

2014 Initial RO/SRO Exam Analysis and Comments

Analysis performed based on the preliminary grading results. 3 ROs and 1 SRO had borderline grades as defined on ES-403-1. Each of these exams was reviewed to determine any specific system or topic knowledge gaps for the individual.

There were 9 questions with 50% or greater miss rate for the group overall, 6 questions that had a high miss rate among the RO applicant group, and 7 questions for the SRO group. No significant knowledge gaps in a specific area or topic were identified for any one individual which includes the individuals with the borderline grades. SRO Upgrade applicants did not have any significant RO knowledge gaps, therefore no further remediation or training required for their current license.

There were 3 questions (15, 71, and 95) identified to challenge for potential key changes prior to final grading. These challenges with justification are submitted on a different sheet.

A training action (TEAR-ANO-2014-119) was submitted to document actions taken as a result of this exam analysis. All missed exam items were reviewed with the applicants during the post-exam review, including explanation of why the distracters were incorrect.

The high miss questions with recommendations are listed in the following table.

<i>Exam Q#</i>	<i>Bank QID</i>	<i>Comment:</i>	<i>Recommendations/Actions:</i>
6	1930	<p>50% of the ROs and 50% of the SROs missed this question. There were two questions logged by applicants during administration of the exam. Both were similar to the comments during the exam review below.</p> <p>During the debrief the applicants had the following comments:</p> <ul style="list-style-type: none"> • Applicant stated that the IA pressure alarm was in, but didn't know whether the alarm was high or low. Need to add IA value and trend to stem. • Applicant stated that they thought that cavitation would have been prevented during this scenario because 2CV-5091 manual inlet valve 2SI-5091-1 would have been manually throttled per OP-1015.008 Attachment B to limit flow for this condition. 	<p>Applicant Training <i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes <i>None identified.</i></p> <p>Exam Bank <i>Recommend adding IA pressure and trend and Attachment B status to the stem of the question. [TEAR-ANO-2014-119]</i></p>
15	1939	<p>This question has a 79% failure rate. Six of eight ROs and five of six SROs missed the question, and all chose "A". The correct answer is "C". There were no applicant questions during</p>	<p>Applicant Training <i>Discussed correct responses and why the distracters were</i></p>

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		administration of the exam. One of the applicants commented during the exam debrief that they were unsure which lights the question was referring to.	<p><i>incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>None identified.</i></p> <p>Exam Bank</p> <p><i>Consider adding panel locations for the status lights referenced. [TEAR-ANO-2014-119]</i></p>
19	1943	<p>75% of the ROs and 83% of the SROs missed this question. During the debrief the applicants had the following comments:</p> <ul style="list-style-type: none"> • If the first half of the answers would have been “slightly lower” rather than “lower” they would have picked it. Thought “lower” was significant especially since “slightly lower” was used in second part of answer. • One applicant stated that the 10 minute time frame messed him up. Thought “immediately” would have been better. 	<p>Applicant Training</p> <p><i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>None identified.</i></p> <p>Exam Bank</p> <p><i>Consider changing first part of answer to “slightly lower” in the NRC exam bank. [TEAR-ANO-2014-119]</i></p>
43	1967	<p>62.5% of ROs and 67% of SROs missed this question. During the debrief the applicants had the following comments:</p> <ul style="list-style-type: none"> • Misread the stem. Read it as asking if HLO would happen in the configuration. • No timeframe was indicated in the stem. 	<p>Applicant Training</p> <p><i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>None identified.</i></p> <p>Exam Bank</p> <p><i>Consider rewording stem to make more understandable in NRC exam bank and change the wording to be more like original question (second part- “and level would _____” with answers “stabilize at setpoint” or rise until HLO is reached”) in NRC exam bank. [TEAR-ANO-2014-119]</i></p>

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		<i>RO group >50% miss rate</i>	
12 25	1936 1949	<p>These questions were missed due to various lapses in knowledge of the related AOP strategies. System level knowledge was also a minor factor for #12. There were no comments on these questions during the review and no questions from any of the applicants were logged during the exam.</p> <p>Knowledge upgrade was completed during the exam debrief.</p>	<p>Applicant Training <i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes <i>None identified.</i></p> <p>Exam Bank <i>No changes recommended.</i></p>
34 41 52	1958 1965 1976	<p>These are questions missed due to various lapses in system level knowledge. There were no comments on these questions during the review and no questions from any of the applicants were logged during the exam.</p> <p>Knowledge upgrade was completed during the exam debrief.</p>	<p>Applicant Training <i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes <i>None identified.</i></p> <p>Exam Bank <i>No changes recommended.</i></p>
67	1991	<p>This is an administrative level question regarding revision verification of procedures in use.</p> <p>4 of 8 ROs (and 2 of 6 SROs) missed this question. Comments from applicants during review identified that the requirements had changed while they were in the training program. Some recognized the procedure change from reading the procedure change email distributed to Operations department.</p> <p>One RO applicant asked during the exam if this question applied to a procedure in progress.</p>	<p>Applicant Training <i>Discussed correct response and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes <i>Consider reviewing program process to ensure there is a method to communicate all procedure changes. [TEAR-ANO-2014-119]</i></p> <p>Exam Bank <i>No changes recommended.</i></p>

