

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
1	F	2												B	S	2011 Cert Exam
2	F	2												B	E	08-1 NRC Exam, 11-1 Cert Exam; 2X2 NRC: Please clarify in the pedigree; <u>why</u> is it that main condenser overpressurization <i>could occur</i> but is not the primary concern for this question? <u>Response:</u> Revised the pedigree of the two distractors dealing with condenser overpressurization to state the following: "Part two is plausible because overpressurization of the main condenser is a concern at the plant, which is why the condenser has atmospheric relief diaphragms installed to protect it. If too much steam is supplied to the main condenser, it could result in an increase in Main Condenser pressure and cause these diaphragms to rupture. The steam from the extraction check valves, in the example given, is sent to the main condenser, after going through the turbine, but is too small to have a direct impact on main condenser pressure." NRC: Updated question is SAT .

Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 (easy) to 5 (difficult); questions with a difficulty between 2 and 4 are acceptable.
3. Check the appropriate box if a psychometric flaw is identified:
 - § "Stem Focus": The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - § "Cues": The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length).
 - § "T/F": The answer choices are a collection of unrelated true/false statements.
 - § "Cred. Dist": The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - § "Partial": One or more distractors are partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
 - § "Job Link": The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - § "Minutia": The question requires the recall of knowledge that is too specific for the closed-reference test mode (i.e., it is not required to be known from memory).
 - § "#/Units": The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - § "Backward": The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are designated "SRO-only." (K/A and license-level mismatches are unacceptable).
6. Enter question source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet criteria of ES-401 Section D.2.f.
7. Based on the reviewer's judgment, is the question, as written, (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
8. At a minimum, explain any "U" status ratings (e.g., how the Appendix B psychometric attributes are not being met).

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3	F	3												B	S	10-1 and 18-1 NRC Exams; Embedded Reference
4	H	3												B	S	18-1 NRC Exam
5	F	3												B	S	2009 NRC Exam; 2X2
6	H	2												N	U S	<p><u>2X2</u></p> <p><u>NRC:</u> It is implausible to have pump cavitation occurring, as indicated by all possible answers, <i>without</i> vibration. As a 2X2 question, this results in 2 implausible distractors.</p> <p><u>Response:</u> This question was validated by 6 operators and had a 66.7% validation rate. Therefore, we believe that the original question is discriminating, and is not implausible. Revised question to a 1 x 4.</p> <p><u>NRC:</u> The revised question is SAT.</p>
7	H F	3												B	E	<p>2017 NRC Exam; 2X2</p> <p><u>NRC:</u> It is implausible that the Unit 2 Isolation Condenser would isolate upon a loss of 125 VDC Bus 3B-1 (versus 125 VDC Bus 2B-1). As a ~2X2 question, this results in 2 implausible distractors.</p> <p><u>Response:</u> Provided a new 1 x 4 question.</p> <p><u>NRC:</u> The updated question is "F" and SAT.</p>
8	F H	3												B	E	<p>15-1 NRC Exam; 2X2</p> <p><u>NRC:</u> It is necessary to put together a couple pieces of information to answer the question correctly – so why isn't this a higher cognitive level question?</p> <p><u>Response:</u> Changed to High Cognitive level.</p> <p><u>NRC:</u> The updated question is "H" and SAT.</p>
9	F	3												B	S	11-1 NRC Exam, 15-1 NRC Exam, 16-1 Cert Exam
10	F	2												B	E	<p>2017 NRC Exam</p> <p><u>NRC:</u> Include in the pedigree why this question is considered RO knowledge – does it apply to a learning objective? Please clarify.</p> <p><u>Response:</u> Per the Fac Rep, ROs are expected to know the requirements for standing orders, including what they can be used for. The distractors address uses of standing orders for tasks which would not meet the procedural adherence or technical specification</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																usage requirements, and would fall outside of allowable standing order allowable usage. NRC: The updated question is SAT .
11	H	3		?										N	E	NRC: Bolding "NO", and having it appear in two (correct or partially) distractors could be considered cueing. Consider using another incorrect value for distractor "A" and remove the bolding from the correct response. Response: Removed the BOLD from 'NO' in the answers 'A' and 'B', but did not otherwise change the answer for distractor 'A', since a review of the question shows that changing the value of boron being injected in part 1 of distractor 'A' would invalidate part 2 of that answer. This is because the decision to inject with Alternate SBLC would only valid if boron is NOT injecting. NRC: The updated question is SAT .
12	F	3										?		N	E	2X2 NRC: The "Answer Explanation" needs to specify how the question addresses the K/A for the operational implications of Secondary containment integrity, versus validating the alarm and what the actual RB DP is. Response: Provided a revised version of this question. NRC: The revised question is SAT .
13	F	2												B	E	NRC: The pedigree for distractor "A" needs to specify that it would also be in for a Channel A, since it is already in for Channel B. Response: Added to the pedigree for distractor 'A': "For a successful SCRAM to occur, annunciator 902-5 D-10, CHANNEL A RX SCRAM annunciator would also be alarming." NRC: The updated question is SAT .
14	H	3		?										B	E	NRC: Is the term "degraded voltage" significant in identifying the correct answer? If so, perhaps "lower voltage" should be used to describe the condition. Response: Changed "degraded voltage" to "low voltage" in the question and pedigree. Revised stem of question to clarify that voltage just dropped to 3700 VAC, and that it remains at that level. NRC: The updated question is SAT .

