Comments and Question Modification History

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1   ☑ RO   ☑ SRO   Question ID: 5000001   Origin: New   ☐ Memory Level

1. (JMD 11/10/04) Okay, but fairly simple question.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (RJC 12/13/04) Licensee may argue RO level. Let it go, we will see.
4. (DAP 12/16/04) Recommend changing stem to "While performing 2601D "Safety Channel and Delta T Power Channel Calibration", the plant tripped. EOP 2525 "Standard Post Trip Actions' are complete.   The STA has just completed the first Safety Function Status Check (SFSC) for EOP 2526 "Reactor Trip Recovery". All Safety Functions are satisfied.|| A short time after the SFSC, the plant becomes unstable.|| Based on the following information, identify the procedure that must be implemented." Distractors are okay. Change original parameters as follows: CRS to US, pzr press 2010 to 2100, SG pressures 880 to 810, 900 to 870, SG levels 68% in #1, 64% in #2, Tc 531 to 528, Th 533 to 532.

   Reasons: #1 SG level is rising because the lower pressure pulls more FW into that SG. After a trip, the Feed Reg Vlvs are in manual so no auto level control.

   Reasons for my suggested change. If we tripped on a steam leak , even though it was not large enough for the 2541 Appendix 1 "DIAGNOSTIC FLOW CHART", the crews would still go from 2525 to 2536. This is done because 2536 "ESD" is the best EOP to do a cooldown and isolate the SG. Also, if there were a bad steam leak upstream of the MSIVs that was not degrading the plant, as indicated by the SG Pressures 880 and 900, the crew would not trip and close the MSIVs. Doing so would not isolate the steam leak, but more important, the thermo/hydraulic shock may open up the pipe and cause a rupture. They would probably do a rapid downpower and be off line ASAP without tripping from 100%.
5. (DEJ 01/10/05) Are there any fire alarms in "East Pen Area"? May want to add EPA FIRE Alarm in alarm. Also, is room temp available in CR, should add that too with trend. Great question.
6. (PAP 01/11/05) Changed CRS to US. US could plausibly order MSIV closure in response to large unapproachable leak in penetration room. Removed "upstream of MSIV MS-64A which has filled the area with steam" to make US direction more reasonable. Will ask licensee about fire alarm for that room and remote temp indication.
7. (JMD 01/31/05) Reviewed changes. Ok.
8. (RLC 03/15/05) Recommend modifying the stem by deleting reference to a large steam leak and replacing with a trip from loss of the 'A' FP. This puts the crew into a clean trip that allows them to complete 2525 and transition into 2526. With the steam leak, the crew would have never transitioned to 2526, they would have gone directly to 2536 (ESD).
9. (PAP, JMD 03/16/05) Modified as recommended. Discussed with licensee.

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2   ☑ RO   ☑ SRO   Question ID: 0054227   Origin: Bank   ☐ Memory Level

1. (JMD 11/10/04) Consider adding to stem to indicate that all of the required actions up to the desired answer have been performed.
2. (PAP 12/07/04) Left as-is, pending feedback from licensee review.
3. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
4. (DAP 12/16/04) Add "Pressurizer level is 33% and rising" to stem. Change distractor B to "Isolate Letdown." The original distractor [Manually initiate SIAS] is a valid answer. The operators are trained to manually initiate SIAS early if conditions degrade to the point that PZR Pressure is less than 1850 psia on a trip and still lowering. EOP-2525 (step #3 contingency) directs the operator to manually operate charging and letdown if pressurizer level is not beign restored to the 35-70% band. Level is at 33% and rising.
5. (PAP 12/28/04) Changed as recommended.
6. (DEJ 01/10/05) Give some PRT parameters too that show PORV's not leaking. What indications are there of spray flow? Temps?
7. (PAP 01/11/05) PORV leaking would be indicated by acoustic monitors. Enough information provided to rule out PORVs. Question requires applicant to use provided information to determine that spray valve must be open/leaking. Left question as is.
8. (JMD 01/31/05) Reviewed changes. Ok. No need for quench tank parameters, acoustic monitor given.

 # 3   ☑ RO   ☑ SRO   Question ID: 5000002   Origin: Bank   ☑ Memory Level

1. (JMD 11/10/04) Okay. Better if a more operational question.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04) Identified as memory level.
4. (DAP 12/16/04) Okay.
5. (DEJ 01/10/05) Wow. Great question.
6. (PAP 02/18/05) Added "RCP" to Choice A.
7. (RLC 03/15/05) New Accident Analysis performed for justification of removal of Charging Pumps from plant Technical Specifications verifies that on a SBLOCA the core is NOT uncovered. The question should be modified to allow for the K/A, however, distractor "B" can NOT state "core uncovery" is unique to a LBLOCA to be an incorrect response (Accident Analysis now states that it is). Recommend changing distractor B to "Only the LBLOCA requires heat removal from CTMT Spray."
8. (PAP, JMD 03/16/05) Modified Choice B as recommended. Discussed with licensee.

 # 4   ☑ RO   ☑ SRO   Question ID: 5000003   Origin: New   ☑ Memory Level

1. (JMD 11/10/04) Okay.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04) Identified as memory level.
4. (DAP 12/22/04) While the above question is technically true, in reality it isn't. The explanation in the text is correct for a simple (2 or 3) redundant sensor logic. But Tc is calculated based on six sensors, and 4 are bypassed at low temp like a LBLOCA. If you want to keep this format (i.e., 'U' or 'R' quality tags) PZR level would be better. Recommend the following alternative question: "The reactor automatically tripped. The US has just entered EOP 2525. No operator actions have been taken.|| Using the attached copy of the SPDS Display, identify the event that has occurred? A. Excess Steam Demand inside Containment. B. Steam Generator Tube Rupture on #2 S/G. C. Loss of Coolant Accident D. Loss of Feedwater."

The attached displays were copied off of the simulator during a LBLOCA. Page 2 (1 min Post LOCA) should be used for this question. Using these display, we could ask dozens of questions - call me to explore the options.
5. (DEJ 01/10/05) I don't think your Q matches K/A, and is minutia. I really like utility Q, but need screens printed in color.
6. (JMD 01/31/05) Recommend implement licensee recommendations.
7. (PAP 02/07/05) Changed per licensee recommendations. Need SPDS handout from licensee for 1 minute after initiating fail open of #2 FRV at full power, followed by LBLOCA concurrent with the reactor trip.
8. (PAP 02/17/05) Capitalized NO in stem.

 # 5   ☑ RO   ☑ SRO   Question ID: 5000004   Origin: New   ☐ Memory Level

1. (JMD 11/10/04) Okay.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (RJC 12/13/04) Change "from the answers below" to "from the choices below".
4. (PAP 12/13/04) Changed "answers" to "choices" as recommended in #2 above.
5. (DAP/RJA 12/16/04) Okay. Was it intentional to have a failed middel seal on "C" RCP?
6. (PAP 12/28/04) Fixed typo in stem.
7. (DEJ 01/10/05) Is pump nomenclature no correct (1A, 1B, 2A, 2B) vs (A, B, C, D)? Is 200# d/p criteria part of a objective where it is required from memory? If not, fully fail the seal. Same wiith S/D vs trip criteria.
8. (PAP 01/12/05) Yes, nomenclature correct. Also, Obj RO-32 of RCS lesson requires the applicant to know operating restrictions for one and two failed seals. Another objective requires operator to know basis for all procedural cautions and notes. No changes required.
9. (PAP 02/17/05) Capitalized NOT in stem.

6 ☑ RO ☑ SRO   Question ID: 5000005   Origin: New   ☐ Memory Level

1. (JMD 11/26/04) K/A mismatch. Doesn't address console ops. Modification suggestion: An RCS leak occurs which lowers level in the pressurizer by 10%, and is then isolated by the crew. The RO restores level in the pressurizer. With no auto makeup, VCT level will decrease by _____ , and the operator will have to perform a manual makeup of _____ gallons to restore VCT level.
2. (PAP 11/30/04) Comment resolved by adding to stem so that applicant must identify whether controller output must be raised or lowered to address the event.
3. (JMD 12/08/04) Reviewed changes. No comments.
4. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
5. (RJC 12/13/04) Underline "approximately" in stem.
6. (PAP 12/13/04) Database will not allow underlining of individual word in a field.
7. (DAP 12/16/04) Okay. Recommend changing "If auto makeup fails to start" in stem to "With no makeup to the VCT".
8. (PAP 12/28/04) Changed stem as recommended by licensee.
9. (DEJ 01/10/05) Fine.
10. (PAP 02/17/05) Capitalized NO in stem.
11. (PAP 02/18/05) Changed "prior" in stem to "rate at which it was decreasing".
12. (RLC 03/15/05) Recommend rewording question to remove "fill-in" design and clarify soliciting of knowledge of size difference between PZR and VCT through the use of specific numbers in rate of lowering. [Proposed: change stem to provide initial rate of pzr decrease (2%/10 min), change choices to provide rate of VCT decrease (4%/10 min, 1%/10 min, 6%/10 min, 1.5%/10 min]
13. (PAP, JMD 03/16/05) Modified structure of question as recommended. Discussed with licensee.

7 ☑ RO ☑ SRO   Question ID: 5000006   Origin: New   ☐ Memory Level

1. (JMD 11/26/04) Distractors C and D are the same. Try a runout flow distractor.
2. (PAP 12/07/04) Modified C and D to provide SI-306 position. Valve is full open in C and full closed in D.
3. (JMD 12/08/04) Reviewed changes. No comments.
4. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
5. (RJC 12/13/04) Are we sure B, C, D are not potential causes. Can we eliminate "could" from the stem?
6. (PAP 12/13/04) Deleted "could" from the stem as recommended.
7. (DAP 12/16/04) Okay. Change "Total SDC RHR Flow" to "SDC Total Flow". Change distractor B "at" to "is".
8. (PAP 12/28/04) Changed as recommended by licensee.
9. (DEJ 01/10/05) Capitalize "oscillating" in stem. Good Q.
10. (PAP 01/10/05) Changed as recommended by Don.

8 ☑ RO ☑ SRO   Question ID: 5000007   Origin: Bank   ☐ Memory Level

1. (JMD 11/26/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP 12/16/04) Okay. Change 300°F to 280°F. Greater than 300°F is not allowed per 2310 Step 3.3. 300°F is too close. Change "thermal barrier" in Choice A justification to "letdown heat exchanger".
4. (PAP 12/28/04) Changed as recommended by licensee.
5. (DEJ 01/10/05) Good Q.

9 ☑ RO ☑ SRO   Question ID: 0053364   Origin: Bank   ☐ Memory Level

1. (JMD 11/26/04) Verify the AOP doesn't require the operator to verify heaters on. If it does, reword stem: "Which of the following actions by itself would maintain ..".
2. (PAP 11/30/04) Moved d to c, c to b, and b to d which makes c the correct answer. Maintaining equal number of a's, b's, c's and d's on test as the correct answer.
3. (PAP 11/30/04) Modified the stem as recommended to read "following actions, taken by itself ..".
4. (JMD 12/08/04) Reviewed changes. No comments.
5. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
6. (RJC 12/13/04) Change "itself" to "themselves" in stem.
7. (PAP 12/13/04) Changed as recommended in #6 above.
8. (DAP 12/16/04, RJA 12/21/04) Okay.
9. (DEJ 01/10/05) Good Q.
10. (PAP 02/17/05) Capitalized NOT in stem.
11. (RLC 03/15/05) Recommend modifying first sentence [of stem] to indicate the PT that is controlling, instead of the PT that "is NOT" controlling.
12. (PAP, JMD 03/16/05) Modified first sentence in stem as recommended. Discussed with licensee.

10   ☑ RO   ☑ SRO   Question ID: 1000045   Origin: Bank   ☑ Memory Level

1. (JMD 11/26/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04) Identified as memory level.
4. (DAP 12/16/04, RJA 12/21/04) Okay. Change distractors from "or more" to "greater than or equal to".
5. (DEJ 01/10/05) May want to ensure "D" can't be argued. May want to lower to 20 psi or swap #2 and #1. Good Q.
6. (PAP 01/28/05) Changed as recommended by Don.
7. (PAP 01/31/05) Changed as recommended by licensee in Item 4 above.

11   ☑ RO   ☑ SRO   Question ID: 0071648   Origin: Bank   ☐ Memory Level

1. (JMD 11/26/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (RJC 12/13/04) Add "IAW EOP-2536, Excess Steam Demand Event" to the stem. Are these immediate actions? If yes, not naming procedure okay. If they are supplemental actions, will naming the procedure give away answer?
4. (PAP 12/13/04) Modified stem as recommended in #4 above.
5. (DAP/RJA 12/21/04) Okay. Change Choice C from "Manual Loading Stations" to "Controllers on C-05".
6. PAP 12/28/04) Implemented licensee recommendations as follows: added "on Panel C-05" to stem, changed "Manual Loading Stations" to "Controllers" in Choice, modified "momentarily shift" in choice to "shift #2 .. momentarily to ..", swapped Choices C and B.
7. (DEJ 01/10/05) May be able to argue "A" correct since it is in procedure. I think could mitigate event depending on leak location. (Break on AFW line). Why has AFAS not actuated? Do they have auto AFAS block?
8. (PAP 01/10/05) In reference to comment that "A" may be argued correct - this is bank question, licensee had no comment about the distractor, question asks what action "to mitigate this event". AFAS has not actuated because of actuation time delay.
9. (JMD 01/31/05) Reviewed changes. Ok.
10. (PAP 02/17/05) Capitalized NOT in stem.

