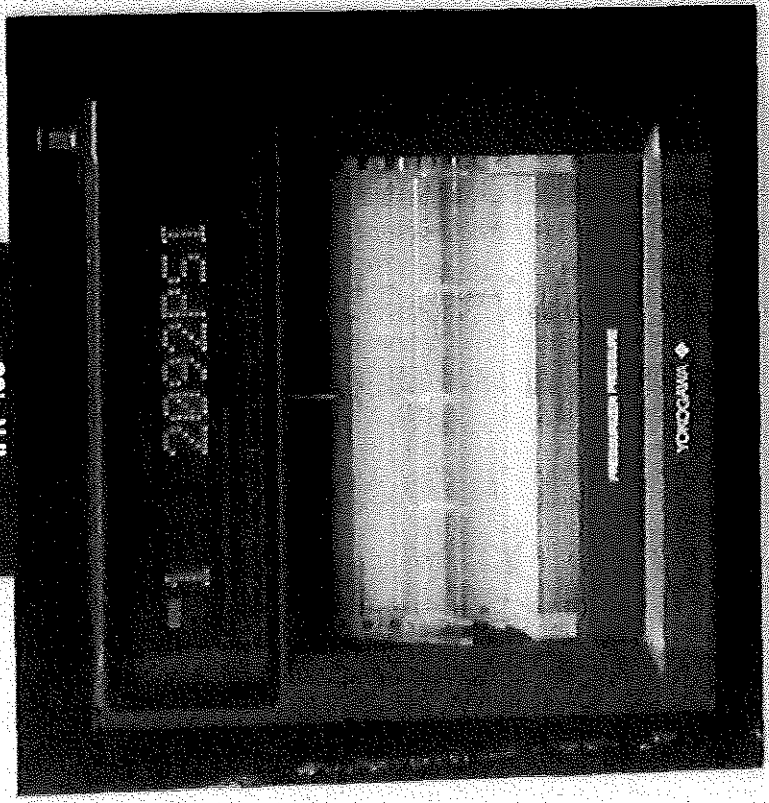
\_\_\_• HS-40069

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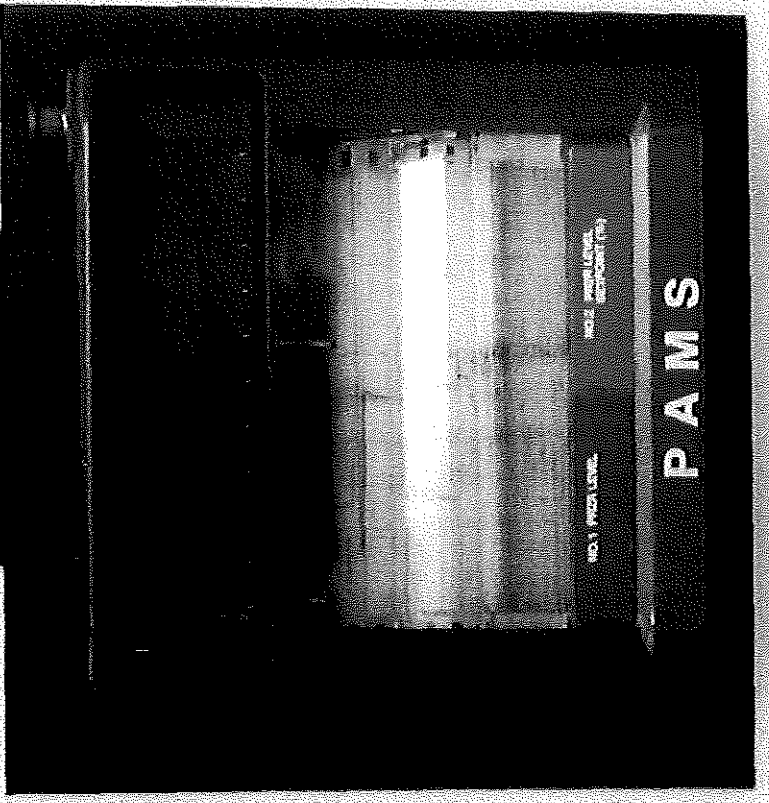