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15	H	2	?											B	E	08-1 NRC Exam; 09-1 Cert Exam; 18-1 NRC Exam ; Embedded Reference NRC: What is the advantage of expressing SBTG flow with the meter versus simply providing a value? Is an embedded reference beneficial? Response: The intent of the meter was to make the question more operationally relevant, by not simply providing the value (the operator must read it). The question was enhanced by removing the embedded reference and adding the actual value of SCFM readings to the answer and distractors. NRC: The updated question is SAT .
16	H	3												B	S	2013 Cert Exam
17	H	3												B	S	2010 NRC Exam
18	F	2												B	E	2010 NRC Exam, 2012 NRC Exam NRC: There are a couple of typos in the pedigree which need to be addressed, such as "BYBASS" and "the the signal," for example. Response: Corrected the typos in the pedigree. NRC: The updated question is SAT .
19	H	2												N	S	2X2
20	F	2												B	S	2013 Cert Exam; ILT 14-1 NRC Exam; 15-1 Cert Exam
21	H	3												B	S	2017 NRC Exam
22	H	2												B	S	2017 NRC Exam; 2X2
23	F	2												B	S	2008 NRC Exam
24	F	2												N	E	NRC: While this is an easier question for someone who was a former NLO, putting familiar actions into correct words is more discriminating. For clarity, I recommend labeling the parts of each distractor as 1) and 2) to clearly associate the parts of the given choices to their answers. Also, the pedigree should spell out how the question meets the K/A, citing methodology and procedure references, to address any possible questions. Response: Added "1)" and "2)" to the question, answer and the distractors to enhance clarity, as recommended. Procedures OP-AA-109-101, PERSONNEL AND EQUIPMENT TAGOUT PROCESS, and HU-AA-101, HUMAN PERFORMANCE TOOLS AND VERIFICATION PRACTICES, define what type of verification will be used for placing or removing a

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																clearance order. Finally, OP-AA-108-101-1001, COMPONENT POSITION DETERMINATION, specifies how the component will be verified. The operator performing the specified verification method (which in this case would be independent verification) must understand how the specified position verification will be performed. Procedure references were added to the pedigree as a note. (Question ID 27828) <u>NRC</u> : The updated question is SAT .
25	H	3												B	E	<u>NRC</u> : The pedigree and distractors should be modified, as required, to clearly indicate that there is only <u>one</u> correct answer, not a best choice among more than one possibility. <u>Response</u> : Revised the last sentence of the question stem to state the following: "Which ONE of the following actions should be taken to provide decay heat removal comparable to the amount lost due to the trip of the 2B SDC Pump?" (Question ID 27722) <u>NRC</u> : The updated question is SAT .
26	H	2												B	E	<u>NRC</u> : The pedigree and/or distractors should be modified, as required, to clearly indicate what the possible "parameter of primary concern" might be. Since no concerns is the correct response, <u>why</u> this is true must be supported <u>Response</u> : Enhanced question by changing lake temperature to 70 °F, adding that the TBCCW controller was set at 80 °F, and added to the answer pedigree: "Since Dresden lake temperature is at 70°F, the TBCCW outlet temperature will not lower below 70°F, which is an allowable temperature per DOP 3800-01, Turbine Building Closed Cooling Water Operation. Therefore, with a failed open TCV, none of the listed equipment would be impacted, and there is no parameter of concern" (Question ID 27707) <u>NRC</u> : The updated question is SAT .
27	H	3												B	S	
28	F	2												B	E	Free Look Question #1; 2017 NRC Exam <u>NRC</u> : The pedigree lacks detail of how each of the flow values were determined and/or an "Answer Explanation" summary to help provide support for the question's required attributes (LOD, distractor plausibility, K/A justification, etc.). <u>Response</u> : (Question ID 27698) Updated the explanation to provide the reference for CS pump and LPCI pump nominal flow (TSG-2). <u>NRC</u> : Updated question is SAT .

