questions reviewed in depth.

| 0.11 | 1. | 2. | ; | 3. Psyd | chometr | ic Flaws | 3 | 4. | Job Con | tent Fla | aws | 5. O | ther | 6. | 7. | 8. |
|------|--------------|--------------|---------------|---------|---------|----------------|---------|--------------|---------|-------------|---------------|-----------|------|-------|-------|--|
| Q# | LOK (F/H) | LOD (1-5) | Stem Focus | Cues | T/F | Cred. Dist. | Partial | Job- Link | Minutia | #/ units | Back- ward | Q= K/A | | B/M/N | U/E/S | Explanation |
| 1 | Н | 2.5 | | | | | | | | | | | | N | U | Selection of procedures is not required of ROs – SRO question. <i>Reworked question to RO level.</i> |
| 2 | F | 2.0 | | | | | | | | | | | | М | Ø | |
| 3 | Н | 2.0 | | | | | | | | | | | | В | U | Operability determination is an SRO task – SRO question. Reworked question to RO level. |
| 4 | F | 2.0 | | | | | | | | | | | | В | Ø | |
| 5 | Н | 2.0 | | | | | | | | | | | | В | S | |
| 6 | Н | 3.0 | | | | | | | | | · | | | В | S | |
| 7 | F | 2.0 | | | | | | | | | · | | | В | S | |
| 8 | Н | 2.0 | | | | | | | | | · | | | Ν | S | Probably not higher. Station agreed – memory level question. |

Instructions

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

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

| 0# | 1. | 2. | 3 | . Psyc | homet | ric Flaw | /S | 4. | Job Con | tent Fl | aws | 5. C | ther | 6. | 7. | 8. |
|-----|--------------|--------------|---------------|--------|-------|----------------|---------|--------------|---------|-------------|---------------|-----------|-------------|-------|-------|---|
| Q# | LOK (F/H) | LOD (1-5) | Stem Focus | Cues | T/F | Cred. Dist. | Partial | Job- Link | Minutia | #/ units | Back- ward | Q= K/A | SRO Only | B/M/N | U/E/S | Explanation |
| 9 | F | 2.0 | | | | | | | | | | | | Z | ₩S | Work on distractors – continuing the downpower is not probable. Downpower is correct under certain circumstances and is proceduralized for those circumstances. Changed to satisfactory. |
| 10 | F | 1.0 | | | | | | | | | | | | В | U | LOD = 1. GET knowledge. Suggest notification comm. Reworked distractors. |
| 11 | F | 2.0 | | | | | | | | | | | | В | E | Distractor a. is implausible. Since flow was high when there were no oscillations, why would raising flow cause oscillations? Replace distractor a. <i>Replaced distractor</i> . |
| 12 | F | 1.0 | | | | | | | | | | | | N | ⊎S | LOD = 1. This is auxiliary operator knowledge. <i>Identified weakness</i> at the station. <i>Will provide feedback to requal.</i> |
| 13 | Н | 2.0 | | | | | | | | | | | | N | S | Not higher skill. Must be memorized. Station agreed. Memory level question. |
| 14# | Н | 2.0 | | | | | | | | | | | | В | S | |
| 15 | F | 2.5 | | | | | | | | | | | | N | S | Does the answer change based on RCIC/RHR status? No change, but info enhances the question. Left question as-is. |
| 16# | Н | 2.5 | | | | | | | | | | | | Ν | E | Is time necessary? Which way did the valve fail? Removed time. Valve failure (open/close) is part of the question. |
| 17 | Н | 2.0 | | | | | | | | | | | | В | S | |
| 18 | Н | 2.5 | | | | | | | | | | | | N | S | (For an RO?) This is an RO responsibility at the plant and has a learning objective. |
| 19# | F | 2.0 | | | | | | | | | | | | N | S | |
| 20 | Н | 2.0 | | | | | | | | | | | | N | S | |
| 21 | F | 2.0 | | | | | | | | | | | | М | S | Consider some method of explaining "improve." Left as is, this is company language. |
| 22# | Н | 2.0 | | | | | | | | | | | | М | S | |
| 23 | F | 2.0 | | | | | | | | | | | | В | S | |
| 24 | Н | 2.5 | | | | | | | | | | | | N | S | |
| 25# | Н | 2.0 | | | | х | | | | | | | | В | U | Immediate, catastrophic failure would not be plausible. Distractors a. and c. are implausible. <i>Replaced question, retained K/A.</i> |