12   ☑ RO   ☑ SRO   Question ID: 5000008   Origin: New   ☐ Memory Level

1. (JMD 11/26/04) Distractor C may be a second correct answer. No longer effective doesn't mean stop trying. Possible alternatives: C, D: Depressurize RCS by steaming ADVs at max rate.
2. (PAP 12/07/04) Modified C and D as recommended.
3. (JMD 12/08/04) Reviewed changes. No comments.
4. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
5. (RJC 12/13/04) SRO vs RO level?
6. (PAP 12/13/04) Question requires a general understanding of the effect of a sustained loss of all feedwater. In order to answer question an RO must know the general event mitigation strategy (once-through cooling) and the thermohydraulic response of the plant. At given RCS temperature, RCS pressure will stabilize above shutoff head of HPSI pumps. 88 gpm charging flow will not be sufficient to remove decay heat. Water inventory will drop until there is too little left to maintain RCS pressure, at which point HPSI will inject. Core uncovery is likely. I think this question requires RO level knowledge. Will wait for feedback from licensee review.
7. (DAP 12/17/04, RJA 12/21/04) Okay. Fix temperatures in Justification for Choice A to match temperatures in question stem.
8. (PAP 12/28/04) Fixed justification as recommended by licensee. Changed "deg F" to "°F" in stem and justification.
9. (DEJ 01/10/05) Put trends on parameters. Make Thot > 596°F. Great Q.
10. (PAP 01/28/05) Added trends to parameters as recommended by Don. Left Thot at 584°F. Temperature sufficiently high to set up situation where once through cooling will not be effective at keeping the core covered.
11. (PAP 02/17/05) Capitalized NOT in stem and two Choices.
12. (PAP/JMD 03/07/05) Changed all choices to focus applicant attention on need to evaluate current RCS conditions and to ensure distractors balanced.
13. (RLC 03/15/05) Recommend rewording question to NOT give plant indications that would imply Operators violated EOP for Loss Of All Feedwater by letting SG level drop below 70" without taking any action. Also, modify distractors to include specific plant operating criteria that is true for OTHER plant emergencies not specific to that solicited by the question stem.
14. (PAP, JMD 03/16/05) Modified question as recommended. Discussed with licensee.

13   ☑ RO   ☑ SRO   Question ID: 0053332   Origin: Bank   ☐ Memory Level

1. (JMD 11/26/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP/RJA 12/21/04). Okay. This meets the NC requirements but these temps would have us riding the safety vlvs. EOP 2530 would have us cooling down by 2 hrs post event. You might consider lowering these temps by 80°F which would equate to about a 60°/hr cooldown rate.
4. (DEJ 01/10/05) Good Q. Take their [licensee] recommendation. Supply steam tables.
5. (PAP 01/28/05) Will provide steam tables to applicants. Lowered temperatures as recommended. Lowered all temperatures by 80°F in choices. Lowered RCS pressure in Choices C and D to ensure SCM is 25°F and 65°F for Choices C and D respectively.

 # 14   ☑ RO   ☑ SRO   **Question ID: 5000009**   **Origin: New**   ☑ **Memory Level**

1. (JMD 11/26/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (RJC 12/13/04) We may get a challenge on need to memorize ARPs.
4. (PAP 12/13/04) Identified as memory level.
5. (DAP 12/17/04, RJA 12/20/04) Okay. Change "PPO" to "SPO" in stem (2 places). Choice A may be considered a correct answer due to the following: a) the plant is not stable (62% and lowering at 5%/hr), b) problem with the B MFP speed control system. These two consideration may cause the examinee to conclude that the plant is too unstable to permit control of #2 S/G with MFP speed control. Recommend [underlined] having the plant stable at some power level (eg., 80%, "B" Condensate Pump out for repairs.) Change Choice A to read: place "B" MFP in manual and control speed manually to maintain #2 S/G level. Don't give them the option to trip.
6. (PAP 12/28/04) Spoke to RJA on phone. Their concern is that operator will opt to trip based on existing problem with feed pump speed control. Changed stem to indicate power is being reduced slowly to remove a condensate pump from service. Changed PPO to SPO in two places.
7. (DEJ 01/10/05) I agree with licensee recommendations. Should get trip option out.
8. (PAP 01/28/05) Modified stem further by replacing "a transient occurs indicated by multiple alarms" with "when SPO reports FRV Locked alarm and white lights out". Licensee accepts that changes (from 5% ramp to 2% ramp and MFW pump repair to condensate repair) take away justification for ordering a reactor trip based on FRV locked. Leaving trip option as distractor in Choice A.
9. (JMD 01/31/05) Reviewed changes. Ok.
10. (JMD 02/17/05) Remove the downpower from the stem, to ensure Choice A cannot be argued correct.
11. (PAP 02/17/05) Changed as recommended.

 # 15   ☑ RO   ☑ SRO   **Question ID: 0055206**   **Origin: Bank**   ☑ **Memory Level**

1. (JMD 11/26/04) Just put in a "fail to start" distractor. Example: A) EDG fails to start due to lack of control power, B) EDG starts, fails to load due to lack of control power, C) EDG starts and loads, mechanical trips only available, D) EDG starts and loads, all trips available due to alternate control power.
2. (PAP 12/07/04) Modified the choices to include a fail to start. Added a "trips on overspeed" choice to ensure question structure fits the required attributes of NUREG 1021. New structure: two choices for "doesn't run" and two choices for "runs".
3. (JMD 12/08/04) Reviewed changes. No comments.
4. (JMD 12/08/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided. (RJC 12/13/04)
5. (PAP 12/13/04) Identified as memory level.
6. (DAP 12/17/04, RJA 12/22/04) Okay.
7. (DEJ 01/10/05) Longest answer is correct. Look at bank Q, nearly all distractors same length. Add some B.S. to A and B.
8. (PAP 01/28/05) Added to Choices A and B as recommended by Don.
9. (JMD 01/31/05) Reviewed changes. Ok.
10. (PAP 02/17/05) Capitalized NOT in Choice A.

 # 16   ☑ RO   ☑ SRO   **Question ID: 5000010**   **Origin: New**   ☐ **Memory Level**

1. (JMD 11/26/04) Overly involved? Other indications of a leak? Sump, annunciators, pressure alarms? Normal flows expected knowledge?
2. (PAP 12/07/04) Per conversation with Dan Pantalone, MS2 expects applicants to know normal system flows. Question left as-is, pending feedback from licensee review.
3. (JMD 12/08/04) Reviewed changes. No comments.
4. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
5. (DAP/RJA 12/21/04) a) Change "at 100% power" to "in MODE 3", because a loss of DV-10 would cause both MSIVs to close resulting in a plant trip. In-house electrical loads transfer from the RSST to the NSST. The loss of DV-10 prevents the breakers on Facility 1 from operating resulting in a loss A SW and RBCCW Pumps and the A D/G (F6433 and F6397 will be 0 gpm). b) Replace stem statement about TS action statement with "B RBCCW Hx is aligned to provide minimum flow for the A SW header". If the "B" SW Pump is properly aligned, then the Tech Spec Action only applied during the swap. Once complete, the US would log out of the Action Statement. c) Change parameters 5180 to 8885, 1220 to 785, 5350 to R150?, 1165 to 850, 145 to 100. d) Change HIGHER to LOWER in B and C. The flow transmitter is downstream of the HX SW TCV.
6. (PAP 12/28/04) Changed initial condition to MODE 3. Changed Choice C leak location to "downstream of..". Choice B became D, D became C, C became B. Modified flows to 8885, 795, 8965, 850, and approx 100. Replaced statement about TS action statement with recommended sentence about 'B' SW Pump alignment.
7. (DEJ 01/10/05) Unsure which is final form of Q, definitely meets K/A. Pretty high difficulty w/o procedures and prints.
8. (PAP 02/17/05) Capitalized NO in stem.
9. (PAP 02/18/05) Changed question wording for clarity.

 # 17 ☑ RO ☑ SRO Question ID: 2100000 Origin: Bank ☐ Memory Level

1. (JMD 11/26/04) Stem focus: conditions indicate overpower, possibly due to operator action. Why continuous withdrawal? K/A mismatch: "Rx trip switches" are involved how?
2. (PAP 12/07/04) Trip switches involved in correct answer. Applicant must realize that correct action is to depress reactor trip pushbuttons. Interpreting "pushbutton" and "switch" as equivalent in context.
3. (PAP 12/07/04) Modified stem to indicate rods were manually withdrawn just 5 steps to establish +0.5 dpm SUR. Plant response is consistent with large rod withdrawal, in excess of amount manually withdrawn by PPO.
4. (JMD 12/08/04) Reviewed changes. No comments.
5. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
6. (RJC 12/13/04) Typo. "CEAs are have been .." in stem.
7. (PAP 12/13/04) Typo corrected. Deleted "are".
8. (DAP/RJA 12/20/04) Add "DPM" to choice. Change Choice D to ".. Open 'B', 'C', and 'D' steam dumps. Existing choice not plausible as MSIVs are already open.
9. (PAP 12/28/04) Added "dpm" to choice.
10. (DEJ 01/10/05) Need to add other data in stem to match distractors: S/G level/trend, SUR/trend, RCS temp/trend.
11. (PAP 01/28/05) Sufficient information provided by high power trip resets to require applicants to determine additional feedwater is required if that power level is to be maintained. The high power trip resets also indicate that beyond POAH. SUR will no longer be the indicator of rate of power increase. No need to modify stem.
12. (JMD 01/31/05) Change "0.5 dpm SUR" to "positive SUR". Otherwise okay.
13. (PAP 01/31/05) Changed Choice B as recommended.
14. (DAP 02/17/05) Change "red High.." in stem to "all High".
15. (PAP 02/17/05) Changed as recommended. Capitalized NO in stem.

 # 18 ☑ RO ☑ SRO Question ID: 5000072 Origin: New ☐ Memory Level

1. (JMD 11/26/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP/RJA 12/20/04) Change Choice C to "It is fully inserted, but indication is lost due to loss of VR-11". While the [existing choice] is not a completely correct answer, it is arguably correct. The CEA may be assumed to be at any position between 2 steps withdrawn and at least 1 step inserted. With the given conditions, there is no other indicaion of actual CEA position. (C is a subset of D.) The intent of this distractor was to see if the students could remember that the PPC indication is an input to the "blue" llight for the S/D CEAs.
4. (PAP 12/28/04) Did not accept recommendation. Licensee contends that the choice is "agruably correct". However, the choice states CEA is inserted AT LEAST 10 STEPS. Based on indications, this cannot be concluded. The CEA MAY be inserted 10 STEPS, or 9 or 8. In fact, with given indications, can only conclude CEA is not fully withdrawn.
5. (DEJ 01/10/05) K/A mismatch. K/A - Dropped control rod. Q - All rods in on trip. Rx trip not equal to dropped rod.
6. (BCH 02/07/05) Replaced question with new question. Objective: CED-01-C RO12 LOIT Relate any core mimic position indication light to its associated CEA position. [MB 02252]
7. (JMD 02/08/05) Too simple as written. Try to fail one of the indicators. Choices could be along the lines of "rod in but lower position indicator failed".
8. (PAP 02/08/05) Rewrote question to try to incorporate recommendations.
9. (JMD 02/08/05) Ok.
10. (DEJ 02/09/05) Good Q. Have licensee verify technically.
11. (PAP 02/17/05) Capitalized NO in stem.

 # 19 ☑ RO ☑ SRO Question ID: 0054389 Origin: Bank ☑ Memory Level

1. (JMD 12/06/04) Explanations for distractors do not line up with the distractors.
2. (JMD 12/06/04) Answers A and C are too close. "Imminent" and "potential" need some clarification. Suggest for "potential" to say if another alarm received. Suggest for "imminent" to say after countdown completed.
3. (PAP 12/06/04) Rearranged the distractor explanations to line up with the applicable distractors to address Comment #1 above.
4. (PAP 12/07/04) Modified Choices A and C to address Comment #2 above.
5. (JMD 12/08/04) Reviewed changes. No comments.
6. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
7. (PAP 12/13/04) Identified as memory level.
8. (DAP 12/20/04, SRM 12/22/04) Okay.
9. (DEJ 01/10/05) Good Q.
10. (JMD 02/17/05) Change "another detector" in Choice A to "..a photoelectric detector".
11. (PAP 02/17/05) Changed as recommended.