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29	H	3												B	S	2017 NRC Exam
30	H	3												B	E	<p>Free Look Question #2; 2009 NRC Exam</p> <p>NRC: Since this is a modified bank question, please provide the original bank question and/or a description of how it was modified for review as a significantly modified (versus bank) question. Also, the stem has "</p> <p>Response: (Question ID 27829) (The 2009 NRC exam question was Question ID 12933) Original version of 2009 NRC exam question was provided.</p> <p>Minor changes made to the ILT 20-1 NRC Exam question under new Question ID 27842 (provided). The changes were not enough to justify calling this Significantly Modified, so it was changed to bank.</p> <p>NRC: Updated question is SAT.</p>
31	F	2												B	S	
32	F	2												N	S	<p>2X2</p> <p><u>Licensee:</u> The station changed the stem from 90 mr/hr to 105 mr/hr, changed procedure listed in stem to RP-AA-18, RADIOLOGICAL POSTING AND LABELING PROGRAM DESCRIPTION, and added RP-AA-18 to references. This was done due to discovery of a procedural conflict between NISP-RP-004, RADIOLOGICAL POSTING AND LABELING and RP-AA-18, RADIOLOGICAL POSTING AND LABELING PROGRAM DESCRIPTION, which could have led to candidates challenging the answer. An Issue report will be written following the completion of the exam to have this conflict addressed.</p> <p>NRC: The question changes, as described, are acceptable. Updated question is SAT.</p>
33	F	2												B	S	
34	H	3												B	S	2012 NRC Exam; 2010 NRC Exam; 2X2
35	F	2												B	S	
36	H	2												B	S	NRC 2008 Exam
37	H	3												N	S	
38	H	3												B	S	<p>Free Look Question #3; 2012 NRC Exam; 2X2 (Question ID 27727)</p>

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39	H	2												N	E	<p>2X2</p> <p><u>NRC:</u> The question would be clearer if repeated words were brought up into the stem. Also, provide an explanation in the pedigree for why this is a memory-level question ("F").</p> <p><u>Response:</u> Enhanced question by bringing repeated words up into the stem. Reviewed question and changed to High Cognitive Level ("H"). (Question ID 27856)</p> <p><u>NRC:</u> Updated question is SAT.</p>
40	H	3												B	S	2007 NRC Exam
41	H	3												M	E	<p>Free Look Question #4; 3-1 NRC Exam; 2X2</p> <p><u>NRC:</u> Please specify when the "3-1 NRC" exam occurred.</p> <p><u>Response:</u> (Question ID 27756) The original version of this question was on the NRC Exam given in 08/2004, where it was question 49. It was significantly modified from the original version. Original version of question was provided.</p> <p><u>NRC:</u> Updated question is SAT.</p>
42	H	3												B	S	2008 NRC Exam; Reference Provided
43	H	3												B	S	2009 NRC Exam; 2X2
44	F	2												B	E	<p><u>NRC:</u> Provide an explanation in the pedigree for why this is considered a high-level question ("H"), since the question can be answered correctly by recalling that Unit 3 Pumpback air compressors are cooled by Unit 2 power.</p> <p><u>Response:</u> Changed question to Low Cognitive level ("F"). (Question ID 27688)</p> <p><u>NRC:</u> Updated question is SAT.</p>
45	F	2												B	E	<p>2010 NRC Exam</p> <p><u>NRC:</u> The question would be clearer if repeated words were brought up into the stem.</p> <p><u>Response:</u> The word "To", which was at the beginning of all four answers, was brought into the stem of the question, and the question slightly rephrased to allow its use. Since the question would become significantly more complex if the common phrase "Torus" or "Torus water" were brought in to the stem, due to the different answers being addressed (i.e.. temperature rise, adequate mixing, and maintaining within the normal operating band), they were left in the distractors. (Question ID 27694)</p> <p><u>NRC:</u> Updated question is SAT.</p>

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46	H	2			×									B	E	<p>03-1 NRC Exam; 2X2</p> <p><u>NRC:</u> It is not plausible that the recorder reading would remain the same when the ranges are changed per answers 'B' and 'D.' Consider addressing whether the range needs to be changed at this point to help eliminate the need to repeat these recorder readings.</p> <p><u>Response:</u></p> <p>At Dresden, changes to the IRM range switch cause a shift in both the displayed range and (for even to odd range switch position changes ONLY) a change in the displayed value of the reading. For change from an odd range switch position to an even range switch position, the value of the reading remains the same, but the indication range changes. For example, if the range switch were on range 1, with a value of "35" indicated, the displayed value would be shown on a 0-40 scale. Changing the IRM range switch to position 2 would still result in "35" being indicated, but it would be displayed on a 0-125 scale. When the IRM switch was taken from range 2 (even position) to range 3 (odd position) the value of "35" would then change to "3.5" and would be indicated on a 0-40 indicated range.</p> <p>Therefore, it is plausible that the indicated value of "70" in answer 'B' and 'D' could remain the same (the answer would be correct if the range switch were changing from an odd position to an even position. The wording in the first paragraph (above) was added to the pedigree section to enhance the explanation of the question.</p> <p>(Question ID 27733)</p> <p><u>NRC:</u> Updated question is SAT.</p>
47	H	3												B	S	
48	F	2				×								M	E	<p>Free Look Question #5; 3-1 NRC Exam</p> <p><u>NRC:</u> 1) Please specify when the "3-1 NRC" exam occurred. 2) Choice 4 is implausible and appears in all 3 incorrect answers. Consider modifying the question to ask for the purpose of the SBLC system.</p> <p><u>Response:</u></p> <ol style="list-style-type: none"> 1) The NRC 3-1 exam occurred in 08/20 - (Question ID 0403-1 NRC-5853 was provided for comparison) 2) The original "free look" question (Question ID 27760) was revised to be a 2x2, with SBLC purpose added. (<u>NOTE:</u> The new Question ID is now 27851). 3) A K/A match justification was added for the modified question. <p><u>NRC:</u> Updated question is SAT.</p>
49	H	3												B	S	