| 0# | 1. 2. LOK LOD | | 3 | . Psyc | hometi | ric Flaw | s | 4. | Job Cont | tent Fl | aws | 5. C | ther | 6. | 7. | 8. |
|-----|------------------|-------|---------------|--------|--------|----------------|---------|--------------|----------|-------------|---------------|-----------|-------------|-------|-------|--|
| Q# | (F/H) | (1-5) | Stem Focus | Cues | T/F | Cred. Dist. | Partial | Job- Link | Minutia | #/ units | Back- ward | Q= K/A | SRO Only | B/M/N | U/E/S | Explanation |
| 26 | Н | 2.0 | | | | | | | | | | | | N | S | |
| 27 | Н | 2.5 | | | | | | | | | | | | N | S | |
| 28# | Н | 2.5 | | | | | | | | | | | | В | S | |
| 29 | F | 2.5 | | | | | | | | | | | | В | S | |
| 30 | H | 2.0 | | | | | | | | | | | | N | Е | Distractor b. is weak. See if we can find a better 2 nd half. Replaced 2 nd half of the distractor |
| 31# | Н | 2.0 | | | | | | | | | | | | В | S | |
| 32 | Н | 2.5 | | | | | | | | | | | | N | S | |
| 33 | Н | 2.5 | | | | | | | | | | | | В | S | |
| 34# | F | 2.0 | | | | | | | | | | | | В | S | |
| 35 | Н | 2.5 | | | | | | | | | | | | N | S | |
| 36 | Н | 2.0 | | | | | | | | | | | | М | S | |
| 37# | Н | 2.5 | | | | | | | | | | х | | В | U | K/A is for area rad monitors. Question is for process rad monitors. *Agreed. Selected new K/A, fixed question.* |
| 38 | Н | 2.5 | | | | | | | | | | | | В | S | |
| 39 | Н | 2.5 | | | | | | | | | | | | В | S | |
| 40# | Н | 2.0 | | | | | | | | | | | | Ν | S | |
| 41 | Η | 2.0 | | | | | | | | | | | | В | Ø | |
| 42 | F | 2.0 | | | | X | | | | | | | | N | U | Runout should not occur on a HPCS pump running at 600 gpm. Distractors a. and b. are implausible. <i>Changed distractor.</i> |
| 43# | F | 2.0 | | | | | | | | | | | | В | S | |
| 44 | Н | 2.0 | | | | | | | | | | | | N | S | |
| 45 | Н | 2.0 | | | | | | | | | | | | М | S | |
| 46# | F | 1.0 | | | | | | | | | | | | N | J | LOD = 1 Reworked question. |
| 47 | Н | 2.0 | | | | | | | | | | | | В | E | Distractor b. is implausible. The distractor has reactor power lowering while reactor period is stable and positive. Violates laws of physics. <i>Replaced distractor.</i> |
| 48 | Н | 2.0 | | | | | | | | | | | | N | Е | Bulletize plant conditions. Bulletized |

