

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
1	H	2				X								B N	E S	<p><b>2021 MILLSTONE 3 NRC EXAM (Q1 removed from the CERT Exam)</b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Question, as written, is asking the applicant to determine which annunciators are NOT applicable to a Reactor Trip. The following issues were identified with the Proposed Question: <ul style="list-style-type: none"> <li>Excessive use of Double Negatives between the Question Statement and the answer choices. Recommend eliminating the words <i>"should not be lit"</i> from all four answer choices. Question is confusing as written.</li> <li>Excessive use of negatives in Distractor A. Distractor presently contains three negatives (i.e., 2-NOTs and 1-No).</li> <li>Distractor B requires the applicant to make an assumption regarding the initial level of the DWST. The 19.6 minute calculation time to receive the DWST LEVEL LO alarm in the plausibility explanation does not support why the Distractor is incorrect, given the 10-minutes after trip information provided in the stem.</li> <li>Distractor C does not appear to be plausible. How does <i>"MFP Recirc Valves opening on a Feedwater Isolation"</i> affect Feed Water Heater Levels?</li> </ul> </li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Replaced question with new question that asks which annunciator IS expected on a reactor trip. Also ensured no negative statements are included in the answer choices, and removed DWST Low Level from the choices.</li> </ul> <p><b><u>Supplemental LICENSEE response:</u></b></p> <ul style="list-style-type: none"> <li>Changed the question statement to ask which "annunciator would be lit..." <b>(Based on NRC Branch Chief review comment).</b></li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
2	F	2												B	S	<b>2007 MILLSTONE 3 NRC EXAM</b>

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5	F	2												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Replace the word <b><i>“align”</i></b> with <b><i>“establish”</i></b> in the Part 1 section of the Answer Statement, such that it reads as follows:  <i>“The RO will establish the bleed path by _____”</i></li> </ul> <p>Recommended change enhances the plausibility of Distractors B and D given that <b><i>“allowing”</i></b> RCS pressure to increase to the PORV COPPS setpoint is not the same as physically manipulating a component for the purpose of <b><i>“aligning”</i></b> the bleed path.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Replaced the word “align” with the word “establish” in part 1 of the answer statement.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>
6	F	2												B	S	
7	H	3												B	E S	<p><b><u>NRC Early Review Question</u></b>  <b><u>2017 MILLSTONE 3 NRC EXAM</u></b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Replace the word <b><i>“from”</i></b> with the word <b><i>“to”</i></b> in Item 5 of the stem so it is clear that Item 5 is referring to the upstream Load Center Supply Breakers.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed the word “from” to the word “to”.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

8	H	2	X	X	N	MS	<p><b>NRC Early Review Question</b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Plausibility of Distractor 'A' is questionable. Why would an applicant reasonably believe that any of the Feedwater Isolation signals would only result in closure of the Containment Trip Valves (CTVs)?</li> <li>Revise Item 3 of the stem to state "A SG NR level is 81% and slowly rising."</li> <li>Replace the words "Assume the Reactor has not automatically tripped," with a PZR pressure value that has sufficient margin to the Low Pressure trip and indicate that the value is lowering. Include this information as Item 5 of the stem. As written, the use of the word "automatically" may be interpreted to mean that the reactor failed to automatically trip when required.</li> <li>Remove the stem information that states "No additional operator actions have been taken." The statement is unnecessary and can lead to confusion on questions where the same or similar statements have not been provided. NUREG-1021, ES-1.2, Paragraph B.8, states:   <i>"When answering a question, do not make assumptions about conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question. For example, you should not assume that any alarm has activated unless the question so states or the alarm is expected to activate as a result of the conditions that are stated in the question. Similarly, you should assume that no operator actions have been taken, unless the stem of the question or one of the answer choices specifically state otherwise."</i> </li> <li>Revise the question statement to read "How did the Main Feedwater System automatically respond?"</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed the question and the distractors to ask which Main Feedwater component did NOT automatically respond the event. This removes the implausibility issue with distractor A".</li> <li>Revised stem item 3 to state "A" SG NR level is 81% and slowly rising.</li> <li>Replaced the words, "Assume the Reactor has not automatically tripped" with new item 5 that states RCS pressure is 2150 psia and lowering.</li> <li>Removed the statement to "Assume no additional operator actions have been taken.</li> <li>Changed the question statement to read, "Which of the following Main Feedwater System components did <b><u>NOT</u></b> automatically respond to this event?"</li> </ul> <p>*****</p> <p><b>CHIEF EXAMINER Supplemental Comment for Early Review Question (7/6/2023):</b></p> <ul style="list-style-type: none"> <li>Remove Item #4 which states "The BOP operator reports</li> </ul>
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																<p><i>that the Main Turbine has tripped,” in light of the change made to the Question Statement requiring the applicants to now determine the MFW System responses that did <u>NOT</u> automatically occur. Item #4 information is not required to correctly answer the question and is potentially “leading, given Distractor D, “The A TDMFP (3FWS-P2A) tripped.” The applicants should know that the Main Turbine tripped on high SG level based on the information provided in the stem; i.e., SG ‘A’ NR level is 81% and rising.</i></p> <p><b>LICENSEE Supplemental Response:</b></p> <ul style="list-style-type: none"> <li>• Removed item 4 from question stem.</li> <li>• Added “The Feed Station Operator reports” to item 3 from question stem, to be consistent with the stem items 2 and 4.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
12	H	3												N	S	
13	F	3												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Delete the word <i>“only”</i> after <i>“Battery 3”</i> in the Question Statement.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Per Chief Examiner comments on 7/28/23 phone call, moved the word <i>“only”</i> from the Question Statement to Distractors <i>“B”</i> and <i>“D”</i> Part 2, to avoid being subsets of <i>A”</i> and <i>“C”</i>.</li> </ul> <p><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Note: Changed distractor order to make <i>“A”</i> the new correct answer, to balance overall number of correct answers for each letter choice (25 each, <math>\pm 1</math>) after making all changes based on NRC Review.</li> </ul> <p><b><u>Supplemental LICENSEE response:</u></b></p> <ul style="list-style-type: none"> <li>Changed the question statement to ask about <i>“the reason AOP 3563, Loss of DC Bus Power directs the crew to trip the Reactor...”</i> to better match the KA Statement (<b>Based on Don Jackson comment</b>).</li> </ul>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
16	H	3												B	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Change the word <i>“into”</i> to <i>“in”</i> in the Answer Statement, such that it reads <i>“The RCS leak is/was in the ____”</i></li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed the word, “into” to “in”.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
17	H	3												B	S	
18	H	2				X								N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Questioning the plausibility of Distractor D. What leads an applicant to reasonably select Distractor D (establish Main Condensate Flow) over Distractor C (establish Main Feed Flow) to feed at least one SG, given the conditions currently specified in the stem and the fact that Condensate is required for establishment of Main Feed Flow?</li> <li>Suggest: a) changing ‘B’ SG WR level to 42%, and b) providing indication that the Containment is Adverse, to raise the Discrimination Validity of the question.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Enhanced plausibility explanation for distractor D, describing how FRH.1 tries to establish Main Feed Flow (which requires Main Condensate flow), and if unsuccessful, the crew will then try to establish Main Condensate flow. This would be the case if there were a problem with the Main Feed System. Several actions are required if establishing Main Feed flow is unsuccessful, with the most significant being the SGs must be depressurized to below Main Condensate Pump shutoff head.</li> <li>Per discussion with Chief Examiner (phone call, 7/28/23) changed SG WR levels to be significantly closer to bleed and feed requirements (2 of 4 SG Wide Range levels below Bleed and Feed criterion) without adding adverse containment conditions, since this may be getting closer to SRO level knowledge, beyond overall strategy of the procedure and beyond system knowledge.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