20   ☑ RO   ☑ SRO   Question ID: 5000012   Origin: New   ☑ Memory Level

1. (JMD 12/06/04) Okay.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (RJC 12/13/04) Could be viewed as too easy (LOD1) but I will let it go since you are trying to match K/A.
4. (PAP 12/13/04) Identified as memory level.
5. (DAP 12/20/04, SRM 12/22/04) Okay.
6. (DEJ 01/10/05) Good.
7. (JMD 02/17/05) Add to stem "if time permits".
8. (PAP 02/17/05) Changed as recommended.

21   ☑ RO   ☑ SRO   Question ID: 5000014   Origin: New   ☐ Memory Level

1. (JMD 12/06/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP 12/21/04, SRM 12/22/04) Recommend changing to Choice D as correct answer and modify D to equal, equal, equal. I asked our simulator thermo/heat xfer engineers to evaluate this question (they are on the security agreement). My feeling was that both S/G pressures would be equal because they both were dumped to the condensor via the 'A' steam dump vlv. The engineer pulled a recent simulator test designed to evaluate the fidelity of the simulator as compared to some standard. The test was 100% pwr with a deenergization of the 'A' RCP. Notice the pressure of #1 and #2 S/G s are identical. (See curves #8 thru 15). The only slight difference is betweem feed flow. That was due to the feed reg bypass valve throttling to a slightly different position. Just the way our simulator is groomed.
4. (PAP 12/28/04) Don't want to accept recommendation because puts applicants in the dilemma of choosing between theoretical response using laws of physics vs observed response based on small magnitude of actual changes. Recommend instead changing stem to "steady at 80% power, bkr trips, reactor fails to trip, if no operator actions compare conditions".
5. (DEJ 01/10/05) I think 'C' is right, heat xfer lowers on loop w/idle RCP. Pressures = w/MSIVs open.
6. (JMD 01/31/05) Change question stem to set up condition where both RCPs on one SG trip (perhaps loss of electrical bus), then ask same question.
7. (PAP 01/31/05) Changed as recommended.
8. (JMD 02/17/05) Add to stem "and all equipment responds as designed".
9. (PAP 02/17/05) Changed as recommended. Capitalized NO in stem.
10. (PAP 02/18/05) Changed question from asking about feed flow to asking about FRV bypass position because the difference in SG pressure will affect feed flow.
11. (RLC 03/15/05) Recommed rewording to streamline stem and distractors. [eliminate confusion as to what is being compared]
12. (PAP, JMD 03/16/05) Modified as recommended. Discussed with licensee.

22   ☑ RO   ☑ SRO   Question ID: 5000015   Origin: New   ☑ Memory Level

1. (JMD 12/06/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04) Identified as memory level.
4. (DAP 12/21/04, SRM 12/22/04) Okay.
5. (DEJ 01/10/05) Make 'D' stator temperature. Also, maybe LOD one based on setpoint only. Can change to action based Q, don't tell them to trip. Suggestion: "What is req'd? A. Trip..oil level, B. NoTrip..Nothing violated C. Trip..vibs D. Trip..stator temp.
6. (PAP 01/31/05) Changed per Don's recommendations.
7. (JMD 01/31/05) Reviewed. Ok.

23   ☑ RO   ☑ SRO   Question ID: 0055022   Origin: Bank   ☐ Memory Level

1. (JMD 12/06/04) Reviewed. No comments.
2. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP 12/21/04, SRM 12/22/04) Okay. Although we would not warm SDC with 2 LPSI's, I think the question is valid. It evaluates the students knowledge of past MS2 OE, and the reason for our present warming process.
4. (DEJ 01/10/05) Good Q.

 # 24 ☑ RO ☑ SRO **Question ID: 5000016** **Origin: Bank** ☐ Memory Level

1. (PAP 12/03/04)   NEED COPY OF RPM 5.1.5 FROM LICENSEE
2. (JMD 12/06/04)   Reviewed. No comments.
3. (RJC 12/13/04)   Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
4. (DAP 12/21/04, SRM 12/22/04)   Add to stem "Assume no "Increased Radiation Exposure Authorization" form has been signed." Change distractors to 2 min, 5 min, 30 min, 90 min. Per Attachment 3 of MP-26-EPI-FAP09, the authorization of < or = 25 Rem requires "lifesaving or protection of large populations". A General Emergency may meet the "protection of large population" requirement, but the exposure limit does not have to be 25 rem, it could be 15 rem, or 12 rem etc. The only specified automatic upgrade is 4.5 rem/hr when an Unusual Event or greater is declared.
5. (DEJ 01/10/05)   I disagree w/licensee #1 comment [about GE may meet protection..]. Emer Exposure Dose Limit needs to be clear in stem. Good Q.
6. (JMD 01/31/05) Question okay as written. Make "maximum" bold.
7. (PAP 01/31/05)   Changed "maximum" to all capital letters.
8. (PAP 02/17/05)   Capitalized NOT in stem.
9. (PAP 02/18/05)   Added "with all dose extensions necessary for this condition granted" to stem because otherwise limit would be 5 rem.

 # 25 ☑ RO ☑ SRO **Question ID: 5000018** **Origin: Bank** ☑ Memory Level

1. (JMD 12/08/04)   Reviewed. No comments.
2. (RJC 12/13/04)   Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04)   Identified as memory level.
4. (DAP 12/21/04, SRM 12/22/04)   Okay. Recommend deleting "just" from stem.
5. (PAP 12/28/04)   Deleted "just" as recommended.
6. (DEJ 01/10/05)   "D" is not plausible to me. Other than that..good.
7. (JMD 01/31/05) Reviewed. Ok.
8. (PAP 02/18/05)   Distractor A is potentially correct since steaming to condenser minimizes release. Revisit this. Possibly change to A as correct with different b.
9. (PAP 02/18/05)   Changed distractor A to make incorrect.

 # 26 ☑ RO ☑ SRO **Question ID: 5000019** **Origin: Bank** ☑ Memory Level

1. (JMD 12/08/04)   Reviewed. No comments.
2. (RJC 12/13/04)   Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04)   Identified as memory level.
4. (DAP 12/21/04, SRM 12/22/04)   Capitalize "direct" to reduce the notion that a site page would qualify. A site page would be made for a significant steam leak. Add "managable" to Choice C. "Managable" further eliminates calling security which may also prompt a call to Unit 3. Essentially any abnormal event on one unit results in a courtesy call to the other unit. Add to stem "Assume none of the following requires a plant downpower".
5. (DEJ 01/10/05)   Agree [w/licensee comment about "manageable"]. Not required [in reference to licensee comment about courtesy call to the other unit]. Has To Be Great Q,..I wrote it!
6. (PAP 01/11/05)   Changed "significant" to manageable" in choice as recommended.
7. (RJA 02/17/05)   Need to check that Choice B is not also correct. See MM-1, SMGDL01..
8. (PAP 02/24/05)   Licensee unable to find procedures to support any distractor as a correct answer. Changed bin fire location to general area of turbine building.

 # 27 ☑ RO ☑ SRO **Question ID: 5000025** **Origin: New** ☑ Memory Level

1. (JMD 01/03/05)   Reviewed. No comments.
2. (DEJ 01/10/05)   Good Q.
3. (DAP, SRM 01/20/05)   Okay. Change "ST" to "SP" in stem.
4. (PAP 01/27/05)   Changed as recommended.

 # 28 ☑ RO ☑ SRO Question ID: 5000026 Origin: New ☐ Memory Level

1. (JMD 01/03/05) How does this relate to the K/A?
2. (PAP 01/04/05) K/A addresses knowledge of loss of source range as applied to associated guidance in the emergency operating procedures. EOP-2540A, "Functional Recovery of Reactivity Control" provides an acceptance threshold based on source range indication after a trip. The technical guide for this EOP states that reactor power is expected to fall below this value within 15 minutes after a reactor trip. This question tests knowledge of this guidance and the operation of the nuclear instruments in that the applicant must apply this knowledge in demonstrating an ability to identify correct operation of the source range instruments. By knowing what to expect of these instruments, an operator will be able to recognize improper operation of the source range when called to use them during implementation of the EOPs.
3. (DEJ 01/10/05) Appears as a K/A mismatch, no evident loss of SRNI's. May not be EOP guidance on loss of SRNI's, only in AOP's.. Pick new K/A and Q.
4. (JMD 01/11/05) Agree with Don. Not a good K/A match. Need to modify question.
5. (PAP 01/12/05) Replaced originally developed question with new question developed by JMD. Original question follows: STEM: The plant has been operating at 100% for two months when the following occurs:||- TURBINE THRUST BRG WEAR TRIP alarm (B-26 n C-06/7) is received|- main turbine automatically trips|- reactor trip breakers remain closed||The PPO manually trips the reactor by opening the CEDM MG set breakers.||Approximately 18 minutes after the reactor trip, which of the following sets of indications will be displayed on Channel 'A' Wide Range Excore Nuclear Instrument? CHOICES: A) 1E-7 % and 1E4 cps B) 1E-6 % and 1E5 cps C) 1E-5 % and 1E4 cps D) 1E-4 % and 1E5 cps. JUSTIFICATION: CHOICE (A) - NO WRONG: Overlap is off by 2 decades. VALID DISTRACTOR: Proper counts per second indicated. CHOICE (B) - NO WRONG: Power is inconsistent for time after shutdown. Overlap is off by 2 decades VALID DISTRACTOR: 1E5 cps expected (per EOP Tech Guide) for 15 minutes after trip CHOICE (C) - YES EOP Technical Guide state that 1E-4% expected 15 minutes after a trip. With normal minus-one-third decade per minute negative SUR post-trip, reactor power should drop another decade during the time between 15 minutes after and 18 minutes after the trip. CHOICE (D) - NO WRONG: Power is 1 decade higher than expected. VALID DISTRACTOR: Proper overlap indicated. Power level consistent with 15 minutes after trip.||For purpose of K/A catalog, Millstone Unit 2 considers the Wide Range Nuclear Instruments to be "source range" when below 1E-4%. The instruments are considered as "intermediate range" when reactor power between 1E-4% and 0.1%. REFERENCES: 1. EOP 2540A Functional Recovery of Reactivity Control Technical Guide (7/7/00) (Pg 5 of 28) 2. EOP-2540A, "Functional Recovery of Reactivity Control", Revision 10 (7/7/00) (Pg 4 of 17) 3. NIS-01-C, "Nuclear Instrumentation System" Lesson, Revision 3 (7/23/01), Figure 1, "Excore Nuclear Instrumentation Ranges"
6. (DEJ 01/12/05) Good Q, Remind me in CE, are WRNI's considered the T.S. Source Ranges, I remember Yes.
7. (DAP, SRM 01/20/05) Okay.

 # 29 ☑ RO ☑ SRO Question ID: 0053696 Origin: Bank ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Add RCS pressure + trend < SIAS setpt. Is it common knowledge that VA-20 powers CH-514? Also, will MOV open in manual? Good Q.. May need to add a little help. LOD High.
3. (PAP 01/10/05) Added RCS pressure and trend as recommended. MOV could be opened manually in the field, however this is not a given choice. Will present to licensee to get their assessment before further modification.
4. (DAP, SRM 01/20/05) There is no correct answer to this question. Both BA pumps are Z2 and do not start due to loss of VA-20. Without a running BA pp, there is no reason to open CH-514. Both gravity feed valves (not mentioned in question) are Z1 and will both open on SIAS at 1672 psia. Also, CH-501 is Z1 and the 'B' and 'C' charging pump will be running at 1672 psia. Emergency boration on Z1 will automatically actuate with no operator action.
5. (PAP 01/27/05) Replaced the question with 0053696 Rev 1 from the MS2 bank.
6. (JMD 01/31/05) Reviewed. Ok.
7. (RLC 03/15/05) Recommend adding valve numbers [to choices].
8. (PAP, JMD 03/16/05) Added valve numbers as recommended. Discussed with licensee.

 # 30 ☑ RO ☑ SRO Question ID: 5000028 Origin: New ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Good.
3. (DAP 01/20/05) Okay.

 # 31 ☑ RO ☑ SRO Question ID: 0053994 Origin: Bank ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Be specific in stem.."additional 1 attempt for close has occurred". In Choice 'D', "try a second additional attempt. Good Q.
3. (PAP 01/10/05) Changed as recommended.
4. (DAP 01/20/05) Okay.
5. (PAP 02/18/05) Added "B" Hx status to stem to ensure Choice B is incorrect.
6. (RJC 03/09/05) Add procedure to the stem.
7. (PAP 03/09/05) Modified stem as recommended.