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50	H	3												N	E	<p>2X2</p> <p><u>NRC:</u> Is "as required" needed in all distractors? If so, please move it up into the stem for question clarity.</p> <p><u>Response:</u> Removed "as required", from the answer and distractors, and added "if required" to the stem of the question.</p> <p>Added "1" and "2" to the stem of the question, the answer and all distractors, to ensure clarity of which part of the question was being answered. (Question ID 27761)</p> <p><u>NRC:</u> Updated question is SAT.</p>
51	H	3												N	S	2X2
52	H	2												B	E	<p><u>NRC:</u></p> <ol style="list-style-type: none"> Distractor "A" is implausible - it can be refuted by data review alone. Remove "may have" and replace with "was" for the correct answer. <p><u>Response:</u> (Question ID 27764)</p> <ol style="list-style-type: none"> Replaced distractor "A" with a different distractor that cannot be refuted by data alone. Changed the correct answer to remove "may have" and replaced it with "was", as recommended. <p><u>NRC:</u> Updated question is SAT.</p>
53	H	3												N	S	
54	F	2												N	S	2X2
55	H	3												N	E	<p>Free Look Question #6; 2X2</p> <p><u>NRC:</u> Please explain in the pedigree what NF-AB-715 restrictions are and provide a copy of this reference.</p> <p><u>Response:</u> (Question ID 27769)</p> <p>NF-AB-715 notch restrictions are the same as those listed in DGP 01-01. Replaced NF-AB-715 in the explanation, with DGP 01-01, which specifies the information addressed in the stem of the question. DGP 01-01 is already a supplied reference. See DGP 01-01, Attachment A, step 5.a for this information.</p> <p><u>NRC:</u> Updated question is SAT.</p>
56	H	2												N	E	<p>2X2</p> <p><u>NRC:</u> For clarity, label the parts of each distractor as 1) and 2) to clearly associate the parts of the given choices to their appropriate stem questions.</p>

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																<p><u>Response:</u> Made the recommended change, used '1)' and '2)' for consistency with other questions. (Question ID 27832)</p> <p><u>NRC:</u> Updated question is SAT.</p>
57	H	2												N	S	
58	H	2												N	E	<p>2X2</p> <p><u>NRC:</u> For clarity, label the parts of each distractor as 1) and 2) to clearly associate the parts of the given choices to their appropriate stem questions.</p> <p><u>Response:</u> Made the recommended change, used '1)' and '2)' for consistency with other questions. (Question ID 27774)</p> <p><u>NRC:</u> Updated question is SAT.</p>
59	F	3										?		N	E	<p><u>NRC:</u> Please explain in the pedigree how the K/A is met by this question concerning the "design feature(s) and/or interlocks provide for personnel access without breaching secondary containment."</p> <p><u>Response:</u> See revised question. (Question ID 27775)</p> <p><u>NRC:</u> Updated question is SAT.</p>
60	H	2											?	B	E	<p>2010 NRC Exam; 2X2</p> <p><u>NRC:</u> Please explain in the pedigree how the K/A is met by this question concerning the "physical connections and/or cause-effect relationships between FUEL POOL COOLING AND CLEAN-UP and the Shutdown cooling system." Is this cause-effect relationship addressed in the DOA?</p> <p><u>Response:</u> Added the following K/A Justification: "The shutdown cooling system is designed to be able to line it up to the fuel pool in order to augment the fuel pool cooling system. This requires installing a spool piece, and physically separating the SDC suction and discharge of the SDC pump aligned to the fuel pool from the normal SDC flow path. The operator must recognize that although 3B SDC pump is aligned and running to the fuel pool, the high recirc loop temperature condition listed in the stem will NOT cause a trip of the 3B SDC pump; and therefore there is no impact to the fuel pool. The appropriate action, based on the stem of the question, is to address the loss of decay heat removal from the RPV using DOA 1000-01."</p> <p>DOA 1001-01 does address potential actions regarding use of SDC pumps for fuel pool cooling. For example, it allows redirecting SDC pumps that are aligned to the fuel pool, to the RPV if needed. In this case, re-aligning the pump will not accomplish anything, since it would simply trip also. The cause effect relationship is not directly</p>