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22	F H	2										X		B	U S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>K/A Mismatch flaw. Question can be answered without any knowledge of the Fuel Handling Incident Event. Question, as written, only tests applicant knowledge of the communications that need to be established to support Fuel Handling Operations.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Wrote a new question that tests specific RO job functions during a fuel handling event, rather than generic RO responsibilities during fuel handling operations.</li> </ul> <p><b><i>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

[illegible]

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
24	F H	1				X								N B	U E S	<p><b>NRC Early Review Question</b>  <b>2017 MILLSTONE 3 NRC EXAM</b></p> <p><b>NRC:</b></p> <ul style="list-style-type: none"> <li>LOD=1. The three Distractors are closed cooling water systems that are not remotely associated with the Liquid Radwaste Release activity.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>Unable to write a discriminating question for the APE 59 and AK1.06 combination due to limited RO job function. RO will understand Circ Water provides dilution flow for liquid waste discharges, and inform the US if a Circ Pump is lost during a discharge.</li> <li>Chief Examiner Randomly Reselected a new APE and KA.</li> <li>Replaced the question.</li> </ul> <p>*****</p> <p><b>CHIEF EXAMINER Supplemental Comment for Replacement Question (7/7/2023):</b></p> <p><b>NRC Lead Examiner:</b></p> <ul style="list-style-type: none"> <li>Question determined to Satisfactory; however, the following Plausibility Explanation associated with Distractors C and D is incorrect:  <i>"C and D are wrong, since the crew is allowed to have immediate boration continue from the RWST on a Reactor trip."</i>  Plausibility Explanation should be revised to state:  <i>"C and D are wrong, since the crew is allowed to have immediate boration continue through its normal path on a Reactor trip."</i>  See Question 30 on the 2017 MS3 NRC Exam.</li> <li>Replacement question COG Level is HCL per the Pedigree Sheet</li> <li>Replacement Q Source is Bank.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>Changed the Explanation as to why "C" and "D" are wrong, to say, "the crew is allowed to have immediate boration continue through its normal path on a Reactor trip."</li> <li>Will update ES Form 2.3-4 "Written Examination Quality Checklist" for all questions after the Exam is approved.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
25	F	4 2												N	U S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>• LOD=1. Silencing the local alarm horn and resetting the fire alarm are standard capabilities that provide little, if any insight, into the ability of an applicant to operate and/or monitor Plant Fire Zone Panels. Correct Answer B is the obvious choice, even if uncertain, given the other answer options. Recommend testing one of the other Zone Panel capabilities listed in the Explanation Section.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>• Redrew KA with Chief Examiner, due to difficulty writing a discriminating question with plausible distractors since there is limited zone panel capabilities.</li> <li>• Replaced the question.</li> </ul> <p><b><i>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>
26	H	2				X								N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>• Distractor D does not appear to be credible, as there is no RED Path associated with FR-Z.2.</li> <li>• Revise the question to make Distractor A the correct answer, in order to raise the overall Discrimination Validity of the question. Suggest a Containment Pressure value of 58 psia and stable, with no Containment Spray Pumps running to support this change.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>• Not able to change to 58 psia with no Containment Spray Pumps running since this overlaps with Operating Exam.</li> <li>• Per discussion with Chief Examiner on 7/28/23, discerning Containment Sump Level color is acceptable for RO portion of exam, and changed Containment pressure to 61 psia to raise discrimination validity of the question.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>
27	F	3												N	S	
28	H	3												B	S	<b><i>2017 MILLSTONE 3 NRC EXAM</i></b>



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29	H F	2				X						X		B	U S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>K/A Mismatch flaw. Question tests applicant knowledge of automatic Makeup System flowrates (i.e., Boration and Primary Grade Water), not automatic operation of VCT level control.</li> <li>Questioning the plausibility of Distractors C and D, given that Primary Grade Water Flowrate is 80 GPM for both. If Total Flow controls at 80 GPM for Automatic Operation, then how could the combined Boration and Primary Grade Water Flowrates exceed 80 GPM total, as is the case for each of these Distractors?</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Replaced question with a new question that better tests monitoring of automatic operation of VCT level control.</li> </ul> <p><b><i>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>
30	F	2												B	E S	<p><b><i>2002 MILLSTONE 3 NRC EXAM</i></b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Operation History Field on the Pedigree Sheet incorrectly references the MS3 2001 ILE. Question was Q42 on the 2002 ILE.</li> <li>Use the MS3 2002 ILE version of the question (i.e., Q42), to raise the overall Discrimination Validity. The applicants should be required to determine which valve, the Suction or the Discharge, must be closed first, as on the 2002 ILE. The 2023 ILE Question, as written, tells the applicant upfront that the Discharge Valve is required to be closed prior to the Suction Valve.</li> <li>Procedure OP 3304A, “<i>Charging and Letdown</i>,” was not included with the References provided to the NRC. Confirm that the reason the Discharge Valve is closed prior to the Suction Valve is covered/addressed in the Precaution Section of OP 3304A, as alluded to in the stem.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed question to match 2002 version.</li> <li>Changed question pedigree to state last used on Millstone 3 2002 NRC Exam</li> <li>Verified Precaution 3.3.8 still exists and provides the listed basis in the current revision of OP 3304A (Rev. 47).</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

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31	H	2				X								B	E S	<p><b>2007 MILLSTONE 3 NRC EXAM</b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Distractor C does not appear to be plausible. If reducing RHR HDR FLOW from 4,000 gpm to 3,200 gpm as stated in the stem, then how is it possible to have an increase in flow through FCV-606 with NO change in flow through FCV-618 (i.e., <i>"Remains the same"</i>)? Where does the overall reduction in RHR HDR FLOW come from? The combined Plausibility Explanation for Distractors A &amp; C is reasonable for Distractor A because of the "Decreases" option in Part 1 of the answer. Conversely however, it fails to sufficiently address the credibility of Distractor C because of the "Increases" option in Part 1.</li> <li>Per Chief Examiner (CE) evaluation, this question, as written, satisfies the criteria for being significantly modified from Q31 on the 2007 NRC ILE because: a) Part 2 of the answers is based on RHR Pump Recirc Flow instead of RHR HX Bypass Flow, and b) the Part 2 answer options are different (see 3<sup>rd</sup> criteria for what constitutes a Significant Modification in ES 4.2, Page 4 of 29; i.e., CE determination).</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Verified the question matches the current bank question, so it is considered "Bank", not "modified". Also verified the bank question has changed significantly since it was used on the 2007 NRC Exam, so removed the reference to 2007 NRC Exam on the pedigree sheet.</li> <li>Added Recirc Valve position at the start of the event as being closed. This creates the potential for the recirc valve opening (at discharge of heat exchanger) as overall flow decreases, which would cause heat exchanger flow to increase.</li> <li>Modified Explanation section to explain why "C" is plausible based on decreasing flow potentially opening the recirc valve.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