32   ☑ RO   ☑ SRO   Question ID: 5000029   Origin: New   ☐ Memory Level

1. (JMD 01/03/05) Check at facility (CAF) because LPSI are used for boron precipitation or for cooling flow?
2. (PAP 01/04/05) Completely rewrote the question. The original unworkable because a single HPSI provides adequate flow for long term cooling. Original question was as follows: During recovery from a Large Break LOCA, a LOSS of which of the following pumps will have the GREATEST impact on LONG TERM CORE COOLING? A-charging pumps, B-reactor coolant pumps, C-high pressure safety injection pumps, D(key answer)-low pressure safety injection pumps. Original justifications: CHOICE (A) - NO WRONG: Charging pumps do not provide sufficient flow to maintain the core cooled. VALID DISTRACTOR: Charging pump start on SIAS and inject to the core. CHOICE (B) - NO WRONG: Reactor coolant pumps are not used for long term cooling in a post-LBLOCA situation. VALID DISTRACTOR: Reactor coolant pump restart is addressed in the EOPs for special situations, such as during SGTR. CHOICE (C) - NO WRONG: EOP steps shutdown HPSI during post-LOCA cooldown. VALID DISTRACTOR: HPSI is designed for high pressure injection in small break situations. CHOICE (D) - YES Recovery from a LB LOCA is dependent of maintenance of core cooling via flow through the core and out the break. LPSI is designed to provide a high volume/low pressure flow of borated water to the core and can maintain stable cold conditions using the SDC heat exchangers to remove decay heat. Original references: EOP-2532, "Loss of Coolant Accident", Revision 23 (3/31/04) (Pg 23 of 95), Source: INPO Bank - Q# 20064 - Used at Braidwood 1, 10/29/2001
3. (DEJ 01/10/05) Good Q.
4. (RJA, 01/20/05) The facility 1 HPSI pump is required for boron precipitation control if facility 2 is not available. Therefore answer C is correct. B is incorrect.
5. (DAP 01/20/05) Answer B is not correct. While the remaining HPSI does provide sufficient injection flow, there is no pump to provide boron precipitation, which is part of the long term heat removal strategy.
6. (PAP 01/27/05) Need to talk to Dan before changing. Stem says hot leg break. Should not need boron precipitation control.
7. (PAP 01/28/05) Spoke with DAP. Licensee will make recommendation.
8. (PAP 02/03/05) Added "procedurally" to Choices B and D, based on licensee recommendations.
9. (JMD 02/03/05) Topic ok, format awkward, workable.
10. (DEJ 02/07/05) Good Q again.
11. (JMD 02/17/05) Replace "shortly after SRAS" in stem with "12 hours after the event".
12. (PAP 02/17/05) Changed as recommended.
13. (JMD 02/17/05) Change Choices A and C to ensure fully wrong.
14. (PAP 02/17/05) Changed as recommended. Capitalized NOT in stem and each choice.
15. (PAP/JMD/RJC 03/09/05) Made choices into complete sentences by moving the "fill in the blanks" statement into the choices. Intended to improve question and answer clarity.
16. (RLC 03/15/05) Recommend rewording to streamline stem and clarify distractors based on procedure requirements and system capabilities. [change distractors to "LPSI would" or "LPSI would not" and to "HPSI can" or "cannot"]
17. (PAP, JMD 03/16/05) Modified stem as recommended. Changed distractor A to ensure wrong. Discussed with licensee.

33   ☑ RO   ☑ SRO   Question ID: 5000030   Origin: Bank   ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Choice 'C' - "lower O2 concentration". Good.
3. (PAP 01/11/05) Changed as recommended.
4. (RJC 01/13/05) Changed "should" to "required".
5. (PAP 01/13/05) Modified stem as recommended.
6. (RJA, DAP 01/20/05) Change "are noted" to "are provided". Quench tank oxygen is not displayed. It must be provided by chemistry. Operators are not required to memorize all setpoints and limits. In our opinion, this question relies on the student knowing alarm setpoints (i.e., would 100°F be ok or not?). This does not distinguish between competent and incompetent operator.
7. (PAP 01/27/05) Changed stem as recommended. Operators should be able to recognize off-normal conditions to prevent exceeding limits. SP-2619A-002, "Control Room Daily Surveillance, MODES 1 & 2" even has a section for compensatory checks of quench tank level, temperature and pressure while RC-200 AVMS is failed. Recommend leaving question on test.
8. (JMD 01/31/05) Reviewed. This question involves recognizing normal conditions rather than memorizing alarm setpoints. Will CAF. Open to suggestions.
9. (JMD 02/17/05) Change QT temp in stem to 150°F and reduce Choice C concentration to 2%.
10. (PAP 02/17/05) Changed as recommended.
11. (RLC 03/15/05) Recommend lowering Oxygen concentration of QT [to 1.2%] because it is normally inerted with pressurized nitrogen and, therefore, should not be capable of getting such a high level of O2. This caused confusion with some Exam Evaluators as they percieved that something HAD to be wrong with the N2 supply to the QT or perhaps the rupture disk was leaking and pressure was incorrect.
12. (PAP, JMD 03/16/05) Changed oxygen concentration to 2.0% in stem and 1.0% in choice C to address comment by licensee. Discussed with licensee.

34   ☑ RO   ☑ SRO   Question ID: 5000031   Origin: New   ☐ Memory Level

1. (JMD 01/03/05)   No K/A match. RPS has no impact on the control rod drive system. Choose a new K/A for same system.
2. (BCH 01/12/05)   Rewrote question to test RPS input to CRDS CEA Withdrawal Prohibit.
3. (DAP 01/20/05)   The powers in the stem should be 'Q' power, the highest of delta-T or NI power. Consider changing distractor B from Channel 'D' to Channel 'A'. If a channel is in a trip condition, then it remains in a pretrip condition. If the examinee is unsure of the trip and pretrip setpoints, then he/she may think that only Channel 'A' has a pretrip.
4. (PAP 01/27/05)   Changed stem to Q power as recommended. Changed distractor B as recommended to CH A.
5. (JMD 01/31/05)   Change Choice A "has tripped" to "will trip".
6. (PAP 01/31/05)   Changed as recommended.
7. (DEJ 02/09/05)   Great Q.
8. (PAP 02/17/05)   Capitalized NO in Choice D.
9. (RLC 03/15/05)   Recommend replacing question with one [Q#54172] that better fits the K/A and does not require Examinee to try and distinguish between Tech. Spec. setpoint limits and I&C sepoint values. Also, original stem requires Examinee to assume RO violated plant procedures in monitoring and controlling reactor power.
10. (PAP, JMD 03/16/05)   Kept original question but changed stem conditions to include an RPS malfunction for better K/A match. Discussed with licensee.

35   ☑ RO   ☑ SRO   Question ID: 0053886   Origin: Mod   ☐ Memory Level

1. (JMD 01/03/05)   Reviewed. No comments.
2. (DEJ 01/10/05)   I am not familiar w/Millstone inverters, but opening DC Input should or may cause static switch to swap to some alternate AC Source. Unsure if answer correct..need more references.
3. (PAP 01/11/05)   Answer is correct as written. Inverter 2 OOS takes away the option of swap to alternate AC.
4. (DAP 01/20/05)   Ok. Answers A and B as written imply that pumps started, then stopped. Recommend changing "be stopped" to "not start".
5. (PAP 01/27/05)   Changed choices A and B to "not be running".
6. (JMD 01/31/05)   Reviewed. Ok.
7. (PAP 02/17/05)   Capitalized NO in stem and NOT in distractors.

36   ☑ RO   ☑ SRO   Question ID: 5000033   Origin: New   ☐ Memory Level

1. (JMD 01/03/05)   Reviewed. No comments.
2. (DEJ 01/10/05)   How does PT split out through Rx Reg? I can't remember. Do you have to say which Rx Reg Channel X or Y is selected + does failure affect both S/G's?
3. (PAP 01/10/05)   I don't think RR has anything to do with this input. Will leave for licensee review comments.
4. (DAP 01/21/05)   Add "for the #2 ADV" to the stem. Add "assume no operator action" to the stem. Change "recover" to "stabilize" in Choices B, C and D. Change Choice D to "lower", vice "higher". 1) Examinees are not required to know transmitter numbers and what they control. The above modification should be considered. 2) The modification to 'D' makes it the most correct answer. Steam flow through an ADV is not sensed by the S/G water level control system. Therefore the only SGWLC signal that would compensate for the excess steam flow is the deviation between level setpoint and actual level. Now things get complicated. If the controller is a proportional controller the level will stabilize below setpoint, which I'm not sure of. If the controller is integral/differential, the level will return to setpoint, assuming it responds quick enough to avoid a trip. All I can say is 'D' is the most correct answer [with recommended change of higher to lower], but I can't say it is really correct.
5. (PAP 01/27/05)   Added "for the #2 ADV" to the stem as recommended. Added "assume no operator action" to stem, as recommended. Changed "recover" to "stabilize" in choices, as recommended. Left Choice D as "higher". From FSAR description, the controller has an integral feature which ensures that output adjusts as necessary to return controlled parameter to setpoint. Choice B remains as the correct answer.
6. (JMD 01/31/04)   Reviewed. Ok.
7. (PAP 02/17/05)   Capitalized NO in stem and NOT in Choice A.
8. (RLC 03/15/05)   Recommend rewording to reflect steam flow from the ADV is NOT sensed by the FWLCS. [correct answer changed from "level stabilizes at setpoint" to level stabilizes below setpoint).
9. (PAP, JMD 03/16/05)   Question left as-is. No change required. Question correct as written. Confirmed by licensee.

37   ☑ RO   ☑ SRO   Question ID: 0070216   Origin: Mod   ☐ Memory Level

1. (JMD 01/03/05)   Reviewed. No comments.
2. (DEJ 01/10/05)   Good Q.
3. (DAP 01/21/05)   Ok.
4. (RLC 03/15/05)   Recommend raising setpoint in the "A" distractor from 575 psia to 585 psia. Original number is too close to the "I&C" setpoint, which is always more conservative by an unknown margin.
5. (PAP, JMD 03/16/05)   Changed values in distractors A and C farther from actual setpoint to address recommendation. Discussed with licensee.

 # 38 ☑ RO ☑ SRO **Question ID: 5000034** **Origin: Mod** ☐ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Good Q. May want to verify on sim. No digital feed? Verify on sim tuning is stm flw/fd flw dominant?
3. (DAP 01/21/05) Ok.
4. (JMD 02/17/05) Verify answer correct for 100% power. If no trip, change correct to Choice B.
5. (PAP 02/17/05) Capitalized NO in stem.
6. (RLC 03/15/05) Recommend changing correct answer to B. Original question is not technically correct for design of FWLCS. [level will not lower to the low level trip]
7. (PAP, JMD 03/16/05) Correct answer changed to "will stabilize above the low level trip". Confirmed by licensee. Swapped choices A and B, and C and D to balanced distribution of A's, B's, C's and D's as the correct answers on the test. Discussed with licensee.

 # 39 ☑ RO ☑ SRO **Question ID: 5000035** **Origin: New** ☐ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Good Q.
3. (RJA 01/24/05) Ok. Change "ESAS Actuation Cabinet" to "Auxiliary Feed Actuation Cabinet" in stem.
4. (PAP 01/27/05) Changed as recommended.
5. (PAP 02/18/05) Pat makes point that rods will be inserted initially due to rapid effect on NIS. Then would follow with turbine load.
6. (PAP 02/24/05) Modified choices to make distractors incorrect while maintaining psychometric balance.

 # 40 ☑ RO ☑ SRO **Question ID: 5000036** **Origin: Bank** ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Show me how this one works. K/A match questionable. 480VAC=>Inverter nor really major load.
3. (JMD 01/11/05) K/A match okay.
4. (DAP 01/21/05) Ok.

 # 41 ☑ RO ☑ SRO **Question ID: 5000037** **Origin: New** ☑ Memory Level

1. (JMD 01/03/05) Relevance? Leave as is for CAF (Check At Facility). Suggested fallback question: Which of the following describes the response of the EDG if power is lost to the governor? A-Control will shift to the mechanical governor, which will maintain the EDG at present speed. B(key answer)-Speed will rise to the mechanical governor setpoint. C-Speed will lower to the mechanical governor setpoint. D-The EDG will shutdown.
2. (DEJ 01/10/05) Good Q.
3. (RJA 01/25/05) We don't feel that operators should know specifically how the fuel racks are positioned on an automatic start. This does not distinguish between a competent and an incompetent operator. It may be more appropriate to ask how load is controlled on an emergency start or what happens to D/G speed control on a loss of DC.
4. (PAP 01/27/05) Governor oil boost is covered in operator training EDG lesson material. Air start isolations are identified as needing to be open to "governor oil booster". OP-2346A, "Emergency Diesel Generators" has sections for manual start of a diesel from the control room which direct the operator to verify fuel racks in minimum position and manipulate slow speed switches. Print 26010, "Fuel System" shows the governor hydraulic oil booster supplied from starting air tied into the governor actuator, which is shown controlled by the Woodward 2301A Governor. Seems appropriate that operator should know the purpose of the governor oil booster, to position the fuel racks to full fuel position on engine start, to ensure engine reaches rated speed within required TS time limit. Recommend leaving question as-is.
5. (JMD 01/31/05) Reviewed. Need to discuss with licensee. Can they propose a replacement.
6. (JMD 02/17/05) Replace question.
7. (PAP 02/24/05) Replaced with new question (4100000) written and proposed by licensee (RJA, DAP).
8. (RLC 03/15/05) Recommend streamlining question stem to make it easier to read.
9. (PAP, JMD 03/16/05) Changed format of stem (added carriage returns) but left described situation as-is. Discussed with licensee.