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																stated in the DOA, but the operator must understand the relationship in order to determine required actions. (Question ID 27776) <u>NRC</u> : Updated question is SAT .
61	F	2												B	S	19-1 Cert Exam
62	F	2												B	E	2006 NRC Exam; 2009 Cert Exam; 2X2 <u>NRC</u> : For clarity, label the parts of each distractor as a) and b) to clearly associate the parts of the given choices to their appropriate stem questions. <u>Response</u> : Made the recommended change, except used '1)' and '2)' for consistency with other questions. (Question ID 27781) <u>NRC</u> : Updated question is SAT .
63	F	2				×								B	E	2017 NRC Exam <u>NRC</u> : Please explain in the pedigree how documenting in an IR is plausible – perhaps another option should be used (i.e. work request?). <u>Response</u> : Changed wording in distractors from “IR” to “Work Request”, as recommended. Changed stem to say TEMPORARILY disabling the alarm, to avoid confusion over actual plant deficiencies, which would require a work request (Question ID 27782) <u>NRC</u> : Updated question is SAT .
64	F	2												N	E	2X2 <u>NRC</u> : For clarity, label the parts of each distractor as 1) and 2) to clearly associate the parts of the given choices to their appropriate stem questions AND pull common words in each distractor up into the stem. <u>Response</u> : Made the recommended changes; used '1)' and '2)' for consistency with other questions. Moved the answer to position 'A' due to psychometrics. (Question ID 27785) <u>NRC</u> : Updated question is SAT .
65	F	2										?		N	E	<u>NRC</u> : Please explain in the pedigree how the K/A is met by this question concerning the “UNINTERRUPTABLE POWER SUPPLY” relationship. Is the ESS considered to be a UPS?? <u>Response</u> : Added the following K/A Justification to this question: Unit 2 ESS is an uninterruptable power supply that is fed from Bus 29, 250 VDC MCC #2, Bus 25 and MCC 28-2 via a rectifier, inverter, static switch and ABT. This question tests the

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																knowledge of the impact to APRMs if ESS was lost. Also added DOP 6800-01, ESSENTIAL SERVICE SYSTEM, as a reference. (Question ID 27786) NRC: Updated question is SAT .
66	F	2												B	S	15-1 NRC Exam
67	F	2				X								N	E	2X2 NRC: 1) For clarity, label the parts of each distractor as 1) and 2) to clearly associate the parts of the given choices to their appropriate stem questions AND 2) Please explain in the pedigree WHY an opposite response in core thermal would be plausible – would core differential pressure indication be more plausible? Response: 1. Made the recommended change, except used '1)' and '2)' for consistency with other questions. 2. Added additional justification to the pedigree to explain why an opposite response in core thermal power would be plausible. (Question ID 27853) NRC: Updated question is SAT .
68	H	2												N	S	2X2
69	H	3												N	S	2X2
70	H	2												N	S	2X2
71	H	2												N	S	2X2
72	H F	2	X											N	E	Free Look Question #7; 2X2 NRC: The question stem really asks for what order are the local actions performed in, since all listed actions are the same, but are listed in a different order. Statements 1 - 3 would be clearer if they read "At 250 VDC MCC 2A," for example, versus splitting the statement where it is currently divided. Response: The original "free look" Question ID was 27805. A new question was provided for the same K/A - (The new Question ID is 27857). NRC: Updated question (" F ") is SAT .
73	H	3		X										N	E	2X2 NRC: The question stem does not require any explanation, as provided in distractors A and C. These are different from distractors B and D and provide additional

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
																information which can be used to determine that they are incorrect. Thus, "due to auto start of 2/3A SBT" should be omitted from distractors A and C. <u>Response:</u> Made the recommended changes (Question ID is 27804). <u>NRC:</u> Updated question is SAT .
74	H	3												B	E	2010 NRC Exam NRC: Distractor A should be revised to say "RWCU system flow will be interrupted" to match the wording of the other distractors. <u>Response:</u> Made the recommended changes (Question ID is 27806). <u>NRC:</u> Updated question is SAT .
75	F	3												N	S	2X2
76	F	2											2	M	E	14-1 NRC Exam, 18-1 NRC Exam, 19-1 CERT Exam (<i>modified</i>) <u>NRC:</u> 1) The stem, as written, needs correction - "additional of amount time" should read "additional time." 2) Spell out what TCCP means on it first use. 3) The Answer Explanation needs to be clarified to ensure that the correct answer is the only correct answer (there are exceptions given that must be considered). 4) SRO Only Criteria needs to be spelled out in the pedigree. 5) Explain why this question should be considered significantly modified – the correct answer is essentially the same. <u>Response:</u> <ol style="list-style-type: none"> Changed that portion of the stem to say, "Assuming the reactor remains at power, this jumper may remain installed a MAXIMUM of _____ additional days before a 10CFR50.59 review MUST be completed." Spelled out TCCP in first use. Added to question that reactor remains at power. Added "direct" to bullet two, to clarify that is it is in direct support of maintenance. Since the jumper is listed as being in direct support of maintenance, and the reactor is at power, the maximum time it can remain installed is 90 days (15 days + 75 days = 90 days), Pedigree contains "SRO CRITERIA: 10CFR55.43(b)(3) - Facility licensee procedures required to obtain authority for design and operating changes in the facility." NUREG 1021, Rev 11, ES-401, PREPARING INITIAL SITE-SPECIFIC WRITTEN EXAMINATIONS, page 9, Section D.2.f, bullet 4, states "...significantly modify each question by changing at least one pertinent condition in the stem and at least one distractor. Changing the conditions in the stem such that one of the three distractors in the original question becomes the correct answer would also be considered a