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32	H	3										X		N	U S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>K/A Mismatch flaw. K/A states:  <i>“Ability to (a) predict the impacts of the following on the Emergency Core Cooling System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: ECCS valve failure mode.”</i></li> </ul> <p>While the question is technically correct, there is no impact to the running ECCS Pumps that would require the applicant to demonstrate the ability to use procedures to correct, control, or mitigate the consequences of the spurious closure of 3SIL*MV8804A during Cold Leg Recirculation.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Chief Examiner randomly reselected a new K/A due to difficulty writing a discriminating question related to part 2 of the KA. If a valve fails, the crew will attempt to reposition the valve.</li> <li>Replaced the question.</li> <li>Based on Chief Examiner input, changed part 2 of the new question to test actions on single train inadvertent SIS.</li> </ul> <p><b><i>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>



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	F														S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>K/A Mismatch Flaw. K/A states:  <i>“Knowledge of the operational implications or cause and effect relationships of the following concepts as they apply to the Pressurizer Relief Tank/Quench Tank System: Method of forming a steam bubble in the PZR.”</i></li> </ul> <p>Question, as written, does not test applicant knowledge any operational implication or cause and effect relationship that exists between the PRT/Quench Tank and the method of forming a steam bubble in the Pressurizer. The PRT/Quench Tank is merely used as a Distractor in the question.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Millstone 3 does not normally draw a Pzr bubble by routing water to the PRT. Chief Examiner randomly reselected a new K/A; Question replaced.</li> </ul> <p><b><i>CHIEF EXAMINER Supplemental Comment for Replacement Question (7/11/2023):</i></b></p> <p><b><u>NRC Lead Examiner:</u></b></p> <ul style="list-style-type: none"> <li>Questioning the plausibility of Distractors C and D. Why would an applicant reasonably believe that selecting <i>“Block”</i> would <u>allow</u> for the Automatic function to occur? Has a <i>“Block”</i> feature ever been designed that would serve to enable an Automatic function?</li> </ul> <p><b><i>LICENSEE Supplemental Response:</i></b></p> <ul style="list-style-type: none"> <li>Changed the question statement from “Selecting ‘Block’ allows for 3DGS-AV8031 to _____” to “Selecting ‘Block’ allows for 3DGS-AV8031 to be manually _____.” This allowed removing the automatic function from distractors “C” and “D”.</li> <li>Changed the distractors to grammatically flow with the new question statement. “A” and “B” now say, (manually) “opened when...”, and “C” and “D” now say, (manually) “closed when...”</li> </ul> <p><b><i>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
35	F	3												B	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>In the As Written question, what is the purpose of the stem item that states "CIA fails to actuate?" Based on this information, suggest revising the Question Statement to read something similar to the following: "Which RPCCW valves repositioned in response to the sequence of events identified?"</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>The purpose of the stem item is to raise the difficulty of the question, since CIA is normally generated from any SIS signal. By stating CIA fails to actuate, applicants are required to know which specific signal (SIS or CIA) causes the components to reposition. Added this information to the beginning of the Explanation section.</li> <li>Changed the question statement to read, "Which RPCCW valves received an automatic signal due to this event?"</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
36	F H	3										X		N B	U S	<p><b>2009 MILLSTONE 3 NRC EXAM</b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>K/A Mismatch flaw. Question, as written, tests applicant knowledge of the physical connections between the Pressurizer System and the CVCS System. Question does not test the physical connections or the cause and effect relationships between the Pressurizer Pressure Control System and the CVCS System.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Chief Examiner randomly reselected a new K/A, since there the direct physical connections and cause/effect relationships between the CVCS System and the PPC System are very limited.</li> <li>Replaced the question.</li> </ul> <p><b><u>Supplemental LICENSEE Comment:</u></b></p> <ul style="list-style-type: none"> <li>Based on final post exam submittal validation, corrected a typo in stem item 1, changing "A" to "An."</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
37	H	2												B	E S	<p><b>2009 MILLSTONE 3 NRC EXAM</b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Enhance Distractor D by expressing the bistable status light coincidence combination “<i>per loop</i>” for the Low Reactor Coolant Flow Trip.</li> <li>Enhance the overall Discrimination Validity of this question by requiring the applicants to evaluate the status of both the P-10 and P-13 indications in determining whether the P-7 permissive is met (Rx Pwr &lt;10%), instead of just telling the applicants that Rx Power is stable at 7%.</li> <li>Change Distractor C to “Two” bistable lights lit for PZR LEVEL HI, instead of three.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed distractor “D” to, “Three lit RCS “Loop Flow Low” bistables per RCS loop”. Changed “four” to three” since each loop’s low flow trip is a 2 of 3 coincidence. Also added “for the “C” SG” to distractor “A”, to maintain similar distractor lengths.</li> <li>Changed distractor “C” to “Two” bistables lit.</li> <li>Based on Chief Examiner comment on 7/28/23, added one NIS channel fails high to question stem.</li> <li>Changed Explanation section to support changes to question.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
38	H	3				X								B	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Distractor D does not appear to be plausible as the High Pressurizer Pressure Trip is 2/4 coincidence.</li> <li>Explanation Section is confusing in terms of why Answer A is correct and the Distractors are implausible. Explanation incoherently strings together a series of informational items that are not clearly or logically connected, making them difficult to interpret.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Distractor “D” is plausible, since it requires the applicant to determine which bistables were received from each of the two instrument failures, and which bistables were required to be tripped per the AOP based on the temperature instrument failure. Both instruments feed in to multiple Bistables, and had the Pressure instrument failed low instead of high, the reactor would have tripped.</li> <li>Enhanced the Explanation Section to improve readability, and better explain why distractor “D” is plausible.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
39	F					X								B	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Remove the words “<i>if at all</i>” from the Question Statement.</li> <li>Questioning the plausibility of Distractor D. Why is it plausible that All Emergency ACUs and Emergency Fans would start on the manual start of a single ECCS Pump? Explanation for Distractor D provides no insight as to why this would be credible.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed question stem to state, “What is the response of the ESF Building HVAC System?”</li> <li>“D” is considered plausible, since most building ventilation systems (e.g., Main Steam Valve Building, Control Building, Aux Building) have two modes, normal and emergency, where the entire system realigns during an emergency.</li> <li>Enhanced the plausibility description for distractor “D” in the Explanation section.</li> </ul> <p><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></p>
40	H	3												N	S	<p><u>Reference provided:</u></p> <p><b><i>Detached Reference (Separate Handout);</i></b> Electrical Drawing ESK-6BC (R10); Elementary Diagram 480V US CNTMT AIR RECIRC FAN [3HVU-FN1C]</p>