 # 42 ☑ RO ☑ SRO **Question ID: 5000032** **Origin: Mod** ☐ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Good Q.
3. (DAP 01/21/05) Ok.

 # 43 ☑ RO ☑ SRO **Question ID: 0053401** **Origin: Bank** ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/10/05) Good Q.
3. (DAP 01/21/05) Ok.

44   ☑ RO   ☑ SRO   Question ID: 5000038   Origin: New   ☐ Memory Level

1. (JMD 01/03/05) Remove window dressing in stem. Provide valve number for Choice A. Valve numbers and names are giveaways in C and D.
2. (PAP 01/04/05) Changed Choice A from "Air system cross-tie to Unit 3". Changed Choice B from "Air system excess flow check valve". Changed Choice C from "open" to "opening". Changed Choice D from "close" to "closing".
3. (DEJ 01/10/05) Add "Auto" to A and B.
4. (PAP 01/11/05) Should leave choices A and B as is. Choice A is a valid distractor because this valve is opened BY THE OPERATOR to cross-tie Unit 3 IA to the Unit 2 SA system. The suggested change could reduce the discriminatory value of this question.
5. (JMD 01/11/05) Agree. Leave choices A and B as is.
6. (DAP 01/21/05) Ok. Change "service" to "station" in stem.
7. (PAP 01/27/05) Changed as recommended.
8. (JMD 02/17/05) Add to stem ""C" Instrument Air Compressor has been repaired and is in service." Change Choice B to correct answer and make it the excess flow check valve from IA to SA. Had a misconception about how system should work.
9. (PAP 02/17/05) Changed as recommended.
10. (RLC 03/15/05) "C" IAC is being retired in place, replaced by a new "D" IAC and stated it is in service suppling BOTH Instrument Air and Station Air..
Choice "C" (opening of 2-SA-10.1) will also result in the closure of 2-SA-11.1. When this valve closes it isolates the Station Air System and could, conceivably, isolate the rupture, depending on the as yet unknown system lineup when the new "D" IAC is placed in service. [Recommend question setup with new "D" IAC in service]
11. (PAP, JMD 03/16/05) Modified stem to show that "D" IAC design change has been implemented. Left distractor "C" as-is. No change needed to choice C. Discussed with licensee.

45   ☑ RO   ☑ SRO   Question ID: 0073948   Origin: Bank   ☑ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Great Q.
3. (DAP 01/21/05) Ok.

46   ☑ RO   ☑ SRO   Question ID: 5000040   Origin: New   ☐ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) High LOD Question, But OK, I nuked it out.
3. (DAP 01/21/05) Delete "at" in stem. This question does not distinguish between a competent and non-competent operator. We do not require our operators to know all the ESAS-actuated components and which modules control them. We do not expect our operators to know which components can not be overriden.
4. (PAP 01/27/05) Removed "as" from stem (typo.) Objective PEO-7K in the containment systems lesson requires that an operator be able to "describe the relationships between the Containment Systems and the following: ESAS (SIAS,CIAS,EBFS,CSAS,AEAS)". The sentence in the lesson material which explains that the CIAS pump trip signal cannot be overriden and why has a margin note tying the knowledge to the objective. The ESAS lesson material (ESA-01-C) explains that "five components cannot be overridden: both containment sump pumps and the three RBCCW temperature control service water valves". Applicant should not be expected to know which modules control which components. However, the applicant should know enough about the effect of CIAS on the containment sump pumps and associated valves in order to determine that one or more actuation relays have failed to actuate. This knowledge, in conjunction with knowledge sufficient to eliminate the distractors is enough to identify the correct answer. Recommend leaving question as written.
5. (JMD 01/31/05) Reviewed. Change Choice D to "An actuation module for CIAS has failed to actuate".
6. (PAP 01/31/05) Changed as recommended.

47   ☑ RO   ☑ SRO   Question ID: 0053544   Origin: Bank   ☐ Memory Level

1. (JMD 01/10/05) Would they ever start up with + MTC? How about MTC up/down from trip with Tave 2° low?
2. (PAP 01/10/05) Modifed the stem to clarify the "2°F below".
3. (DEJ 01/12/05) Fix spelling of "detla" in stem. Good Q.
4. (PAP 01/12/05) Corrected typo.
5. (DAP 01/21/05) Ok.

 # 48 ☑ RO ☑ SRO Question ID: 5000041 Origin: New ☑ Memory Level

1. (JMD 01/10/05) 1135°F is not a learning objective. Ask if one recombiner is enough, or what's b/u, or how fast does h2 increase if they both fail. (8 hours, 1 day, 1 week, etc. - EOP tech guide says peak in 12 to 16 days). Ask utility which option is better.
2. (PAP 01/11/05) Response from licensee (Dan Pantalone), temperature is trivia.
3. (DEJ 01/12/05) Good Q. Another Hard Q. I did not know the 1135°F number.
4. (DAP 01/21/05) Is it a requirement for an operator to know the temperature at which thermal recombination of H2 and O2 occurs? We don't believe that this distinguishes between a competent and an incompetent operator.
5. (PAP 02/07/05) Changed question per recommendations to ask time to hydrogen concentration at limit.
6. (DEJ 02/09/05) Good Q. RO knowledge? Check learning objectives.
7. (PAP 02/09/05) Question relates to objective-based knowledge. Obj HCS-00-C RO10: Describe the source(s) of hydrogen following a loss-of-coolant accident, including expected concentrations at various elapsed times.
8. (RLC 03/15/05) Required knowledge of the original question does not distinguish between a safe and unsafe license Candidate. To successfully answer the question, the candidate must assume the plant has had a LBLOCA, assume NOTHING worked to save the core from extensive damage (only way to get a substantial amount of H2 production), assume BOTH recombiners are unavailable and assume nothing has been done to mitigate continued damage to the core for 12 days, then PREDICT what containment hydrogen concentration will be, FROM MEMORY. If the original question MUST be used, then the graph referenced in the Training Materials [Figure A2 of concentration vs. time after event]] required to answer the question should be provided in the Applicant Handout.
9. (PAP, JMD 03/16/05) Modified choices to address licensee comment. Kept question as it is reasonable to expect applicants to remember that time to reach 3% is on the order of weeks rather than hours or days. Discussed with licensee.

 # 49 ☑ RO ☑ SRO Question ID: 5000042 Origin: Mod ☐ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Great Q. Note: A is correct on a B+W Plant.
3. (RJA 01/20/05) [Combine transmitter and steam dump stroke by adding following to stem] "A Steam Dump Main Steam Pressure Transmitter, PT-4216, output drifts high causing [steam dump] to stroke to approx 30% open." Change 5% to 3% in each choice. Change "taking" to "placing the" in each choice. Change "lowering output to 0" to "in the Close position". We operate in "Load Limit" which maintains the Turbine Control Valves at a fixed position. If a Turbine bypass valve were to open at power, steam pressure to the Turbine would lower resulting in a decrease in Turbine load. Additionally, RCS temperature would lower resulting in a power increase. The magnitude of each is difficult to determine. A combination of A and B would be correct. [Correct answer is] "Turbine load will decrease and reactor power will rise. The operator can stop ..".   See question #82.
4. (DAP 01/21/05) I agree with D. Ashey.
5. (PAP 01/28/05) Changed stem as recommended. Changed choices per recommendation regarding the "3%", the "placing the", the "..close position". Added time in core life to stem to ensure applicant has information needed to determine that steam pressure change will be so small as to leave turbine load relatively constant throughout transient. When evaluated against other possibilities, an applicant will be able identify the correct answer. The alternative suggested, which is to say that turbine load decreases could be challenged on the basis that the change is almost imperceptible. The better choice is to describe load as constant. Plant response described in the answer to this question differs from that described in Question #82 because of the magnitude of the primary temperature drop and the amount of excess steam demand. One possible alternative approach would be to say that "turbine load decreases LESS THAN 3% in the correct answer, as opposed to EQUAL TO in the distractors. This alternative eliminates the in-exactness of the term "relatively", but could then introduce uncertainty in that actual power change will be very much less than 3%. Recommend leaving correct answer left as written. Discussed with DAP. He and RJA will review further.
6. (PAP 02/02/05) Modified per latest recommendations of DAP/RJA by changing "turbine load relatively constant" to "turbine load will decrease by less than 3%".
7. (JMD 02/03/05) Reviewed. No comments.
8. (DEJ 02/07/05) Good Q again.
9. (PAP 02/17/05) Capitalized NO in stem.
10. (PAP/JMD/RJC 03/09/05) Evaluated LOK of question. Re-categorized as higher order.

 # 50 ☑ RO ☑ SRO Question ID: 5000039 Origin: New ☑ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Why even have #4. It is in same place on all distractors. Also, recirc probably already closed, pump OOS.
3. (PAP 01/12/05) Deleted #4 (suction drain) from stem and choices as recommended.
4. (DAP 01/21/05) Ok.
5. (PAP/JMD/RJC 03/09/05) Evaluated LOK of question. Re-categorized as lower order.

 # 51 ☑ RO ☑ SRO Question ID: 0054226 Origin: Mod ☐ Memory Level

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q.
3. (PAP 02/17/05) Capitalized NOT in stem.
4. (RLC 03/15/05) Recommend adding valve "names" to existing valve "numbers".
5. (PAP, JMD 03/16/05) Added valve names to existing valve numbers in stem and choice B. Deleted one valve from choice B to enhance credibility of this distractor. Discussed with licensee.

 # 52   ☑ RO ☑ SRO   **Question ID: 5000056**   **Origin: New**   ☑ **Memory Level**

1. (JMD 01/31/05) Word-engineer Choices A and B. Suggestion: "to ensure .. accurately indicates.."
2. (PAP 01/31/05) Changed as recommended.
3. (DEJ 02/07/05) Are C&D kinda the same thing? Is "B" plausible, talks pressure control and stem is inventory control.
4. (BCH 02/08/05) Response: C&D are similar but different - and both are clearly incorrect. C addresses an abnormal condition (pzr level control fails) while D addresses an emergency condition (what is the appropriate procedural transition). B is less plausible than C or D if pzr level were to drop quickly, pressure would also drop (7.5psia/% pzr lvl). An applicant could select this choice if he/she thought that the rapid drop in PZR level caused a drop in PZR pressure and therefore may have created a problem with subcooling as pressure went down. Bottom line - it is often hard to come up with plausible distracters for "reasons" questions that are also clearly wrong. I am open to any suggestions that could improve this one.
5. (PAP/JMD/RJC 03/09/05) Evaluated LOK of question. Re-categorized as lower order.
6. (RLC 03/15/05) Pressurizer level of 20% and dropping requires the RO to verify proper operation of the PZR level control system. When queried of the conditions of PZR level by the US, the RO is SIMULTANEAOUSLY asked for the value and direction of RCS subcooling. The US does not query them separately. Therefore, the RO's are use to giving BOTH conditions in one act AND performing the contingency of step #3 per these conditions. The original Choice "C" is PART OF those contingency actions that are performed and, therefore, this is a "trick" question in regards to what "specific" SUBSTEP is the stem trying to solicit.
7. (PAP, JMD 03/16/05) Capitalized SUBCOOLING in stem for emphasis. No other change required. Discussed with licensee.

 # 53   ☑ RO ☑ SRO   **Question ID: 5000057**   **Origin: New**   ☐ **Memory Level**

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) Wow, you are good at this stuff! Great Q.
3. (PAP 02/17/05) Capitalized CANNOT in stem.

 # 54   ☑ RO ☑ SRO   **Question ID: 3**   **Origin: Bank**   ☐ **Memory Level**

1. (BCH 02/04/05)
2. (JMD 02/07/05) CAF for whether this is required knowledge. Put "only" in choices to ensure one choice is not a subset of another.
3. (PAP 02/07/05) Addressed comment by modifying choice statements about pressurizer heaters. Proportional at maximum in every choice, so deleted - unnecessary. Changed the statement to either "some heaters not energized" or "all heaters are energized".
4. (DEJ 02/09/05) Good Q. Is thumbrule in lesson material?
5. (PAP 02/09/05) This is licensee bank question. Thumbrule is stated in justification. Will CAF.
6. (BCH 02/17/05) Recommend replace question because thumbrule is not taught to ILO. Licensee will suggest replacement.
7. (PAP 02/24/05) Replaced with bank question (0075162) proposed by licensee (RJA, DAP).
8. (PAP, JMD 03/15/05) Changed correct answer to Choice D to correct typo.
9. (RLC 03/15/05) Original question has the BASIC concept technically correct in the Justification, but shows Choice "C" as the correct answer. Recommend flagging choice "D" as the correct answer.
10. (PAP, JMD 03/16/05) Flagged "D" as correct answer. Discussed with licensee.