| 0# | 1. | 2. | 3 | . Psyc | homet | ric Flaw | 'S | 4. | Job Con | tent Fl | aws | 5. C | ther | 6. | 7. | 8. |
|-----|--------------|--------------|---------------|--------|-------|----------------|---------|--------------|---------|-------------|---------------|-----------|-------------|-------|-------|---|
| Q# | LOK (F/H) | LOD (1-5) | Stem Focus | Cues | T/F | Cred. Dist. | Partial | Job- Link | Minutia | #/ units | Back- ward | Q= K/A | SRO Only | B/M/N | U/E/S | Explanation |
| 49# | Н | 2.5 | | | | | | | | | | | | N | S | |
| 50 | Н | 2.0 | | | | | | | | | | | | В | S | Not higher skill. Must be memorized. Agreed – changed to lower. |
| 51 | Н | 2.0 | | | | | | | | | | | | N | S | |
| 52# | F | 2.0 | | | | | | | | | | | | N | S | |
| 53 | F | 2.0 | | | | | | | | | | | | В | S | |
| 54 | F | 2.0 | | | | | | | | | | | | М | S | |
| 55# | Н | 2.5 | | | | | | | | | | | | N | S | |
| 56 | F | 2.0 | | | | | | | | | | | | В | S | |
| 57 | F | 2.0 | | | | | | | | | | | | N | S | |
| 58# | Н | 2.0 | | | | | | | | | | | | N | S | |
| 59 | F | 2.0 | | | | | | | | | | | | N | S | |
| 60 | Н | 2.0 | | | | | | | | | | | | В | S | Not higher, must be memorized. Higher skill. Test position requires analysis skill. |
| 61# | F | 1.0 | | | | | | | | | | | | N | U | LOD = 1 Replaced question. |
| 62 | F | 2.0 | | | | | | | | | | | | В | S | |
| 63 | Н | 1.0 | | | | | | | | | | | | N | ₩S | LOD=1 Question was retained. Procedures & system were modified – new equipment. |
| 64# | F | 2.0 | | | | | | | | | | | | N | Е | Is the reactor still at 100%, ie ATWS while you are trying to insert the control rod? <i>Modified stem.</i> |
| 65 | F | 2.0 | | | | | | | | | | | | N | S | |
| 66 | Н | 2.0 | | | | | | | | | | | | N | S | |
| 67 | Н | 2.0 | | | | | | | | | | х | | В | U | Question does not satisfy the K/A requirement. Selected new K/A, wrote new question. |
| 68 | Н | 2.0 | | | | | | | | | | | | В | S | |
| 69 | Н | 1.0 | | | | | | | | | | | | В | ₩S | Not RO Discussed with exam author and ops representative. the ROs ride the bridge in the fuel building and monitor from the control room. Question is acceptable for an RO. |
| 70 | F | 2.0 | | | | | | | | | | | | В | S | |
| 71 | F | 2.0 | | | | | | | | | | | | В | S | |