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
																<p>significant modification. The intent or objective of the question does not necessarily have to be changed. Adding or deleting irrelevant information and making minor changes (e.g., the unit number, component train, or power level when it makes no difference) would not be considered a significant modification to the question.”</p> <p>This question was changed by changing the pertinent condition in the stem (i.e. how long the TCCP had already been installed) and changing the time listed in the answer and all distractors. This requires the student to recognize that they were in a 90-day time clock, know that the time begins at installation <u>not</u> discovery, and then calculate the time remaining until the 50.59 must be completed. (Question ID 27861)</p> <p><u>NRC</u>: Updated question is SAT.</p>
77	H	3												N	E	<p>Free Look Question #8; 2X2</p> <p><u>NRC</u>: 1) Please explain more fully in the pedigree why the question meets SRO-only criteria – what is Criteria 5? 2) Beyond the stem stating “What action is the SRO required to direct...” what SRO-only knowledge is needed to answer this question (all procedural references are the same)?</p> <p><u>Response</u>: The original “free look” Question ID was 27718:</p> <p>(1) Yes – it <u>was</u> SRO Only Criteria: 10CFR55.43(b)(5) – “Assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency situations.” Now, 10CFR55.43(b)(2) – “Facility operating limitations in the Technical Specifications and their bases,” was added to the pedigree since the question was replaced.</p> <p>(2) These are now based on two different procedural references. One is DOA 6800-01, LOSS OF POWER TO ESSENTIAL SERVICE SYSTEM BUS, used in distractors A and B. The second is DOP 6800-01, 6800-01, ESSENTIAL SERVICE SYSTEM, which is used for the answer and distractor D.</p> <p>(3) A new question was provided for the same K/A - (Question ID 27843).</p> <p><u>NRC</u>: Updated question is SAT.</p>
78	H	3												N	E	<p>Free Look Question #9; 2X2</p> <p><u>NRC</u>: 1) There are several extra characters currently visible in the question stem (<QQ 6394(1410)><<. 2) Please explain more fully in the pedigree why the question meets SRO-only criteria – what is Criteria 5?</p> <p><u>Response</u>: The original “free look” Question ID was 27765.</p> <p>(1) The characters are erroneous, due to translating between RTF and Word. This has been corrected.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
																(2) SRO Only Criteria: 10CFR55.43(b)(5) - Assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency situations. This has been added to the pedigree. The question was revised under a new question ID (Question ID 27850 – provided). <u>NRC</u> : Updated question is SAT .
79	H	3		2										B	E	2008 NRC Exam, 14-1 NRC Exam, 15-1 CERT Exam; Reference Provided <u>NRC</u> : Consider removing “ONLY” from distractor B – Drywell sprays are not permissible (per Figure K), other actions would be considered at this time, but the question asks what is needed NEXT. <u>Response</u> : Made recommended change. Reordered answers to address psychometrics. (Question ID 27741) <u>NRC</u> : Updated question is SAT .
80	H	3											2	N	E	Reference Provided ; 2X2 <u>NRC</u> : SRO <i>Only</i> Criteria needs to be explained in the pedigree. Note that DEOP 400-5, FAILURE TO SCRAM, is the <u>given</u> selected procedure for all possible answers. <u>Response</u> : SRO Justification : Per ES-401, Attachment 2, section II.E, 10CFR55.43(b)(5) includes the selection of a procedure or section of a procedure to “mitigate or recover or which to proceed”. In the associated question, the decision NOT to isolate the MSIVs that failed to close would be an SRO level decision. Normally, for a failure of an isolation valve to close, the correct action would be to isolate the valves that failed to function. The SRO must recognize that the need to protect containment overrides the need to close an MSIV that failed to close spuriously, and which has no indication of a valid Group 1 isolation signal. In this case containment is threatened and the guidance in DEOP 0400-05 for bypassing the MSIV low level and Off Gas High Rad isolations would be the correct choice in order to maintain the condenser as a heat rejection path outside of containment. Additionally, at Dresden the SRO makes the decision whether to terminate and prevent to -35 inches or to TAF. This was added to the pedigree. (Question ID 27834) <u>NRC</u> : Updated question is SAT .
81	H	2												N	S	Reference Provided
82	H	3												B	S	2016 NRC Exam; Reference Provided
83	F	2											2	B	E	2010 NRC Exam, 19-1 NRC Exam