 # 55   ☑ RO ☑ SRO   **Question ID: 5000059**   **Origin: New**   ☐ **Memory Level**

1. (BCH 01/26/05) Similar to question 071659 rev 0 but independently constructed and involves AFW FRV position. Objective 11 11. Given a loss of DC control power to the following components, predict the response of the AFW system and identify correct operator response to mitigate the event: (8823) A) Turbine Driven Auxiliary Feedwater Pump Controls B) AFW-FCVs, FW-43A and 43B
2. (JMD 01/31/05) Reviewed. No comments.
3. (DEJ 02/07/05) Which is correct? C or D. See justifications and "checked answer".
4. (BCH 02/08/05) Response: I had changed the answer around and failed to make the justification to match the change. Problem is now corrected.
5. (PAP 02/17/05) Capitalized CANNOT in choices.
6. (RLC 03/15/05) Recommend changing distractor "D" to indicate "normally on C-05" because the TDAFP is normally selected to DV-20.
7. (PAP, JMD 03/16/05) Changed "C" and "D" per recommendations. Also separated out "Then, DV10 was deenergized". Discussed with licensee.

 # 56 ☑ RO ☑ SRO   Question ID: 0065167   Origin: Mod   ☐ Memory Level

1. (BCH 01/26/05) Modified bank question 0065167 rev 1. The correct answer to the original bank question appears to be in error.
2. (JMD 01/31/05) Reviewed. No comments.
3. (DEJ 02/07/05) Checked answer and justification don't match. Which is correct? Double jeopardy with other loss of power AFW Q? [Q#55 and Q#56]
4. (BCH 02/08/05) I swapped C and D distracters but failed to swap the justification.. I don't think this is double jeapardy because in Q55 we test a loss of DV-10 and in Q-56, we test a loss of VA-20. These power supplies do different things. It may be over-sampling - in that we are testing loss of AFW power supplies 2x - that is the way the sample plan rolled but Q55 does not compromise Q56 (you do not need to get the answer to Q55 in order to answer Q56).
5. (BCH 02/17/05) Changed Choice D to make more correct. Also changed Distractor C for symmetry. Need to fix justifications.
6. (RLC 03/15/05) Recommend rewording all choices to include names of AFW control board switches that must be manipulated per the original question's design. Also, reword correct answer to be more inclusive of the required actions for the conditions of the stem.
7. (PAP, JMD 03/16/05) Added current S/G level to stem. Modified choices A, C and D as recommended. Discussed with licensee.

 # 57 ☑ RO ☑ SRO   Question ID: 5000060   Origin: New   ☑ Memory Level

1. (BCH 01/31/05) Objective: RLD-04-CR1 PEO 9 Describe the operating characteristics of PIOPS in the following modes of operation: (MB-00531) A) Local Mode, B) Change Alarm Disable Status, C) Control Source Check, D) Display/Modify Setpoints, E) Display Current Data, F) Set Time and Date, G) Trend Display, H) Printer Reports, I) Countrate Histogram
2. (JMD 02/01/05) Reviewed. No comments.
3. (DEJ 02/07/05) Right on target, well written.
4. (PAP 02/17/05) Capitalized NOT in stem.
5. (RLC 03/15/05) Recommend adding the word "sample" in place of in front of the word "pump" in choices 'B' & 'C' to make the question technically correct. PIOPS monitors the SAMPLE pump discharge flow and pressure for the purpose of "automatic" isolation of the discharge, on the condition that the rad. Monitor is not properly monitoring the discharge.
6. (PAP, JMD 03/16/05) Changed choices B and C as recommended. Discussed with licensee.

 # 58 ☑ RO ☑ SRO   Question ID: 0054038   Origin: Bank   ☐ Memory Level

1. (JMD 02/01/05) Reviewed. No comments.
2. (DEJ 02/07/05) Bold "either", "only" and "both" under [choices] A, C and D.
3. (PAP 02/07/05) Capitalized words per recommendation.
4. (PAP 02/17/05) Capitalized NO in stem.
5. (PAP 02/18/05) Changed stem to add clarity to what is bypassed.

 # 59 ☑ RO ☑ SRO   Question ID: 5000061   Origin: New   ☐ Memory Level

1. (BCH 01/31/05) This is a simple question that could be made more difficult if needed by asking for the effects on the plant - but it presently meets the KA as written. I did not find any similar questions in the MP-2 bank searching under C-08, A-21, or DS-1 / DS-2.
2. (JMD 02/01/05) Reviewed. No comments.
3. (DEJ 02/07/05) Good Q.
4. (PAP/JMD/RJC 03/09/05) Evaluated LOK of question. Re-categorized as higher order.
5. (RLC 03/15/05) Recommend deleting "Battery DB1" and "(D01)" [in stem and choice C, respectively] because we no longer use the Bechtel nomenclature.
6. (PAP, JMD 03/16/05) Modified stem and choice C as recommended. Discussed with licensee.

 # 60 ☑ RO ☑ SRO   Question ID: 0054057   Origin: Mod   ☐ Memory Level

1. (BCH 02/01/05) Bank Question 0054057 rev 3 was modified to include the reason for the action - to better fit with the KA. Question 5000038/0 (Q#44 on this exam) is also on instrument air cross ties but tests the automatic feature of cross tying station air with instrument air. ISA-00-C Rev 6 Obj RO2. As given in ISA-00-C, identify the effects of a given malfunction or loss of the Station Air or Instrument Air Systems on continued steady state plant operation (MB-02636), Obj RO3 Identify the effects on the Station Air and Instrument Air Systems of a loss or malfunction of the following: (MB-02637)
A.4160 VAC Vital and Non-Vital Electrical Distribution Systems B.480 VAC Vital and Non-Vital Electrical Distribution System. C.120 VAC Non-Vital Electrical Distribution System., Obj RO5 As given in ISA-00-C, describe how the Station Air and Instrument Air Systems components automatically function to cross-connect the Station Air System with the Instrument Air System when Instrument Air System pressure falls below setpoint. (MB-02642)
2. (JMD 02/02/05) Setup is confusing. Is IA pressure decreasing because of leak? If so, the RBCCW/Fire water distractors are implausible. If not, need to provide information as to why pressure decreasing. Did a compressor trip? Also, better match to KA would be "what needs to be done and for what purpose" (i.e., to ensure remote control of steam dumps, etc.)
3. (JMD 02/02/05) Reviewed changes. Ok.
4. (DEJ 02/07/05) Great Q.

 # 61 ☑ RO ☑ SRO   Question ID: 0054834   Origin: Mod   ☑ Memory Level

1. (BCH 02/01/05) Modified question from 0054834 rev 0. Objective: RMS-00-C PEO 4C Describe the automatic protective actions/functions associated with the following Area and Process radiation monitors [MB-00619]: RM-8123A/B & RM-8262A/B, Z1 & Z2 Containment Particulate/Gaseous
2. (JMD 02/02/05) Reviewed. No comments.
3. (DEJ 02/07/05) Good Q.
4. (PAP 02/17/05) Added valve nomenclature to Choices A and C.
5. (RLC 03/15/05) Recommend adding the name for F-20 in choice A and capitalizing the names of the fans in the other distractors.
6. (PAP, JMD 03/16/05) Modified all choices as recommended. Discussed with licensee.

 # 62 ☑ RO ☑ SRO   Question ID: 0053371   Origin: Mod   ☑ Memory Level

1. (BCH 02/01/05) Modified bank question question 0053371 Rev 3. Objective RMS-00C Rev 6 #18 As contained in OP 2383C, describe the administrative controls associated with changing a setpoint for a Process or Area Radiation Monitoring System instrument channel and whether a setpoint may be changed [MB-03128].
2. (JMD 02/02/05) Reviewed. No comments.
3. (DEJ 02/07/05) Is this RO level of knowledge? Q is OK, but I would just skip it.
4. (BCH 02/08/05) The question is considered RO LOK by the licensee because the Millstone bank tests this concept and there is a valid RO lesson plan objective. The RO lesson plan states: "As contained in OP 2383C, describe the administrative controls associated with changing a setpoint for a Process or Area Radiation Monitoring System instrument channel and whether a setpoint may be changed."
5. (JMD 02/17/05) Take numbers out. Make choices to change nothing, change alarm, change alert, change something else. Provide applicants with OP-2383C Attachments 1 and 2 (Pages 28, 29 of 32)
6. (PAP 02/17/05) Changed as recommended.
7. (PAP 02/24/05) Capitalized NOT in choices.
8. (PAP 03/09/05) Actions in key answer are directed by steps in OP-2383C, Section 4.4. Accordingly, changed "should be done" to "must be done" in the question stem.
9. (BCH 03/09/05) Ok by me [reviewed "should" to "must"].
10. (RLC 03/15/05) Recommend adding "Using the appropriate attachment" to the question [stem] because most of the validation team didn't know the attachment was supplied and therefore didn't use it.
11. (PAP, JMD 03/16/05) Added "Using the provided attachment" to the stem as recommended. Discussed with licensee.

 # 63 ☑ RO ☑ SRO Question ID: 5000013 Origin: New ☐ Memory Level

1. (BCH 02/01/05) Objective: CED-01-C.rlc04 RO-10E Given any of the following CEA permissives/stops, identify the purpose of the interlock, the CEA motion which is inhibited, the conditions which result in the interlock, the CEAs or CEA group(s) affected, the CEA control mode affected and the control room indication of the stop/permissive: [MB 02244] A)CEA Group Deviation (DEV), B)CEA Gross Group Deviation (DEV), C)Upper Core Stop (UCS), D)Lower Core Stop (LCS), E)Sequence Permissive (SP), F)Exercise Limit (EL)
2. (JMD 02/02/05) Reviewed. No comments.
3. (DEJ 02/07/05) Good Q. Are A&C the same? Are B&D the same? Question, could USP mean same as "too close together"? I forget USP and LSP - which picks up Group 2 on way out?
4. [BCH 02/08/05] You are absolutely correct on your concerns. (USP = upper sequence point and LSP = lower sequence point) I changed the stem and correct answer to have RG-7 moving out when RG-5 was being commanded out. This does not meet the overlap condition (OVLP) condition because RG-7 and RG-5 are not adjacent groups. Note that if you had an OVLP condition, you will also meet the OOS (first) condition. However, it is possible to meet the OOS condition but NOT meet the OVLP condition. This is now the new premise of the question. In addition, I want to provide a core mimic so the applicants can determine the relative position of RGs 5 and 7 - to better answer the question about radial or axial flux peaking.
5. (JMD 02/09/05) Reviewed. CAF.
6. (JMD 02/17/05) Revisit this one. Need a situation with operational implications. Example: extension shaft not coupled.
7. (BCH 02/23/05) Changed question to test what happens if the CEA extension shaft is not coupled and the reactor is started up.

 # 64 ☑ RO ☑ SRO Question ID: 5000065 Origin: New ☑ Memory Level

1. (BCH 02/01) Obj RWV-00-C RO5 As given in OP 2314B, state the actions required if noble gas or iodine radioactivity limits are exceeded during containment purge to the Main Exhaust System. (MB-03075)
2. (JMD 02/02/05) Reviewed. No comments.
3. (DEJ 02/07/05) Good Hard Q.
4. (JMD 02/17/05) Reword question to delete reference to "flow rate".
5. (BCH 02/23/05) Originally, the question asked for "The method of controlling purge flow rate" in part 2 of the question. Although the purge flow rate was indeed "controlled" by opening 2-AC-3, this valve is not normally considered to be a throttle valve and the use of this terminology was thought to be confusing by the licensee. In other words, the operators do not consider 2-AC-3 as a flow control valve although it clearly controls the flow and has a miod position to throttle flow. I changed the question to ask for the path and the valve that controls the flow rate that is in the path. This still meets the K/A because the flow rate is controlled by positioning the valve listed in the correct answer/distracters.
6. (RLC 03/15/05)   This evolution resulted in the greatest unauthorized release of radiation to the environment that Millstone site has ever experienced. There is NO WAY any operator would even consider performing this evolution without IN-HAND use of the procedure, and they are trained that way. Requiring them to MEMORIZE the procedure driven flow path is counter to management philosophy and good operating practice. [Recommend modifying question to delete reference to AC-3 / AC-57 and to make the choice between EBFAS or main exhaust system to the Millstone or the Unit 2 stack].
7. (PAP, JMD 03/16/05) Left question as written. Discussed with licensee.

 # 65 ☑ RO ☑ SRO Question ID: 0071625 Origin: Bank ☑ Memory Level

1. (BCH 02/02/05) Note - there are 4 revisions to this bank question. In every case, the correct answer was either A or B. I have added the additional point that the fuel assembly should remain grappled to ensure that no applicant can argue that it would be more appropriate to return the assembly to the core based on refueling experience that it would be quicker to do this than to place it in the sourth saddle area.
2. (JMD 02/02/05) Questions about procedure. Will discuss further with Brian.
3. (BCH 02/07/05) Changed stem to ensure that correct choice is only correct answer.
4. (JMD 02/08/05) Change "was" to "is now" in stem. CAF.
5. (DEJ 02/09/05) Good Q.
6. (JMD 02/17/05) Modify Q to ask "what is the safe point".
7. (BCH 02/23/05) Changed as recommended.