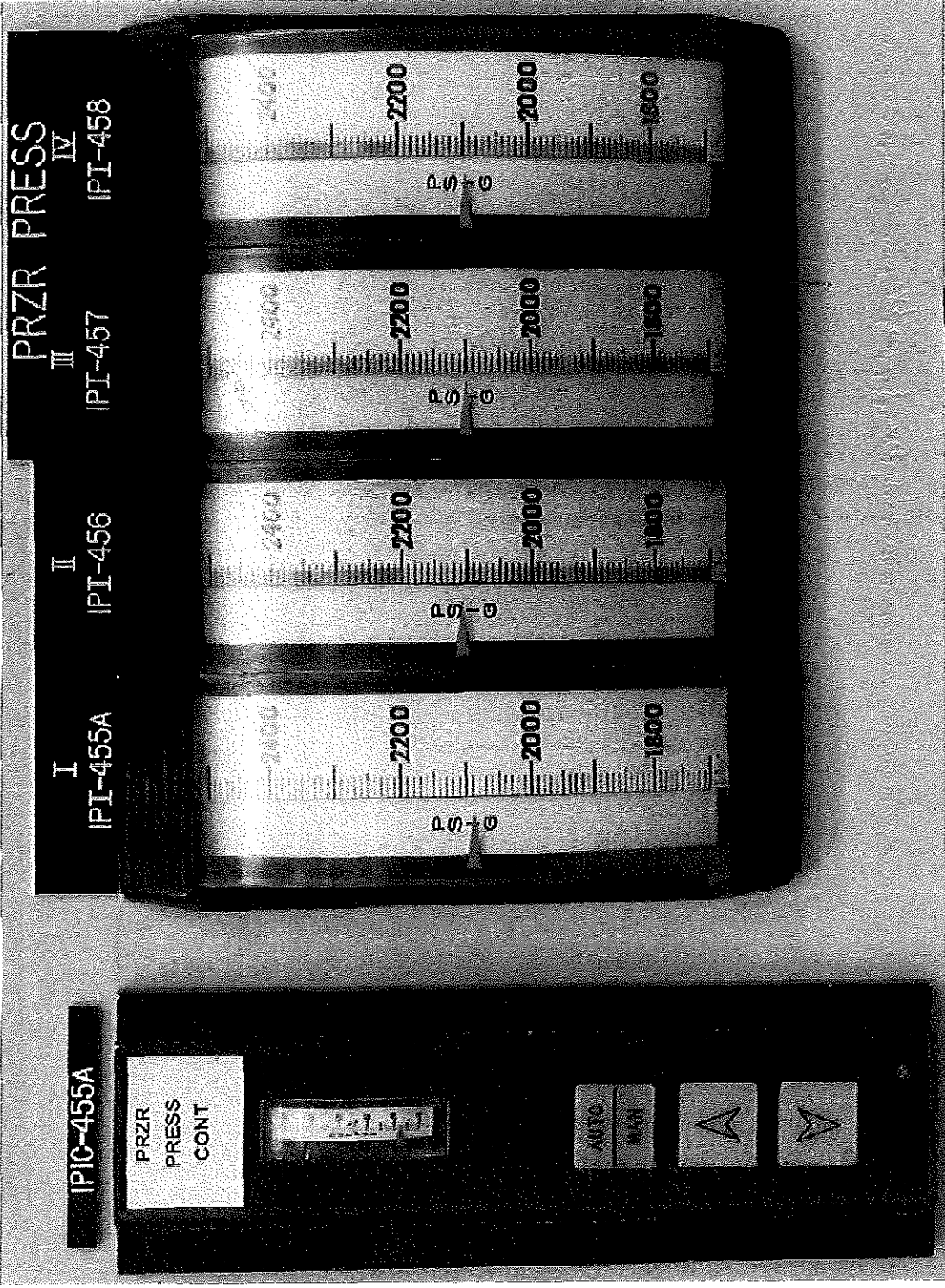


PRZR PRESS  
IPR-455



PRZR LVL  
ILR-459







BYPASS/  
PERMISSIVE  
1601058PLOC1

	1	2	3	4	5
1	SR TRIP BYPASS V1630	SR TRAIN A TRIP BLK'D	SI ACTUATED (RW5T)	SI ACTUATED	AUTO SI BLOCKED
2	SR TRIP BYPASS V1632S	SR TRAIN B TRIP BLK'D	PR OVER PWR ROD STOP MAN BYPASS (V149A CH)	STM LINE 150L TRAIN A SI BLOCKED	STM LINE 150L TRAIN B SI BLOCKED
3	PR TRIP BYPASS V1635A	PR TRAIN A TRIP BLK'D	PR OVER PWR ROD STOP MAN BYPASS (V149A CH)	PRZR TRAIN A SI BLOCKED	PRZR TRAIN B SI BLOCKED
4	PR TRIP BYPASS V1636A	PR TRAIN B TRIP BLK'D	PR OVER PWR ROD STOP MAN BYPASS (V149A CH)	LO LOY STM DLE INTLK P12	LO LOY STM DLE INTLK P12
5	SR BLOCK PERMISSIVE P6	PR LO SETTING TRAIN A TRIP BLK'D	PR OVER PWR ROD STOP MAN BYPASS (V149A CH)	LO TURB INT PRESS PERMISSIVE P13	SPRAY ACTUATION BYPASS CH 1 TEST
6	PR PERMISSIVE P10	PR LO SETTING TRAIN B TRIP BLK'D	OVER PWR AT ROD STOP TURBINE RUNBACK C3	PRZR LO PRESS SI BLOCK PERM PH	SPRAY ACTUATION BYPASS CH 2 TEST
7	LO POWER TRIP BLOCKED P7	CVI RAD	OVER PWR AT ROD STOP TURBINE RUNBACK C4	LOSS OF TURB LOAD INTLK O7	SPRAY ACTUATION BYPASS CH 3 TEST
8	1 LP LO FL TRIP BLK'D P8	C-16 LO TAVG 553 F	LO TURB INT PRESS ROD STOP O5	AMSAC BYPASSED LO TURBINE LOAD	SPRAY ACTUATION BYPASS CH 3 TEST
9	TURB TRIP/ OX-TRIP BLOCKED P-9	C-16 TREF-TAVG 320 F	CONDENSER AVAILABLE C9	CRITER CHARGE BLOCKED CHECK TEST	TEST

SI/Block  
BPLB

BPLB

	TRIP 92%	TRIP 1960	TRIP 2385	SI 1870	P-11 SI UNBLOCK 2000	PORV INTLK 2185
	PRZR HI LEVEL LB459A	PRZR LO PRESS PB455C	PRZR HI PRESS PB455A	PRZR LO PRESS PB455D	PRZR HI PRESS PB455B	PRZR LO-PRESS PB455H
	PRZR HI LEVEL LB460A	PRZR LO PRESS PB456C	PRZR HI PRESS PB456A	PRZR LO PRESS PB456D	PRZR HI PRESS PB456B	PRZR LO-PRESS PB456H
	PRZR HI LEVEL LB461A	PRZR LO PRESS PB457C	PRZR HI PRESS PB457A	PRZR LO PRESS PB457D	PRZR HI PRESS PB457B	PRZR LO-PRESS PB457H
		PRZR LO PRESS PB458C	PRZR HI PRESS PB458A	PRZR LO PRESS PB458D		PRZR LO-PRESS PB458H
15		16	17	18	19	TEST

MLB's  
Bistables

# Examiner's Comments

**PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY****APPLICANT DOCKET NUMBER 55-23694****CROSS REFERENCE:**

1.c: Interpretation/Diagnosis – Understanding

**SCENARIO/EVENT:**

Scenario 3, Event 4: Controlling Pressurizer Pressure Channel PT-455 Failed High