| 0# | 1. | 2. | 3 | . Psyc | hometi | ric Flaw | S | 4. | Job Cont | tent Fla | aws | 5. C | ther | 6. | 7. | 8. |
|-----|--------------|--------------|---------------|--------|--------|----------------|---------|--------------|----------|-------------|---------------|-----------|-------------|-------|-------|---|
| Q# | LOK (F/H) | LOD (1-5) | Stem Focus | Cues | T/F | Cred. Dist. | Partial | Job- Link | Minutia | #/ units | Back- ward | Q= K/A | SRO Only | B/M/N | U/E/S | Explanation |
| 72 | Н | 2.0 | | | | | | | | | | | | В | S | |
| 73 | F | 2.0 | | | | | | | | | | | | N | S | |
| 74 | Н | 2.0 | | | | | | | | | | | | В | S | |
| 75 | F | 1.0 | | | | | | | | | | х | | В | U | LOD = 1, Q does not match K/A. Remove intro, ask question. Replaced question. |
| 76# | Н | 2.0 | | | | | | | | | | | Х | N | S | |
| 77 | Н | 2.0 | | | | | | | | | | | Х | N | U | Not an SRO question. ROs are required to recognize TS entry. <i>Replaced question.</i> |
| 78 | Н | 2.5 | | | | | | | | | | | Х | N | S | |
| 79# | Н | 2.5 | | | | | | | | | | | Х | В | S | |
| 80 | н | 1.0 | | | | | | x | | | | | Х | В | ₩S | LOD = 1. Not an SRO Only question. This is GET info. <i>Info is not provided in GET. This is an Interim Emergency Director, i.e.,</i> Shift Manager duty. |
| 81 | Н | 2.0 | | | | | | | | | | | Х | В | S | |
| 82# | F | 2.0 | | | | | | | | | | | Х | N | S | |
| 83 | Н | 2.0 | | | | | | | | | | | Х | N | S | |
| 84 | Н | 2.0 | | | | | | | | | | | Х | N | S | |
| 85# | Н | 2.0 | | | | | | | | | | | Х | N | S | |
| 86 | Н | 2.0 | | | | | | | | | | | Х | В | S | |
| 87 | Н | 2.0 | | | | | | | | | | | Х | В | S | Do the ROs ride the trolley? If so, this is not an SRO Only Q. ROs ride the trolley in the refuel building, but are not responsible for activities in the containment. Question is ok. |
| 88# | Н | 2.5 | | | | | | | | | | | Х | N | S | May be no correct answer. Probably need EOPs to correctly answer this question. <i>Replaced question.</i> |
| 89 | Н | 2.0 | | | | | | | | | | | Х | N | S | |
| 90 | Н | 2.0 | | | | | | х | | | | | х | N | U | Not an SRO question. EOP bases are RO level questions. Replaced question. |
| 91# | F | 2.0 | | | | X | | | | | | | Х | В | U | Nothing in the question stem would cause me to select any of the other distractors. <i>Replaced question.</i> |

| 0,4 | 1. | 2. | 3 | . Psycl | homet | ric Flaw | /S | 4. | Job Cont | tent Fla | aws | 5. C | ther | 6. | 7. | 8. |
|-----|--------------|--------------|---------------|---------|-------|----------------|---------|--------------|----------|-------------|---------------|-----------|-------------|-------|-------|---|
| Q# | LOK (F/H) | LOD (1-5) | Stem Focus | Cues | T/F | Cred. Dist. | Partial | Job- Link | Minutia | #/ units | Back- ward | Q= K/A | SRO Only | B/M/N | U/E/S | Explanation |
| 92 | Н | 2.5 | | | | | | х | | | | | Х | В | U | First part of 1 of 2 taken twice is not a selection of a procedure and is expected knowledge of an RO. Second part of the 1 of 2 taken twice is EOP bases is not SRO Only. <i>Replaced question.</i> |
| 93 | Н | 2.5 | | | | | | | | | | | Х | В | S | |
| 94# | Н | 2.0 | | | | | | | | | | | Х | N | Е | Change Technician to Technical Made change. |
| 95 | Н | 2.0 | | | | | | х | | | | | Х | N | U | ROs are required to know TS entry conditions. This makes 2 of 4 distractors implausible. The only item being tested above RO level is the length of time before tripping the channel. <i>Reworked question.</i> |
| 96 | Н | 2.0 | | | | | | х | | | | | Х | В | U | RO required knowledge. Does not specify a procedure, but general actions to take for the condition. <i>Reworked distractors, added procedure selection.</i> |
| 97 | Н | 2.5 | | | | | | х | | | | | Х | N | U | RO required knowledge. First part of 1 of 2 taken twice is system knowledge. 2 nd part is a TS entry condition. <i>Reworked question.</i> |
| 98 | Н | 2.0 | | | | | | x | | | | | Х | В | U | RO required knowledge. Must be memorized. Added procedure entry requirements to move to SRO question. |
| 99 | Н | 2.0 | | | | | | х | | | | | Х | В | U | RO required knowledge. Replaced question. |
| 100 | F | 2.0 | | | | | | х | | | | | х | N | ₩S | RO required knowledge This is a special case where SRO oversite is required. Question retained. |