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
																<p>NRC: SRO <i>Only</i> Criteria needs to be explained in the pedigree. Note that OP-AA-106-101, SIGNIFICANT EVENT REPORTING, is <u>given</u> in the stem.</p> <p><u>Response:</u> SRO Justification: At Dresden, the responsibility for Significant Event Reporting falls on the Shift Manager, and the SRO's are also expected to be familiar with these reportability requirements. This is not an RO level function at Dresden. (Question ID 27772)</p> <p>NRC: Updated question is SAT.</p>
84	H	3												N	E	<p>Free Look Question #10</p> <p>NRC: 1) There are several extra characters currently visible in the question stem (<QQ 27783(1410)><<). 2) Please explain more fully in the pedigree why the question meets SRO-only criteria – what is Criteria 5? 3) Why is distractor “A” in blue font? 4) Stem bullets are currently question marks (?). 4) Several typographical errors in the pedigree should be corrected, such as “Condensate/Feedwate,” “They DOA 0600-01 allows...” and “cross tying CRD,” for example.</p> <p><u>Response:</u> (Question ID 27783)</p> <ol style="list-style-type: none"> 1) The characters are erroneous, due to translating between RTF and Word. This has been corrected. 2) SRO Only Criteria: 10CFR55.43(b)(5) - Assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency situations. This has been added to the pedigree. Also, an SRO justification statement was added to the question. 3) Distractor A was changed to black font to match the other distractors. 4) Stem bullets have been fixed. 5) Corrected typographical errors <p>Updated question provided.</p> <p>NRC: Updated question is SAT.</p>
85	H	2												B	S	2012 NRC Exam, 2016 NRC Exam; 2X2
86	F	2				✘							?	N	U S	<p>NRC: 1) The Site Vice President is a clear choice for unlimited access to the Control Room during normal and abnormal operations. Given that 2 of the 4 choices have this access, it results in 2 implausible distractors. 2) SRO <i>Only</i> Criteria needs to be explained in the pedigree. Note that OP-AA-103-101, CONTROL ROOM ACCESS CONTROL, is <u>given</u> in the stem.</p> <p><u>Response:</u></p> <ol style="list-style-type: none"> 1. Revised question to address implausible distractor. 2. SRO Justification: At Dresden, the approval to enter the Main Control Room is given to the Unit Supervisors and Shift Managers only. The WEC

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																supervisor may allow an individual to enter the MCR doorway, but they remain in the vestibule until allowed by either Unit Supervisor to enter the control room itself. This responsibility is not delegated to the RO license level. This was added to the pedigree. (Question ID 27789) <u>NRC:</u> The revised question is SAT .
87	H	4 2				*							?	M	U S	18-1 NRC Exam (modified) <u>NRC:</u> With DEOP 0400-05 <u>provided</u> as a reference for Question 81, LOD =1 for the first part of this question (<i>DLU</i>), eliminating 2 distractors, and which is <i>also</i> the basis for the SRO-only justification. Note: Per DEOP 0400-05, recirc pumps are not tripped if power is less than 6%. Reactor power is below 6% with ALL 4 APRM downscalers lit. <u>Response:</u> Removed " Trip recirc pumps " from the provided reference, DEOP 0400-05, block Q-6. Removed "6%" from the provided reference, DEOP 0400-05, block Q-5 and Q-6. (Question ID 27859) <u>NRC:</u> The question is SAT with the DEOP 0400-05 provided reference being revised as described.
88	H	3												M	E	2017 NRC Exam (modified); 2X2 <u>NRC:</u> This question is the same as the original question provided (B?). <u>Response:</u> The original question provided was incorrect. The correct version of the original question from the 2017 NRC exam was provided with this document. (Question ID 27821) <u>NRC:</u> The question is SAT and was verified to be a MODIFIED question.
89	H	2												N	S	Reference Provided; 2X2
90	H	3												N	S	2X2
91	F	3												B	E	<u>NRC:</u> SRO <i>Only</i> Criteria needs to be more fully explained in the pedigree since assessment of facility conditions is performed but selection of appropriate procedures is not required. <u>Response:</u> SRO Justification: Per ES-401, Attachment 2, section II.E, 10CFR55.43(b)(5) includes the selection of a procedure or section of a procedure to "mitigate or recover or which to proceed". In the associated question, the Unit Supervisor must identify the actions needed in order to mitigate the significant increase in iodine level in the reactor coolant. (Question ID 27751)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
																	NRC: The updated question is SAT .
92	F	2												N	E		<p><u>Reference Provided</u>; 2X2</p> <p>NRC: There is too much HPCI system (and TS) focus for the <i>generic</i> K/A in this question (Per ES-401, D.2.a, "Ensure that the questions selected for Tier 3 maintain their focus on <i>plantwide generic K/As</i> and do not become an extension of Tier 2.")</p> <p><u>Response</u>: Provided new question with less TS focus, to ensure the question is not an extension of Tier 2. Changed question to Low Cognitive ("F") Level. (Question ID 27799)</p> <p>NRC: The new question is SAT.</p>
93	H	3												N	E		<p><u>Reference Provided</u>; 2X2</p> <p>NRC: SRO <i>Only</i> Criteria needs to be more fully explained in the pedigree – include applicable learning objective wording and why 10CFR55.43(b)(5) is applicable.</p> <p><u>Response</u>: Added an SRO justification to the pedigree. Justification included the learning objective description.</p> <p>SRO Justification: The first part of the question, assessing whether the Vortex or NPSH curves are being exceeded, is an SRO ONLY Learning Objective: 29501LP02: "Given a set of conditions for the containment and the ECCS systems, utilize the ECCS Vortex Limits and the ECCS NPSH Limits curves to determine if the curves are being violated (SRO ONLY)" The second part of the question is SRO Only Criteria: 10CFR55.43(b)(5). The conditions given require the SRO to assess the impact of exceeding the NPSH on the plant, and to determine which portion of the procedure they will use (maximum torus cooling, or reduced torus cooling). (Question ID 27809)</p> <p>NRC: The updated question is SAT.</p>
94	F	2				X								N	E		<p>2X2</p> <p>NRC: Determining the AOP's and EOP's precedence in part 1) of this question is minimally discriminating – selecting <i>all</i> AOPs over <i>all</i> EOPs is too simplistic to be plausible. Consider including Technical Specifications and specific high-level AOP's to improve the plausibility of these distractors.</p> <p><u>Response</u>: Revised question to include Technical Specifications, to improve discrimination. (Question ID 27801)</p> <p>NRC: The revised question is SAT.</p>
95	H	3												N	S		Reference Provided ; 2X2