## Form 2.3-5 Written Examination Review Worksheet

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### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
46	H	2		X										B	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>The <b><i>"single" phase</i></b> ground information in the stem, together with the Part 2 answer stating that there are <b><i>"three ground detection lights, with the grounded phase appearing dimmer than the other two."</i></b> is leading, making it possible for the applicants to easily eliminate the Part 2 answers for Distractors B and D. The <b><i>"grounded phase appearing dimmer than the other two"</i></b> is more information than is necessary and is too descriptive in this case. Suggest raising the Discrimination Validity of this question by revising the Part 2 answers read as follows:  (2) ground detection lights (Choices A &amp; C)  (2) a volts to ground meter (Choices B &amp; D)</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Revised part 2 answers to choose between "ground detection lights and "a volts to ground meter".</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>
47	F	3												B	S	<b><i>2011 MILLSTONE 3 NRC EXAM</i></b>
48	H	3												B	E S	<p><b><i>2002 MILLSTONE 3 NRC EXAM</i></b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Q75, Distractor B, on the 2002 NRC Exam, specifies starting the <b><i>Fuel Oil Transfer Pumps</i></b> from 3EGS*PNLA. Q48, Distractor B, on the 2023 NRC Exam specifies starting the <b><i>'B' Train Fuel Oil Transfer Pump</i></b> from 3EGS*PNLA. This is the only difference in the two questions. Why was the change made to identify only the <b><i>'B' Train Fuel Oil Transfer Pump</i></b> for Distractor B on the 2023 Exam? Concern is the potential for inadvertently cueing the applicants, given that 'B' Train power is not available.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Stem item 6 states that although ("A" Train) power is available, neither "A" Train Fuel Oil Transfer Pump can be started. Based on this, it improves readability to make the change to discuss the "B" Train Transfer Pumps.</li> <li>Also changed the question and the distractors to more clearly focus on how electrical power will be provided, since that is the KA the question is testing. This change was not based on the original NRC comments, but the Chief Examiner agreed with this change on the 7/28/23 phone call.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
49	H	3												B	S	
50	F	2												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Confirm that “<i>Stepping the Filter</i>” causes 3CMS-RE22 indication to drift upward while a new background calculation is performed, as stated in Correct Answer D. The Answer Explanation is silent regarding the impact on 3CMS-RE22 indication.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>OP 3362, Note prior to step 4.16.1 states the rad monitor will be inoperable for up to two hours before the indication returns to normal (implying the indication will be abnormal) while the background calculation is performed. The fact the indication drifts upward during this process was confirmed by an SRO validator who is involved with work control. This information has been added to the Explanation section of the question.</li> </ul> <p><b><u>Supplemental LICENSEE Comment:</u></b></p> <ul style="list-style-type: none"> <li>Based on post exam submittal validation, removed the direction of the trend from correct answer “C” and distractor “D”, since the rad monitor will drift, but it could drift in either direction. This change makes these choices better match what the procedure Note states.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>



# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
54	F	2				X								B	U S	<p><b>NRC Early Review Question</b></p> <p><b>2009 MILLSTONE 3 NRC EXAM</b></p> <p><b>NRC:</b></p> <ul style="list-style-type: none"> <li>What does the acronym "ADTS" stand for?</li> <li>Distractors A and B do not appear to be credible. Why would the ADTS have to be consulted if there was a predetermined time (i.e., 3 hours or 4 hours) for placing the CTMT Purge System. Recommend using Hydrogen Concentration percentages for all of the answer options.</li> <li>For Distractor D, 10 % appears to be a rather high value before taking any action to reduce Hydrogen Concentration.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>"ADTS" stands for "Assistant Director of Technical Support", which is a Emergency Response Organization person who provides technical support to the crew.</li> <li>KA is testing knowledge of a specific step late in E-1 after the crew has aligned for cold leg recirculation. It is minutia to know the Ctmt hydrogen concentration from memory that requires operator action with Containment Purge.</li> <li>Chief Examiner Randomly Reselected a new KA.</li> <li>Replaced the question.</li> </ul> <p>*****</p> <p><b>CHIEF EXAMINER Supplemental Comment for Replacement Question (7/12/2023):</b></p> <ul style="list-style-type: none"> <li>Question History updated to reflect <b>2009 MILLSTONE 3 NRC EXAM</b> on the Pedigree Sheet.</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
55	H	3												B	E S	<p><b>2019 MILLSTONE 3 NRC EXAM</b>  <b>(Previous 2 NRC Exams)</b></p> <p><u><b>NRC:</b></u></p> <ul style="list-style-type: none"> <li>Pedigree Sheet indicates that this question was used on the 2019 Millstone 3 NRC Exam. However, review of ADAMS record documentation shows that the question was in fact <u>not</u> used on the 2019 Exam. Rather, the 2023 NRC Exam version of the question served as the Source / Parent Question for Modified Q18 on the 2019 Exam. Correct this item on the Pedigree Sheet.</li> </ul> <p><u><b>LICENSEE:</b></u></p> <ul style="list-style-type: none"> <li>Removed 2019 NRC Exam reference from pedigree sheet</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
56	F	3												N	S	
57	F H	2										X		N B	U S	<p><b>2001 MILLSTONE 3 NRC EXAM</b></p> <p><u><b>NRC:</b></u></p> <ul style="list-style-type: none"> <li>K/A Mismatch flaw. Question does not meet the intent of the K/A, which states:  <i>"Knowledge of the operational implications or cause and effect relationships of the following concepts as they apply to the Nuclear Instrumentation System: Maximum disagreement allowed between channels."</i></li> </ul> <p>Question, as written, tests applicant knowledge of a) the Power Change Channel Deviation value that corresponds to the associated annunciator setpoint, and b) the desired target band for all NIS Channels after adjustment is made. Question does not test applicant knowledge of the operational implications or cause and effect relationships of the Maximum disagreement permitted between NIS channels.</p> <p><u><b>LICENSEE:</b></u></p> <ul style="list-style-type: none"> <li>Chief Examiner randomly reselected a new K/A, given that the Operational Implications of reaching the maximum disagreement between NIS channels are limited, other than having to adjust the channel that is reading out of spec.</li> <li>Replaced the question.</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

[illegible]



# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level				
60	H	3													N	S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Question K/A (A2.03) is a “coupled” K/A per ES-4.2, Section C.2, and reads as follows:</li> </ul> <p><i>“Ability to (a) predict the impacts of the following on the Steam Generator System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: Pressure/level transmitter failure.”</i></p> <p>ES-4.2, Section C.2, states:</p> <p><i>“When selecting or writing questions for K/As that test coupled K/As (e.g., the A.2 K/A statements in Tiers 1 and 2 and a number of generic K/A statements such as 2.4.1, in Tier 3), try to test both aspects of the K/A statement. If that is not possible without expending an inordinate amount of resources, limit the scope of the question to that aspect of the K/A statement requiring the highest cognitive level (e.g., the (b) portion of the A.2 K/A statements) or substitute another randomly selected K/A.”</i></p> <p>Tier 2 Question 60, as written, appropriately tests that aspect of K/A statement requiring the highest cognitive level (HCL). In this case, the (a) portion of K/A A2.03 satisfies the HCL criteria; i.e., <i>predict the impacts of a Main Steam Pressure Transmitter failure on the SG System</i>. It was not possible to test the (b) portion of the coupled K/A statement without expending an inordinate amount of resources; as determined by the Licensee in concert with the Chief Examiner (CE).</p> <p>Q60 determined to be Satisfactory based on 1) CE evaluation of the question, and 2) Program Office confirmation of CE interpretation of the aforementioned guidance in ES-4.2, Section C.2. Program Office confirmation received on 7/13/2023.</p> <p>Update the Pedigree Sheet to include the highlighted information.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Updated pedigree sheet with the highlighted information.</li> </ul> <p>*</p>

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
61	F	2												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Question is Borderline LOD=1 as written. Suggest the following to raise the overall Discrimination Validity of this question: Leave Part 1 as is. Recommend using Part 2 to test applicant knowledge of system operation that is more substantive in nature; for example, system flow rates upon initiation (i.e., Supply, Exhaust, Recirc, etc). Saw several values in the References provided (e.g., 800, 1200, 1400, 4000, 20000 scfm). There may be other aspects of system operation that would work as well. System flow rates were provided as an example.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Left Part 1 as is. Changed part 2 to test which of the two Emergency Filters is expected to be in service.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
62	F	2		X										B	E S	<p><b><u>NRC Early Review Question</u></b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Is it necessary to specify "DAS" in Correct Answer 'A'? Concern is the potential for cueing the applicant.</li> <li>Is it necessary to specify "outside the ESF Building" in Distractor 'B'? Concern is the potential for cueing the applicant.</li> <li>Given the plausibility explanation for Distractor 'D,' i.e., "<i>D is plausible, if a high radiation alarm is received, this Sump will divert to the TPCCW Sump, which drains to the LWS System,</i>" could this answer choice also be correct?</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Removed the three and four letter system designators from the distractors.</li> <li>Kept the "outside the ESF Building" specifier, since this is in the Radiologically Controlled Area (RCA), and there is another SRW sump outside the Emergency Diesel Enclosure, and which is a less plausible distractor.</li> <li>Did not change distractor "D", since the question stem states all systems are in their normal lineups, and a high radiation alarm in the Turbine Building is not normal.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
63	F	2												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Distractor B, per the Plausibility Explanation, is a characteristic of Geiger-Mueller detectors, but not an advantage, making it technically correct. The case can therefore be made that there are two correct answers to this question. Replace Distractor B.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>It was difficult to come up with a fourth plausible answer, so the question statement was changed to say, "The Low Range Area Radiation Monitors are designed to operate in the Geiger-Mueller region of the gas amplification curve since a specific advantage of operating in this detector operating region is_____."</li> <li>This change aligns with ES-4.2, item D.15.j (ES-4.2, Page 17 of 29), which states, "When appropriate, use distractors that are generically correct statements, but do not correctly answer the question..." Per this guidance, existing distractor "B" is now clearly wrong, since even though it is a generically correct answer, it is not an advantage of this type of detector, so it does not correctly answer the question.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
64	F	4 2												B	U S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>LOD=1 as written. Correct Answer A is obvious given the other choices.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed question to another bank question covering the same KA.</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
65	H	3												B	S	<p><b><u>LICENSEE Comment:</u></b></p> <ul style="list-style-type: none"> <li>Changed the word "VIOLATE" in the question statement to more appropriately state, "<b><u>NOT</u></b> comply with," <b>based on NRC Branch Chief review comment.</b></li> </ul>

## Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
66	H	2												B	E S	<p><b><u>NRC Early Review Question</u></b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Plausibility Explanation for Distractor ‘A’ incorrectly states that Answer ‘D’ is plausible and that the action taken for Distractor ‘D’ was taken due to ALARA concerns. ‘D’ is the correct answer.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed “D” to “A” at both locations in the justification.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>
67	F	2												B	S	
68	F	2												N	S	
69	F	3												B	S	



[illegible]

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
																<ul style="list-style-type: none"> <li>Changed part 2 of distractor "D" to say, "Axial Neutron Flux Distribution" to match Correct Answer "B".</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
72	F	2												N	S	
73	H	3												N	E S	<p><b>NRC:</b></p> <ul style="list-style-type: none"> <li>Remove the <b>1100 psia</b> parenthetical information in the stem. Applicants should know to convert psig to psia when using the Steam Tables.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>Removed the 1100 psia parenthetical information from the stem</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
74	H	3												B	E S	<p><b>NRC:</b></p> <ul style="list-style-type: none"> <li>Explanation for Distractor A states:  <i>"A is wrong since QSG = mΔh, and <b>artificially low</b> feed temperature means the calorimetric will assume the SGs are having to heat up the feedwater a lesser amount to reach saturation temperature, ..."</i>  Statement should read <b>"artificially high"</b>.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>Changed "artificially low feed temperature" to "artificially high feed temperature" in the Explanation section for distractor "A"</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
75	H	4 3												M N	U S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>The stem states:  <i>"Complete the following statement, assuming adequate natural circulation cooling is occurring."</i></li> </ul> <p>Distractors B and D are not credible and can easily be eliminated, making this question LOD=1. If the assumption is that Natural Circulation is occurring (specified in the stem), then Part 2 of these Distractors cannot possibly be correct if CETC temperatures are <i>"rising."</i></p> <ul style="list-style-type: none"> <li>Plausibility Explanation for Distractor D incorrectly states:  <i>"D is plausible, since CETCs will be decreasing."</i></li> </ul> <p>Part 2 of Distractor D is <i>"rising"</i>. CETCs decreasing would be indication that Natural Circulation is occurring. Appears to be a Cut-and-Paste error.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Added RCS pressure to the question stem, and changed the second part of the question to ask the maximum Core Exit Thermocouple temperature allowed.</li> </ul> <p><b><u>Supplemental LICENSEE Comment:</u></b>  Made the following changes based on final post exam submittal validation.</p> <ul style="list-style-type: none"> <li>Changed the question statement to ask the minimum subcooling required per ES-0.1, <i>Reactor Trip Response</i>, Step 9, since ES-0.2 adds more restrictions on subcooling.</li> <li>Added information on this change to the Explanation section.</li> </ul> <p><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></p>



[illegible]

## Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
																procedure <b>(Based on NRC Branch Chief review comment).</b> <i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i>
77	H	3												N	S	