 # 66 ☑ RO ☑ SRO Question ID: 5000069 Origin: New ☐ Memory Level

1. (BCH 02/03/05) This question was developed after shifting the original K/A. As the reference material was reviewed, it became clear that MP-2 Tech Specs appeared to have a "hole" regarding the requirement for WR NI channels during a startup. The question was completed but it is not clear if there is a correct answer because the startup procedure does not clearly identify action to be taken if the number of operable WR NI channels falls below the minimum during a startup.
2. (JMD 02/03/05) Change correct answer to "stop CEA withdrawal", based on Step 4.3.3. CAF.
3. (DEJ 02/07/05) A.2. does not indicate a time frame, others do.
4. (PAP 02/08/05) Added "within 4 hours" to Choice A for symmetry.
5. (BCH 02/08/05) Good idea. Looks better from a psychometric perspective.
6. (JMD 02/17/05) Reselect the K/A
7. (BCH 2/25/05) This is a valid K/A - the problem is that the situation is unfulfilling to operators who would want to take some action if they were in this condition. However, Millstone Tech Specs do not require any action to be taken under this situation. Decided to change the question to test the required tech spec action for a loss of WRL NI channels in MODE 3 as directed by JMD.
8. (RLC 03/15/05) The plant enters Mode 2 when Group 4 reaches 72 steps (per OP-2202). Therefore, the question is technically incorrect for the given conditions. Recommend rewording in order to still meet the original K/A, and live within the bounds of required RO knowledge (the detailed requirements of most Tech. Spec. Action statements, especially those listed in "Tables", are NOT required from memory for an RO). Proposed rewording slightly to solicit actions implied by the Reactor Startup procedure, OP-2202, which states that TWO channels of WR NI's are required to perform a reactor startup.
9. (PAP, JMD 03/16/05) Changed CEA height in stem to have plant in MODE 3. Capitalized TECHNICAL SPECIFICATIONS in stem. Discussed with licensee.

 # 67 ☑ RO ☑ SRO Question ID: 5000070 Origin: New ☐ Memory Level

1. (BCH 02/03/05) Objective:RLD-04-C #8. Given a precaution or a list of precautions from SP 2617A, give the basis for CLRW and ALRW System discharge precautions applicable to the PEO, and describe the methods available to monitor associated parameters. (MB-00540)
2. (JMD 02/03/05) Reviewed. No comments.
3. (DEJ 02/07/05) Good Q.
4. (JMD 02/17/05) Change "Tech Req Manual" to "REMODCM" in Choices A and D.
5. (PAP 02/17/05) Changed as recommended.
6. (PAP 02/24/05) Capitalized NOT in stem.
7. (RLC 03/15/05) Changed wording of Choice "B" and "C" to clearly mean "radioactive discharge", not "chemical" discharges, which the NPDES does limit. Changed "CLWMT" to CWMT which complies with it's acronym.
8. (PAP, JMD 03/16/05) Modified as recommended. Discussed with licensee.

 # 68 ☑ RO ☑ SRO Question ID: 5000071 Origin: New ☐ Memory Level

1. (BCH 02/03/05)
2. (JMD 02/04/05) Ok.
3. (DEJ 02/09/05) Good Q. Choice C is also correct. Needs to say "Only .. Valves close". D also needs "only".
4. (PAP 02/09/05) Changed as recommended.
5. (PAP 02/24/05) Capitalized AND and ONLY in choices.
6. (RLC 03/15/05) Recommend rewording question to simplify the stem somewhat and to put the emphasis on the ADMINISTRATIVE aspects of the instrument failure, as that is the only concept being tested that is of a license knowledge level. The "system valve response" is more of a non-license concept.
7. (PAP, JMD 03/16/05) Question left as written. Discussed with licensee.

 # 69 ☑ RO ☑ SRO Question ID: 0056618 Origin: Mod ☐ Memory Level

1. (BCH 02/03/05)
2. (JMD 02/04/05) Unrealistic. This is going to require a percentage of the core released into the containment. Won't happen from a SGTR. Possibly add a LBLOCA to the stem, or just ask a question that more simply addresses the KA.
3. (BCH 02/07/05) Modified question and choices. Stem no longer refers to a SGTR.
4. (DEJ 02/09/05) [Stem] needs to say "a rx trip occurs at 0200."
5. (PAP 02/09/05) Changed as recommended.
6. (RLC 03/15/05) Recommend adding "several radmonitors are rising" [to the stem] to make the conditions statement more credible for fuel damage. Validation group remarked that there would be more than just one rad monitor for a fuel failure.
7. (PAP, JMD 03/16/05) Modified as recommended. Discussed with licensee.

 # 70 ☑ RO ☑ SRO Question ID: 0054466 Origin: Mod ☑ Memory Level

1. (JMD 02/04/05) Ok. Correct spelling of "green" in stem. I am amazed that you actually found a [KA] link.
2. (PAP 02/07/05) Changed green light to red light in stem and added function and location for light. Intent is to provide indications that valve has closed.
3. (DEJ 02/09/05) Good Q.

 # 71 ☑ RO ☑ SRO **Question ID: 5000067** **Origin:** New ☑ Memory Level

1. (JMD 02/03/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q.
3. (RLC 03/15/05) It is believed this question [suggested replacement question] also meets the K/A, is slightly higher in difficulty level, and does not require memory recall of the fuel movement procedure.
4. (PAP, JMD 03/16/05) No basis for replacement of original question. Question requires ability to answer the learning objective. "ELO-19 List two conditions given in OP 2303B which require immediate suspension of all Spent Fuel Pool fuel movement and notification of the Shift Manager and the Unit 2 Reactor Engineer." Discussed with licensee

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 # 72 ☑ RO ☑ SRO **Question ID: 5000066** **Origin:** New ☐ Memory Level

1. (JMD 02/03/05) May need a core map showing detector locations. Otherwise okay.
2. (PAP 02/03/05) Deleted core location description from stem. Added handout of core locations.
3. (DEJ 02/07/05) I like Q.
4. (PAP 02/24/05) Capitalized NO in Choice C.

 # 73 ☑ RO ☑ SRO **Question ID: 5000064** **Origin:** New ☑ Memory Level

1. (JMD 02/02/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q.

 # 74 ☑ RO ☑ SRO **Question ID: 5000063** **Origin:** New ☑ Memory Level

1. (JMD 02/02/05) Reviewed. No comments.
2. (DEJ 02/07/05) D could be correct depending on how it is read. Maybe "Based on these conditions, the crew will immediately _____."
3. (PAP 02/08/05) Changed as recommended.

 # 75 ☑ RO ☑ SRO **Question ID: 0054207** **Origin:** Bank ☑ Memory Level

1. (JMD 02/02/05) Rephrase question to "determine the permissible seq for perfom actions steps 25 and 26". Change Choice C to "Step 26 may be performed at any time because.."
2. (PAP 02/02/05) Changed as recommended.
3. (DEJ 02/07/05) Ok.
4. (JMD 02/17/05) Ask another question based on discussion about interpretation of the hold point at MS2. Maybe test purpose of asterisks.
5. (PAP 02/24/05) Replaced with new question (4200000) written and proposed by licensee (RJA, DAP).
6. (RLC 03/15/05) Suggest replacing original # 75 with this one [Q# 54207] due to streamlined stem and greater spectrum of choice coverage in the suggested replacement.
7. (PAP, JMD 03/16/05) Replaced question as recommended. Categorized as memory level. Replaced question that was higher order. Discussed with licensee.

 # 76 ☐ RO ☑ SRO **Question ID: 0055020** **Origin:** Mod ☐ Memory Level

1. (JMD 11/26/04) Reviewed. No comments.
2. (PAP 12/02/04) Don't think Joe realized this was an SRO only question as it was mixed in with the RO questions. Need to review against SRO-only criteria.
3. (JMD 12/06/04) Not an SRO question. All SRO-only questions need to meet one of the 7 criteria specified in 10CFR55.43.
4. (PAP 12/07/04) Modified stem and choices to require applicant to apply TS action requirements to given situation. Now meets 55.43(2).
5. (JMD 12/08/04) Reviewed changes. No comments.
6. (RJC 12/13/04) Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
7. (DAP 12/21/04) Change Choices C and D to less than 10 steps.
8. (PAP 12/28/04) Changed Choices C and D to "less than 10 steps".
9. (DEJ 01/10/05) Generally good/great Q, would crew lower group 6 to 10 steps to align Group 6 rods or would they repair dropped rod and pull dropped CEA in manual individual to align w/group? For C and D, just restate T.S. req't, don't say how.
10. (JMD 01/31/05) Change Choices C and D from "inserted to less than 10 steps" to "restored to within 10 steps of each other.."
11. (PAP 01/31/05) Changed as recommended.

77   ☐ RO   ☑ SRO   Question ID: 5000017   Origin: New   ☑ Memory Level

1. (JMD 12/8/04)   Reviewed. No comments.
2. (RJC 12/13/04)   Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP/SRM 12/22/04)   Okay.
4. (DEJ 01/12/05) Good Q.
5. (PAP/JMD/RJC 03/09/05) Evaluated LOK of question. Re-categorized as lower order.
6. (RLC 03/15/05) Recommend rewording Choice "A" to better meet intended concept stated in the Justification.
Reword Choice "B" due to bases explanation of probabilistic analysis that points out only ONE SIT tank is truly required
due to the short delay (on a LBLOCA) before the expected injection flow from a LPSI or HPSI pump.
7. (PAP, JMD 03/16/05)   Modified choice A. Discussed with licensee.

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78   ☐ RO   ☑ SRO   Question ID: 5000020   Origin: Mod   ☐ Memory Level

1. (JMD 12/8/04)   Are operators expected to know these channel IDs without noun names. Wait to see comments
from licensee's review before changing question.
2. (RJC 12/13/04)   Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (DAP/SRM 12/22/04)   Change readings to .9, 1.1, 1.1, 4.3, 1.2, 1.0, 1.1. Add noun names to transmitters. Change
Choice A to "1 of ..". Change Choice B to "not valid..". Change Choice C from "CA system" to "AOP-2575, "Rapid
Downpower". While it is true the setpoint per the ARP is 3.8, the actual setpoints are lower, which allows for
instrumentation drift. Ctmt pressures of this magnitude would result in tripping the rx, therefore 2525. We reworte the
question to indicate a small high energy break in ctmt that would require a rapid downpower, but not a trip.
4. (PAP 12/28/04)   Changed per licensee recommendation.
5. (DEJ 01/12/05)   I like your original Q better than licensee's. What is the ctmt pressure SIAS setpt that the operators
know .. use that, if 3.8# then keep as is.
6. (PAP 01/12/05)   Changed stem to have one channel failed high and bypassed. Recommendation of BCH.
Pressures as recommended by licensee. Distractors set up as choices between immediate trip and rapid downpower
procedures. Per licensee feedback, would not be acceptable for operator to trip reactor with pressures as given.
7. (JMD 01/31/05)   Reviewed. CAF. Need something to drive operators to implement AOP-2575, not just opinion.
8. (PAP 01/31/05)   Corrected procedure reference by changing "2574" to "2575" in Choices A and B.
9. (PAP 02/17/05)   Added to stem information needed to confirm no accident in progress. Changed choices from rapid
downpower to containment depressurization.
10. (PAP 02/24/05)   Capitalized NO and NOT in stem and NOT in two choices.

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79   ☐ RO   ☑ SRO   Question ID: 5000021   Origin: Bank   ☐ Memory Level

1. (JMD 12/8/04)   Reviewed. No comments.
2. (RJC 12/13/04)   Reviewed. General comments: Identify cognitive level of question and whether handouts provided.
3. (PAP 12/13/04)   Added information to stem to inform applicant that the missed 'A' EDG surveillance is a conditional
surveillance required by the TS action statement on the 'B' EDG.
4. (SRM/DAP 12/22/04) Ok.
5. (DEJ 01/12/05) Unsure of timing on this. I figure "A" is right but 2nd diesel inop at 0600 and get 2 hours before
must apply 6 hr to HSB. Shouldn't Choice A be 0800 so be in HSB by 1400? Change Choice D to 0800. T.S.4.0.3 is 24
hours from time of discovery.
6. (PAP 01/12/05)   Changed Choice D as recommended. Left Choice A as is because action for inoperability of
second diesel begins at time of discovery (0800, not 0600).
7. (JMD 01/31/04)   Reviewed. Need CAF to verify from "time of discovery".
8. (PAP 02/17/05)   Changed stem "conditional surveillance" to "conditional 24 hour surveillance".
9. (PAP 02/18/05)   Will provide TS 3.8.1.1 to applicants.

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80   ☐ RO   ☑ SRO   Question ID: 5000022   Origin: Bank   ☐ Memory Level

1. (JMD 01/03/05)   Reviewed. No comments.
2. (DEJ 01/12/05) Good Q. C is right, but calc on "D" is wrong.
3. (PAP 01/12/05) Corrected calc in justification for distractor "D".
4. (DAP 01/21/05) Ok.
5. (PAP 02/17/05) Changed "transit time" to "the time to get to and from the job site".