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
96	H	2												N	S	2X2
97	F	3												N	E	2X2 NRC: 1) For clarity, label the parts of each distractor as 1) and 2) to clearly associate the parts of the given choices to their appropriate stem questions AND pull common words in each distractor up into the stem. 2) Explain why it was determined that the LOK for this question is "H" versus "F." Response: 1. Made recommended changes. 2. Changed LOK to F. (Question ID 27841) NRC: The updated question is SAT .
98	H	3												N	E	2X2 NRC: 1) For clarity, consider removing the words "continue to" from part (1) of distractors C and D. 2) Revise the bullets in the stem to avoid mixing tenses – "was" and "is." Consider: "SBLC Storage Tank level – 3800 gallons," for example. 3) Clean up the typos in the Answer Explanation and pedigree ("the the" etc.). Response: 1. Kept "continue to" in part 1 of distractors 'C' and 'D' to show this is an ongoing action, since without them it might be argued that the unit supervisor recognizes an issue with SBLC and is only directing the NSO to perform an assessment of the SBLC system. By putting continuing to monitor, it removes this potential. 2. Brought the initial SBLC storage tank level up into the first part of the question to avoid mixing tenses. 3. Removed the typo "the the" from the pedigree. (Question ID 27816) NRC: The updated question is SAT .
99	H	2												N	S	2X2
100	H	2												N	E	Reference Provided; 2X2 NRC: For clarity, clean up the typos in the pedigree ("level level," "at at,"etc.), rewording as required. Response: Cleaned up the typos in the pedigree ("level level," "at at,"etc.), (Question ID 27819) NRC: The updated question is SAT .

RO TOTALS:	B= 46 M= 2 N= 27	F= 32 H= 43	E= 36 U= 1	Additional Notes: 2 extra "F" question > Minimum
SRO TOTALS:	B= 5 M= 3 N= 17	F= 7 H= 18	E= 15 U= 2	Additional Notes:
<u>GENERAL COMMENTS:</u>				
1. Bank questions are indicated by B ; Modified are indicated by M ; New questions are indicated by N				
2. There are ___ (RO)/___ (SRO) questions with references/attachments provided.				

Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- Enter the level of difficulty (LOD) of each question using a 1 (easy) to 5 (difficult); questions with a difficulty between 2 and 4 are acceptable.
- Check the appropriate box if a psychometric flaw is identified:
 - § "Stem Focus": The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - § "Cues": The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length).
 - § "T/F": The answer choices are a collection of unrelated true/false statements.
 - § "Cred. Dist>": The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - § "Partial": One or more distractors are partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
 - § "Job Link": The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - § "Minutia": The question requires the recall of knowledge that is too specific for the closed-reference test mode (i.e., it is not required to be known from memory).
 - § "#/Units": The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - § "Backward": The question requires reverse logic or application compared to the job requirements.
- Check questions that are sampled for conformance with the approved K/A and those that are designated "SRO-only." (K/A and license-level mismatches are unacceptable).
- Enter question source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet criteria of ES-401 Section D.2.f.
- Based on the reviewer's judgment, is the question, as written, (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- At a minimum, explain any "U" status ratings (e.g., how the Appendix B psychometric attributes are not being met).