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
78	H	3												N B	U S	<p><b>2013 MILLSTONE 3 NRC EXAM</b></p> <p><u>Reference provided:</u></p> <p><b>Detached Reference (Separate Handout):</b> Tech Spec 3/4.4.4, "Relief Valves," Page 3/4 4-12</p> <p><u>NRC:</u></p> <ul style="list-style-type: none"> <li>Item 5 of the Stem states: <p>"Engineering reports 'A' PORV is leaking by, but the leakage is considered "NOT excessive."</p> <p>Explanation Section states that the question "requires the applicant to apply surveillance requirements to determine if a PORV with seat leakage is considered OPERABLE."</p> <p>This statement is inaccurate. The applicant is <u>not</u> required to apply SRs to determine whether the PORV is Operable with seat leakage, in answering this question.</p> <p>The applicant, having been provided the TS Reference (LCO 3.4.4), and told in Item 5 of the stem that the seat leakage is "NOT excessive," is easily able to determine:</p> <ul style="list-style-type: none"> <li>per ACTION 'a', that the PORV is NOT INOPERABLE due to excessive seat leakage, and</li> <li>that ACTION 'd', requiring the PORV Control Switch to be placed in the CLOSE position, is therefore applicable and the correct answer.</li> </ul> <p>Part 2 of the Question becomes an exercise in "Connecting-the-Dots," and is essentially a Direct Lookup with the TS Reference and Item 5 information.</p> </li> <li>Explanation Section incorrectly states: <p>"A' and 'C' are plausible, since per Action 'b', if the PORV were considered INOPERABLE, no Action with the Block Valve would be required."</p> <p>This statement is confusing since, per Action'b', if the PORV were considered INOPERABLE, Action to close the associated Block Valve and Remove Power would be required.</p> </li> </ul> <p><u>LICENSEE:</u></p> <ul style="list-style-type: none"> <li>Chief Examiner randomly reselected a new K/A due to difficulty writing SRO level question about the effect of RCS pressure change on components.</li> <li>Replaced the question.</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

[illegible]

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level				
																	<p><b><i>LICENSEE Supplemental Response:</i></b></p> <ul style="list-style-type: none"> <li>• Changed Distractor "C" to specify the "A" Charging and CCE Pumps have been verified to be in operation.</li> <li>• Per discussion with Chief Examiner on 8/17/23, kept 15 days in Correct Answer B, since the exact number of days in the basis section of Tech Specs is not required from memory.</li> </ul> <p><b><i>Supplemental LICENSEE Comment:</i></b></p> <ul style="list-style-type: none"> <li>• Based on final validation after exam submittal, changed correct answer "B" to say the SBO Diesel was last run by "surveillance test performance" to clarify what had actually been performed.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

## Form 2.3-5 Written Examination Review Worksheet

[illegible]

## Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
82	H	3	X											N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Steps 1, 3, and 4 are confusing in terms of what was done when, for example: <ul style="list-style-type: none"> <li>STEP 1: The crew <b>completes all actions in EOP 3503 ...</b></li> <li>STEP 3: The <b>US directs the required actions to be taken per EOP 3503</b> to restore RCS subcooling</li> <li>STEP 4: The <b>crew complete all other actions in EOP 3503 ...</b></li> </ul> </li> </ul> <p>If all actions in EOP 3503 were completed per STEP 1, then why is the performance of additional actions in EOP 3503 being directed in STEP 3, and the completion of all <u>other</u> actions in EOP 3503 noted in STEP 4? What <u>other</u> actions (per STEP 4) would be outstanding if all actions were completed per STEP 1? Confusing read.</p> <ul style="list-style-type: none"> <li>Explanation for Correct Answer C states, per EOP 3504, Step 6, that the crew will be directed to align a head vent <b>path to the PRT</b>. The head vent path will be aligned to Excess Letdown in this question.</li> </ul> <p>In addition, the version of EOP 3504 provided to the NRC, shows that the step referenced should be Step 4 instead of Step 6. Confirm which step of EOP 3504 is correct.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Clarified Stem Steps 1-5, to clarify that the crew completed all actions <u>in the Control Room</u> prior to evacuating the Control Room, and which step in EOP 3503 directed the actions to address the low subcooling.</li> <li>Changed the justification for correct answer “C” in the Explanation section to say the crew was directed to align head vent excess letdown.</li> <li>Confirmed correct revision of EOP 3504 is Rev. 9-2, and corrected the step number referenced in the Explanation for correct answer “C” to EOP 3504, step 4.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
83	H	3												B	S	

## Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
84	H	3												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Item 4 of the stem states  <i>“The crew isolates the C SG per E-2, Faulted Steam Generator Isolation.”</i></li> </ul> <p>Should Item 4 instead read <i>“The crew confirms isolation of the C SG per E-2, Faulted Steam Generator Isolation, given that the steps to successfully isolate the SG were previously performed in E-3?”</i></p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Discussed with the Chief Examiner on 7/28/23. No change was made to item 4 of the question, since the step in E-2 that confirms faulted SG isolation is titled, “Isolate Each Faulted SG”.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>



# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level				
85	H	3															<p><b>NRC Early Review Question</b>  <b>2000 MILLSTONE 3 NRC EXAM</b>  <b>NRC:</b></p> <ul style="list-style-type: none"> <li>Recommend replacing <i>“Functional Response Procedure”</i> with <i>“Functional Restoration Procedure,”</i> as referenced in the Answer Explanation section.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>Changed “Functional Response Procedure” to “Functional Restoration Procedure”.</li> </ul> <p>*****</p> <p><b>CHIEF EXAMINER Supplemental Comment (7/17/2023):</b></p> <ul style="list-style-type: none"> <li>Question: Would not Distractors A and B essentially be the same step/answer given that the depressurization is currently in progress?</li> <li>Unable to confirm that the <b>Last NRC Exam</b> was the 2002 Millstone 3 Initial License Exam, as identified on the Pedigree Sheet. Ensure the accuracy of this information.</li> </ul> <p><b>LICENSEE Supplemental Response:</b></p> <ul style="list-style-type: none"> <li>Differentiated Distractor “A” from Distractor “B” by having “A” suspend the current SG depressurization step, and “B” complete the current SG depressurization step.</li> <li>Changed the Explanation section based on the changes to Distractors “A” and “B”.</li> <li>Located Question on the Millstone 3, 2000 NRC Exam, Question #15. Changed pedigree statement to reference the 2000 NRC Exam, rather than the 2002 NRC Exam.</li> </ul> <p>*****</p> <p><b>CHIEF EXAMINER Supplemental Comment (8/11/2023):</b></p> <ul style="list-style-type: none"> <li>Suspect that the 3<sup>rd</sup> bullet in the stem should read <i>“The crew has just commenced depressurizing ...”</i> The word <i>“depressurizing”</i> appears to be missing.</li> </ul> <p><b>LICENSEE Supplemental Response:</b></p> <ul style="list-style-type: none"> <li>Added the word “depressurizing” to the 3<sup>rd</sup> bullet in the stem.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

## Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
86	H	2												B	E S	<p><b>2011 MILLSTONE 3 NRC EXAM)</b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Should Correct Answer C require the RO to adjust <b>3CHS*FCVI21</b> instead of <b>3RCS-LK459</b> to decrease charging flow? The Correct Answer for previously used question Q94 on the 2011 NRC Millstone 3 Exam states:  <i>"The US will direct the RO to adjust Charging Flow Control Valve 3CHS*FCVI21 to decrease charging flow."</i>  How would adjusting Letdown Isolation Valve 3RCS-LK459 decrease Charging Flow? Appears that adjustment of this valve would only affect Letdown Flowrate.</li> <li>For Distractors A and B, recommend using the words:  <i>"with <math>\Delta T</math> across the Pressurizer Spray nozzle in excess of TRM limits"</i>  from Q94 on the 2011 Exam, instead of <i>"with excessive delta T across the Pressurizer Spray nozzle."</i></li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed "C" to say, "Charging Flow Control Valve 3CHS*FCVI21 to decrease charging flow.</li> <li>Adjusting the letdown controller would not affect Charging flow, but it would change letdown flow, and this is an allowed procedural way to decrease overall mass addition rate to the RCS and combat the Pzr insurge event. Clarified this in the Explanation section.</li> <li>For distractors "A" and "B", changed wording to say, "with <math>\Delta T</math> across the Pressurizer Spray nozzle in excess of TRM limits"</li> </ul> <p><b><u>Supplemental LICENSEE response:</u></b></p> <ul style="list-style-type: none"> <li>Deleted redundant <i>"decrease charging flow"</i> from correct answer "C" due to inadvertently duplicating the wording a second time during last update to the question (<b>NR Branch Chief review comment</b>).</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

[illegible]

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
																<ul style="list-style-type: none"> <li>Changed the second part in the Question Statements to say, "The electrical alignment requires the crew to <u>  (2)  </u> its cubicle at Bus 34C. The crew will then rack the breaker up at Bus 34C."</li> <li>Changed the grammar in distractors "A" and "C" to say, "verify the "C" Pump breaker is already in"</li> <li>Changed the grammar in correct answer "D" and distractor "B" to say, "rack down the "C" Pump breaker at its cubicle at Bus 34D and move it to"</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
88	H	3												M	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Distractor A does not appear to be credible. How would it be remotely plausible to verify the adequacy of Sump Recirc Flowrate with one Charging Pump in ES-1, when Cold Leg Recirculation has yet to established?</li> <li>Modification justification on Pedigree Sheet states:  <i>"Distractor A has been changed from <b>aligning a hot leg injection path</b> to verifying adequate sump flow through the running Charging Pump."</i>  While Distractor A has been changed to <i>"verifying adequate sump flow through the running Charging Pump,"</i> the Parent Question version of Distractor A does not specify <i>"aligning a hot leg injection path."</i> Ensure the accuracy of this information. </li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Modified Distractor "A" to say, "after initial sump recirc alignment is complete" to clarify the verification is to occur after the recirc alignment has been completed.</li> <li>Changed the plausibility statements for Distractor "A" in the Explanation section to match new Distractor "A".</li> <li>Changed modification justification to say, Distractor "A" has been changed from "verify two Charging Pumps are running" to "verify adequate sump recirc flowrate with one Charging Pump running...".</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1–5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q–K/A	License Level			
89	H	3												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Second sentence of the Explanation Section incorrectly states:  <i>“Per LCO 3.8.3.1, ACTION <b>b(2)</b>, there is a 2-hour requirement to energize a deenergized VIAC.”</i>            Should be LCO 3.8.3.1, ACTION <b>b(1)</b>.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed second sentence of the Explanation section to say “LCO 3.8.3.1, ACTION b(1)</li> </ul> <p><i><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></i></p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
90	F H	4 3										X	X	N B	U S	<p><b>2011 MILLSTONE 3 NRC EXAM)</b></p> <p><u>Reference provided:</u></p> <p><b>Detached Reference (Separate Handout);</b> Tech Spec LCO 3.7.1.1, with Tables</p> <p><b>NRC:</b></p> <ul style="list-style-type: none"> <li>• LOD=1. It is common knowledge for both RO and SRO applicants that the function of the RHR Suction Relief Valves is to protect the Integrity of the RCS pressure boundary (Item 4) because the low pressure piping of the RHR System is not rated for RCS pressure. Consequently, Distractors B, C, and D can be easily eliminated by all license-level applicants.</li> <li>• K/A Mismatch flaw. Is there a Secondary Containment System in Westinghouse PWRs? The K/As identified for Safety Function (SF) 5, "Containment Integrity," in a Westinghouse PWR, are intended to test applicant knowledge of the Primary Containment Systems. There are no K/As in the SF5 section of the K/A Catalog that support Secondary Containment Systems. Note that: a) Item 1 in the stem is apparently associated with Secondary Containment, and b) the Question Statement is written to encompass both Primary and Secondary Containment Systems.</li> <li>• Suggest eliminating the word "Breaker" from Item 3 to avoid any potential ambiguity. Should read the same as the TRM, i.e., "The Reactor Coolant Pump Motor Power Feeder Overcurrent Protective Device ...".</li> <li>• The bulleted Explanation Statement under Correct Answer A, pertaining to "the basis for verifying the Containment Recirc Pump Casing is full of RWST water," appears to be a Cut-and-Paste error. None of the answer choices are associated with this information.</li> </ul> <p><b>LICENSEE:</b></p> <ul style="list-style-type: none"> <li>• Chief Examiner randomly reselected a new K/A due to overlap with the operating exam.</li> <li>• Replaced the question.</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
91	H	4 3												M B	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Editorial – Correct Answer D contains the word “ACTION” after LCO 3.0.3. Remove the word “ACTION”.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Removed the word “ACTION” since Correct Answer “D” is entering Section 3.0 LCO 3.0.3, which has only one LCO ACTION</li> </ul> <p><b><u>Supplemental LICENSEE Comment:</u></b></p> <ul style="list-style-type: none"> <li>Replaced the question based on post exam submittal validation results, given that all six SRO validators missed the question during the exam validation process, indicating that the question was borderline LOD 5.</li> </ul> <p><b>Replacement Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
92	H	3												N	U E S	<p><b><u>NRC Early Review Question</u></b></p> <p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>If OP 3353.MB2B, 3-9, “Rad Hi,” directs the crew to AOP 3573, then it would appear that Distractor A and Correct Answer B would both be correct, given that direction to place the Degasifier in Standby is accomplished in AOP 3573.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Changed the question statement to have the applicant identify the specific procedure that actually contains the direction to place the Degasifier in Standby,</li> </ul> <p><b>CHIEF EXAMINER Supplemental Comment (7/18/2023)</b></p> <ul style="list-style-type: none"> <li>Revise the Question Statement to read as follows: “The <u>(1)</u> closed; and the US will direct the crew to place the Degasifier in Standby using <u>(2)</u>.”</li> </ul> <p><b><u>Supplemental LICENSEE Response:</u></b></p> <ul style="list-style-type: none"> <li>Revised the Question Statement to read as follows: “The <u>(1)</u> closed; and the US will direct the crew to place the Degasifier in Standby using <u>(2)</u>.”</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>
93	H	3												N	S	<p><b><u>Reference provided:</u></b></p> <p><b>Detached Reference (Separate Handout);</b></p> <p>TRM 3.7.12.2, pg. 3/4 7-21 and 22, Fire Suppression Systems; Spray and/or Sprinkler Systems</p>

# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
94	H	2												N	S	
95	H	3												B	S	
96	F	2												B	S	2019 MILLSTONE 3 NRC EXAM (Previous 2 NRC Exams)
97	F	1 2		X		X								N	U E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>• LOD=1. Discrimination Validity of this question is low. Distractor A is the obvious choice, especially given the nature of the Distractors. Replace Correct Answer A with a more discriminating reason for rejecting the Work Order.</li> <li>• Distractors C and D do not appear to be credible. Why would a Work Order be rejected for the conduct of Minor Maintenance or Urgent Work? How else would the work for these items be accomplished if not done under the Work Order process?</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>• Replaced correct answer "A".</li> <li>• Replaced distractors "C" and "D".</li> <li>• Per Chief Examiner comment (phone call, 7/28/23), removed the word "reject" to in the question statement. Changed the statement to "The work can be issued without requiring a Work Order..."</li> </ul> <p>*****</p> <p><b>CHIEF EXAMINER Supplemental Comment (8/11/2023):</b></p> <ul style="list-style-type: none"> <li>• Credibility associated with Distractor D, "involves a Reactivity Management issue," is Low. Replace this Distractor.</li> </ul> <p><b>LICENSEE Supplemental Response:</b></p> <ul style="list-style-type: none"> <li>• Per discussion with Chief Examiner on 8/17/23, Changed Distractor "D" back to, "is classified as 'Minor Maintenance'" (and added quotation marks to correct answer "A" "Tool Pouch" to match distractor "D"), since this distractor has higher plausibility than a Reactivity Management issue.</li> <li>• Changed Justification Section for Distractor "D" to match tis change.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>



# Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
98	H	3												N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Rename the answer choices as follows: <ul style="list-style-type: none"> <li>Turbine Building Stack Monitor increasing trend</li> <li>ESF Building Ventilation Exhaust Monitor increasing trend</li> <li>Liquid Radwaste Effluent Monitor in ALERT</li> <li>D Steam Generator Tube Leak</li> </ul> </li> <li>Remove the word <b><i>“abnormal”</i></b> from the Question Statement.</li> </ul> <p><b><u>CE Comment:</u></b> Question is a precise exact K/A Match. Question written in a way that complies with Tier 3 criteria while still meeting the intent of the K/A.</p> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Renamed the answer choices as follows: <ul style="list-style-type: none"> <li>Turbine Building Stack Monitor increasing trend</li> <li>ESF Building Ventilation Exhaust Monitor increasing trend</li> <li>Liquid Waste Effluent Monitor in ALERT</li> <li>The “D” Steam Generator Tube leak</li> </ul> </li> <li>Removed the word “abnormal” from the Question Statement.</li> </ul> <p><b><i>Question determined to be Satisfactory based on Chief Examiner evaluation.</i></b></p>

[illegible]

### Form 2.3-5 Written Examination Review Worksheet

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. K/A Use Flaws		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job Link	Minutia	#/Units	Logic	Q-K/A	License Level			
																<b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b>
100	F	2		X										N	E S	<p><b><u>NRC:</u></b></p> <ul style="list-style-type: none"> <li>Replace Correct Answer A, <i>“Provide current plant status to the ADTS,”</i> with <i>“Recommend corrective actions to the ADTS,”</i> to raise the overall Discrimination Validity.</li> <li>Remove the second <b>“now”</b> from the Question Statement such that it reads:   <i>“Now that the turnover with the EOF-DSEO is complete, which of the following is a responsibility of the MCRO per EPI-FAP01, Control Room Emergency Operations?”</i></li> </ul> <p>Concern is the potential for inadvertently cueing the applicants.</p> <ul style="list-style-type: none"> <li>Provide the names of the acronyms in the Explanation Section.</li> </ul> <p><b><u>LICENSEE:</u></b></p> <ul style="list-style-type: none"> <li>Replaced correct answer A with “Recommending corrective actions to the ADTS”.</li> <li>Removed the second “now” from the question statement.</li> <li>Added “ing” to each of the Distractor action verbs, to better match the grammar of the question statement, e.g., changed “Recommend” to “Recommending”.</li> <li>Provided the names for the acronyms used in the question in the Explanation section.</li> </ul> <p><b>Question determined to be Satisfactory based on Chief Examiner evaluation.</b></p>

Refer to ES-4.2 for the definitions of terms used in this worksheet for the written examination. Review each question (Q) as submitted and as subsequently revised and document the following in the associated worksheet columns:

- 1) Enter the level of knowledge (LOK) as either (F)undamental or (H)igher cognitive level.
- 2) Enter the level of difficulty (LOD) from 1 (easy) to 5 (difficult); mark direct lookup questions (applicant can directly determine the answer from the provided reference) as LOD 1. A question is (U)nsatisfactory if it is LOD 1 or LOD 5.
- 3) Check the appropriate box if a psychometric flaw is identified:
  - “Stem Focus”: The stem lacks enough focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information). This is an (U)nsatisfactory question.
  - “Cues”: The stem or one or more answer choices contains cues (e.g., clues, specific determiners, phrasing, length). This is an (U)nsatisfactory question.
  - “T/F”: All of the answer choices are a collection of unrelated true/false statements. This is an (U)nsatisfactory question.
  - “Cred. Dist.”: The distractors are not credible; single implausible distractors require (E)nhancement, and more than one noncredible distractor in the same question results in an (U)satisfactory question.
  - “Partial”: One or more distractors are partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by the stem). This is an (U)nsatisfactory question.
- 4) Check the appropriate box if a job content flaw is identified:
  - “Job Link”: The question is not linked to the job requirements (i.e., the question has a valid knowledge or ability (K/A) but, as written, is not operational in content). This is an (U)nsatisfactory question.
  - “Minutia”: The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory). This is an (U)nsatisfactory question.
  - “#/Units”: The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons). This is an (U)nsatisfactory question.
  - “Logic”: The question requires backward or reverse logic or application compared to the job requirements. This is an (U)nsatisfactory question.
- 5) Check the first box if a K/A mismatch flaw exists. Check the second box if the question is flawed because it is written at the wrong license level. Either condition results in an (U)nsatisfactory question.
- 6) Enter the question’s source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet the criteria of ES-4.2.
- 7) Based on the review performed in steps 2–5, mark the question as (U)nsatisfactory, in need of (E)nhancement, or (S)atisfactory.
- 8) Fully explain the reason for any (U) in column 7 (e.g., how the psychometric attributes are not being met).
- 9) Save the initial review comments and detail subsequent comment resolution so that each exam-bound question is marked by an (S) on this form.