81   ☐ RO   ☑ SRO   Question ID: 5000023   Origin: New   ☑ Memory Level

1. (JMD 01/03/05) Reviewed. No comments.
2. (DEJ 01/12/05) I would never get this one right. May be too hard.
3. (PAP 01/12/05) Will refer comment to JMD).
4. (RJA 01/20/05) Is this really SRO knowledge?
5. (DAP 01/21/05) This info may be required for an HP Tech, but not an SRO.
6. (PAP 01/28/05) Spoke with DAP. He and RJA will try to come up with a replacement question that better matches the KA.
7. (PAP 02/02/05) Rewrote question to make more operationally valid based on input from licensee. Left original question in bank as 5000068 Rev 0. DAP and RJA both say Choice D should stand as valid distractor. They do not think it could be defended as possibly correct. If necessary to change, they propose "shifting operating LPSI pumps when on SDC with flow already established through both SDC HXs".
8. (JMD 02/03/05) Reviewed. No comments.
9. (DEJ 02/07/05) I like this one much better and I got it right!

82   ☐ RO   ☑ SRO   Question ID: 5000024   Origin: Bank   ☐ Memory Level

1. (JMD 01/03/05) Tie to procedures for 55.43(5).
2. (PAP 01/04/05) Modified stem and choices to address comment above.
3. (DEJ 01/12/05) Good Q.
4. (RJA 01/20/05) Change "RTP" to "power" in stem.
5. (DAP 01/21/05) Ok.
6. (PAP 01/28/05) Changed "RTP" as recommended.
7. (PAP 02/24/05) Capitalized NO in stem.
8. (RLC 03/15/05) Recommend rewording stem to streamline. Change amount ADV is open from 30% to 50% [in Choice D] to better account for changes seen in plant parameters.
9. (PAP, JMD 03/16/05) Changed as recommended. Discussed with licensee.

83   ☐ RO   ☑ SRO   Question ID: 0071509   Origin: Bank   ☑ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Great Q. [Add] "Reactor Trip Recovery" [to procedure number in stem].
3. (PAP 01/12/05) Changed as recommended.
4. (DAP 01/21/05) Ok.

84   ☐ RO   ☑ SRO   Question ID: 5000043   Origin: New   ☐ Memory Level

1. (JMD 01/10/05) Is there a difference between hand and PPC calculation? Recommend breaking paragraph after first sentence. Then put last sentence after second sentence.
2. (PAP 01/10/05) Changed as recommended.
3. (DEJ 01/12/05) Q too confusing, I got it, but had to stare at answer for awhile. I suggest going w/a more standard RCS leakage Q. If you say "assume" more than once in a Q, there is probably too much going on.
4. (PAP 01/12/05) Modified question by deleting an assumption, deleting references to total leakrate in choices, having applicant calculate the new SG tube leakage and apply it to the TS limit.
5. (DAP 01/21/05) Ok. Change "meets" to "is less than" in Choices A and B.
6. (PAP 01/28/05) Changed as recommended.
7. (JMD 01/31/04) Reviewed. Ok.

85   ☐ RO   ☑ SRO   Question ID: 5000044   Origin: New   ☑ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Good Q.
3. (DAP 01/21/05) Ok.
4. (PAP 02/17/05) Changed "non-ductile" to "brittle" in Choice B as requested by licensee. Dropped a "the" in Choice A for psychometric reasons.

86 ☐ RO ☑ SRO Question ID: 5000045 Origin: Mod ☑ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Good Q. See note: [Change "A reactor trip has just occurred." to "An automatic reactor trip has been initiated by RPS".]
3. (PAP 01/12/05) Changed as recommended.
4. (RJA 01/24/05) Change "RPI indicates" in stem to "All CEA position indications show". Change "and the reactor trip breakers are stuck shut" to "The reactor trip breakers will not open at C-04 or locally and the CEDM Feeder breaker will not open." Change "reactor is subcritical" to "reactivity control acceptance criteria is met". Delete "procedure" from "procedure EOP". Delete "power dropping and" from Choices B and D. An additional step is to ensure that no more than one CEA is not fully inserted. In this case all CEAs are not fully inserted. This condition will require performing the contingency action, which is the initiation of Emergency Boration. Therefore, B is correct. (I agree - DAP).
5. (PAP 01/28/05) Discussed these proposed changes at length with RJA and DAP. All changes implemented as proposed.
6. (JMD 01/31/04) Reviewed. Ok.

87 ☐ RO ☑ SRO Question ID: 0053649 Origin: Bank ☑ Memory Level

1. (JMD 01/10/05) Reviewed. No comments.
2. (DEJ 01/12/05) Good Q.
3. (RJA 01/20/05) FYI, OP 2260 Attachment 1, step 4.2.8, provides additional information: "If a SGTR has occurred, the operator is expected to feed the affected SG as necessary to maintain level low in the band ~40-45%." While D is still technically correct, someone may think it should be more correct. B may be considered correct if the examinee assumes #2 SG level will continue to increase to greater than 40% without any feed flow.
4. (DAP 01/24/05) Change Choices C and D from "continue feed to SGs until both have" to "feed SGs to maintain". The use of "until both have.." means you can't stop feeding the high SG until the lower SG is greater than or equal to 40%.
5. (PAP 01/28/05) Changed as recommended. Changed "should" to "must" in stem. Left Choice B as is. Still a valid distractor. Per procedure, SG will be fed to maintain 40% to 70% level.
6. (PAP 02/24/05) Capitalized NO in stem.

88 ☐ RO ☑ SRO Question ID: 0054362 Origin: Mod ☐ Memory Level

1. (JMD 01/18/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q. Would MSLI occur? If so, would it affect #2 SG pressure, rad activities? What about blowdown RMS?
3. (PAP 02/08/05) Stem as written shows that MSI has not occurred. Per lesson material, the blowdown rad monitor can be used to identify SGTR, "but due to its low sensitivity, it has been found in the industry not to alarm until around 30 minutes after real tube leaks." Deleted "no other rad monitors rising".
4. (PAP 02/24/05) Capitalized NO in stem.

89 ☐ RO ☑ SRO Question ID: 5000046 Origin: New ☐ Memory Level

1. (JMD 01/18/05) Not SRO level question. Try instead, "MSIVs don't close, what should be done next (local, switches, etc.)". Format of #92 would work here also.
2. (PAP 01/25/05) Modified question and answers per recommendation. Original wording as follows: ".. Both MSIVs remain open.||Assuming each bottle-up panel switch functions as designed, which of the following sets of switches listed in EOP-2525, "Standard Post-Trip Actions", correctly completes the statement.||Placing Bottle-Up Panel Isolation Switches _____ in ISOL constitutes the MINIMUM actions necessary to stop the steam release in the turbine building.||A. "#1 MSIV Ch 1, 2-MS-64A" AND "#1 MSIV Ch 2, 2-MS-64A" ||B. "#2 MSIV Ch 1, 2-MS-64B" AND "#2 MSIV Ch 2, 2-MS-64B" ||C. (Correct Answer) "#1 MSIV Ch 1, 2-MS-64A" AND "#2 MSIV Ch 2, 2-MS-64B" ||D. "#1 MSIV Ch 1, 2-MS-64A" AND "#1 MSIV Ch 2, 2-MS-64A" AND "#2 MSIV Ch 1, 2-MS-64B" AND "#2 MSIV Ch 2, 2-MS-64B" ||JUSTIFICATION: SRO ONLY QUESTION - Samples 55.43(5) Assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency situations.||CHOICE (A) - NO WRONG: Both MSIVs must be closed to isolate the leak. VALID DISTRACTOR: Plausible that #1 MSL supplies SV-1.||CHOICE (B) - NO WRONG: Both MSIVs must be closed to isolate the leak.VALID DISTRACTOR: Plausible that both switches required for closure of #1 MSIV.||CHOICE (C) - YES Minimum combination is one switch for #1 MSIV and one switch for #2 MSIV. Both MSIVs must be closed to isolate break because of cross-over header. Only one switch required per MSIV.||CHOICE (D) - NO WRONG: Minimum combination is just one switch per MSIV VALID DISTRACTOR: Procedure lists all switches. Plausible that all switches necessary to close the MSIVs. ||REFERENCES: 1. EOP-2525, "Standard Post Trip Actions", Revision 20 (2/22/01) (Pg 13 of 26)
3. (JMD 01/31/04) Reviewed. Ok.
4. (DEJ 02/07/05) K/A mismatch. K/A - immediate action, Q - contingency action.
5. (JMD 02/08/05) Disagree. K/A match ok.

90 ☐ RO ☑ SRO Question ID: 5000047 Origin: New ☑ Memory Level

1. (JMD 01/18/05) Reviewed. No comments.
2. (DEJ 02/07/05) Reviewed. No comments.
3. (PAP 02/17/05) Changed damaged assembly to actual high radiation condition.

 # 91 ☐ RO ☑ SRO   Question ID: 5000048   Origin: New   ☐ Memory Level

1. (JMD 01/18/05) Change "this situation is possibly indicative of" to " this situation indicates a".
2. (PAP 01/25/05) Changed as recommended.
3. (DEJ 02/07/05) Good Q.

 # 92 ☐ RO ☑ SRO   Question ID: 5000049   Origin: New   ☑ Memory Level

1. (JMD 01/18/05) Reviewed. No comments.
2. (DEJ 02/07/05) Verify correct per licensee. EOP's active in mode 3 but doesn't seem right to do E-0. Check E-0 entry.
3. (PAP 02/08/05) Checked with licensee. With JMD concurrence, changed to MODE 2 situation in stem.
4. (PAP 02/17/05) Added 'B' RCP to stem for clarification at request of licensee.

 # 93 ☐ RO ☑ SRO   Question ID: 5000050   Origin: New   ☑ Memory Level

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q.
3. (PAP 02/17/05) Simplified situation in stem.
4. (RLC 03/15/05) Original questions tests the "from memory" recall of a concept that may not be required for several months. [Recommend replacing with Bank Q# 56585.]
5. (PAP, JMD 03/16/05) Left question as written. Discussed with licensee.

 # 94 ☐ RO ☑ SRO   Question ID: 5000051   Origin: New   ☐ Memory Level

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q.
3. (PAP 02/17/05) I messed up question by making changes prematurely. Need to think this through and rewrite. No alternate channel. No PORV position indication. QT temp / press hi ARPs require immediate trip.
4. (PAP 02/24/05) Rewrote question as suggested by JMD.

 # 95 ☐ RO ☑ SRO   Question ID: 5000052   Origin: New   ☑ Memory Level

1. (JMD 01/31/05) Question asks NEXT corrrect action. Stop LPSI is the next. Only considered a distractor because wrong procedure referenced. As currently written, all choices are correct actions in response to given conditions. Recommend deleting procedure references and asking which of the following is a correct action. Choice of the correct action shows applicant understanding of the procedure without having to refer to it specifically.
2. (PAP 01/31/05) Changed as recommended.
3. (JMD 02/01/05) Reviewed. No comments.
4. (DEJ 02/07/05) Put procedure reference in stem. Will make it link to 43(5).
5. (PAP 02/08/05) Changed as recommended.
6. (PAP 02/17/05) Added additional signals to stem (EBFAS, MSI). Capitalized NOT.

 # 96 ☐ RO ☑ SRO   Question ID: 0054565   Origin: Bank   ☑ Memory Level

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) K/A Mismatch? What are your thoughts? One of my least favorite K/As.
3. (JMD 02/08/05) Disagree. K/A match ok.
4. (PAP 02/17/05) Changed Choices from OP to EOP because would respond via EOP network.
5. (PAP 02/24/05) Capitalized NO in stem.

 # 97 ☐ RO ☑ SRO   Question ID: 5000053   Origin: New   ☐ Memory Level

1. (JMD 01/31/05) KA mismatch. KA says recognize reportable event. Q gives reportable event. Can use a Q that uses both reportable and non-reportable events with times. For example, "which of the following is reportable and the time frame" (two choices reportable, two not)
2. (PAP 01/31/05) Changed as recommended.
3. (JMD 02/01/05) We'll probably get comments on knowing 4 and 8 hour reports. Let licensee make suggestions.
4. (DEJ 02/07/05) Good.

 # 98 ☐ RO ☑ SRO   Question ID: 5000054   Origin: Bank   ☐ Memory Level

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) Ok.

99 □ RO ☑ SRO Question ID: 5000055 Origin: New □ Memory Level

1. (JMD 01/31/05) Reviewed. No comments.
2. (DEJ 02/07/05) Good Q.
3. (PAP 02/17/05) Changed distractors A and B to "steam pressure channel" vice just "channel".

100 □ RO ☑ SRO Question ID: 0053324 Origin: Mod □ Memory Level

1. (JMD 01/31/05) Better Q: "which of the following cannot be authorized..". Recommend "FH SRO, core alts, SG #2 manways off, which of the following cannot be authorized - A) removal of PORV, B) removal of #2 MSIV, C) removal of #1 SG safety, D) removal of #1 SG manway - or maybe include something unrelated to SG secondary so as not to point to ctmt integrity issue.
2. (PAP 01/31/05) Implemented recommendations.
3. (JMD 02/01/05) Reviewed. No comments.
4. (DEJ 02/07/05) Good Q.
5. (PAP 02/24/05) Capitalized CANNOT in stem.