**EXPECTED ACTION/RESPONSE:**

The applicant, as Senior Reactor Operator (SRO), was expected to perform steps of 18001-C, "Systems Instrumentation Malfunction," Section C, to gain control of pressurizer pressure, select an unaffected channel on PS-455F, and return pressurizer pressure control to automatic. The applicant was not expected to maintain manual control of pressurizer heaters after the pressurizer pressure control system was realigned to function properly in automatic following the selection of an unaffected channel.

**APPLICANT ACTION/RESPONSE:**

The applicant entered 18001-C, Section C, and performed all steps with the exception of directing pressurizer heaters to be placed in automatic. When the applicant reached Step C8.b to place heaters in automatic, she stated that they were going to wait to place heaters in automatic. She also stated, "I do not think heaters are operating properly." A few minutes later, the SRO informed the Reactor Operator (RO) that he could place the pressurizer heaters in automatic. Instead, the RO placed the "A" backup heaters to ON. The applicant permitted the RO to manually control pressurizer heaters for the remainder of the scenario. After the scenario, the applicant was asked to explain her actions pertaining to pressurizer heater operation during the scenario. The applicant stated that she did not want to place heaters to automatic until pressure was lower. The applicant was downgraded in this competency because the pressurizer pressure control system was functioning properly after an unaffected channel was selected, and the applicant decided not to direct completion of 18001-C, Step C8.b, which would have returned heaters to automatic.

The applicant made two non-critical errors in this rating factor; therefore, a score of "1" was assigned.

**LACK OF ABILITY/KNOWLEDGE:**

The applicant demonstrated a weakness in understanding that the pressure control system, including the pressurizer heaters, were working as designed after the selection of an unaffected channel.

**POTENTIAL CONSEQUENCES:**

The potential consequences of this error include placing unnecessary burden on control room operators by maintaining manual control of parameters that have the capability of being automatically controlled. Furthermore, a misunderstanding of automatic pressure control could cause incorrect pressure control manipulations.