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		<i>SRO group >50% miss rate</i>	
7	1931	<p>5 of 6 SROs missed this question. None of the ROs missed it.</p> <p>There were no comments from the applicants during the review and no questions logged during administration of the exam.</p>	<p>Applicant Training</p> <p><i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>None identified.</i></p> <p>Exam Bank</p> <p><i>No changes recommended.</i></p>
71	1995	<p>This question has a 36% overall miss rate but a 50% miss rate for RO examinees. Four of the eight ROs and one of six SROs missed this question. Five chose "C", one chose "A". The correct answer is "D". There were no applicant questions logged for this item during administration.</p> <p>During exam debrief with the applicants, they stated that removing an annunciator from service is an SRO task in the SRO Qualification Guide.</p>	<p>Applicant Training</p> <p><i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>None identified.</i></p> <p>Exam Bank</p> <p><i>Consider changing to SRO section of exam bank or modifying to include more info relative to ROs. [TEAR-ANO-2014-119]</i></p>
79	2003	<p>50% of SROs missed this question. During the debrief the applicants had the following comments:</p> <ul style="list-style-type: none"> • Applicants stated that they mixed up loss of 480V AC with Loss of 125V DC response • Thought adding "AOV" to 2CV-4823-2 and "MOV" to 2CV-4820-2 would help identify valve better 	<p>Applicant Training</p> <p><i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>None identified.</i></p> <p>Exam Bank</p> <p><i>Consider adding "AOV" to 2CV-4823-2 description in</i></p>

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			<i>answers and "MOV" to 2CV-4820-2 answers in NRC exam bank. [TEAR-ANO-2014-119]</i>
91	2015	<p>67% of SROs missed this question. During the debrief the applicants had the following comments:</p> <ul style="list-style-type: none"> Applicants stated that it is common practice now for ROs to use ACAs so the applicants used that fact to eliminate the ACA distractor. 	<p>Applicant Training <i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes <i>None identified.</i></p> <p>Exam Bank <i>Consider changing question to reword from "CRS would use" to "mitigation strategy directed by". [TEAR-ANO-2014-119]</i></p>
95	2019	<p>This question has a 67% failure rate. Four of six SROs missed, all chose "C". The correct answer is "A". There was one applicant question logged for this item during administration.</p> <p>This question asks which procedure directs the performance of a Reactivity Brief. The question gives conditions which infer a plant transient is in progress. In this situation COPD-032, Transient Conduct of Operations, (listed in answer "A") would be the governing document. However, COPD-030, ANO Reactivity Management Program, also contains Shift Manager responsibilities for performance of Reactivity Briefings during a Transient condition (refer to COPD-030, Rev. 007, step 4.5, 11th bullet, page 10 of 59).</p> <p>During the exam debrief, the applicants that chose the incorrect answer stated that they interpreted the question as asking what procedure provides overall guidance for performing reactivity briefings.</p>	<p>Applicant Training <i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes <i>Consider submitting a PIF to clarify which is the overriding document for transients. [TEAR-ANO-2014-119]</i></p> <p>Exam Bank <i>Consider modifying to include another plausible procedure to use in distracters rather than COPD-030. [TEAR-ANO-2014-119]</i></p>
98	2022	<p>83% of SROs missed this question.</p> <p>During the debrief, the applicants commented that they could not</p>	<p>Applicant Training <i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further</i></p>

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		recall learning this fact.	<p><i>training action recommended.</i></p> <p>Program Changes</p> <p><i>Review the SRO training program and ensure this information and refueling accidents in general is properly covered. [TEAR-ANO-2014-119]</i></p> <p>Exam Bank</p> <p><i>None</i></p>
100	2024	<p>50% of SROs missed this question. During the debrief the applicants had the following comments:</p> <ul style="list-style-type: none"> • The applicants could not recall the status of the RCPs during this scenario. • This procedure is not readily available for study due to being withheld from public disclosure and not on the electronic library. 	<p>Applicant Training</p> <p><i>Discussed correct responses and why the distracters were incorrect during exam review with applicants. No further training action recommended.</i></p> <p>Program Changes</p> <p><i>Consider a method to make this procedure available to applicants during study. At minimum, communicate to them where copies are currently kept.</i></p> <p><i>Consider providing a hard copy when this lesson plan is presented. [TEAR-ANO-2014-119]</i></p> <p>Exam Bank</p> <p><i>None</i></p>

Suggested Changes to the 2014 ANO Unit 2 Initial RO/SRO Exam

Exam Q#	Bank QID	Comment:
15	1939	<p>Question is too detailed for initial exam.</p> <p>This question has a 79% failure rate. Six of eight RO's and five of six SRO's missed the question, and all chose "A". The correct answer is "C".</p> <ul style="list-style-type: none"> • The level of knowledge from memory is not what would be expected of a licensed operator. The status of the indicating lights on panel 2C-03 and/or 2C-23 is used along with other indications in conjunction with the Annunciator Corrective Actions procedure to address operation and malfunctions within the ESFAS system. This question level of detail is beyond the job requirements (i.e. the question has a valid K/A but, as written, is not operational in content) as required by ES-401-9 note 4. • This question relies upon the examinee to recall ESFAS system knowledge that is too specific for the closed reference test mode (i.e. it is not required to be known from memory) as required by ES-401-9 note 4 and thus is too much to expect an examinee to recall from memory. • The status of ESFAS Trip Path lights on loss of power supply is not something operators would be expected to know without the benefit of procedural guidance or electrical diagram. In addition, one of the applicants commented during the exam debrief that they were unsure of which lights the question was referring. <p>Recommend deleting the question from this exam.</p>
71	1995	<p>Question is SRO knowledge.</p> <p>This question has a 36% overall failure rate but a 50% failure rate for RO examinees. Four of the eight RO's and one of six SRO's missed, five chose "C", one chose "A". The correct answer is "D".</p> <ul style="list-style-type: none"> • This question has SRO level question knowledge with respect to who would approve the removal of the annunciator card (license level mismatch not allowed by EN-401-9). This question asks about administrative procedural guidance on which position must give concurrence for pulling an annunciator card and what the administrative requirements are for labeling (tagging) the removed card for identification while stored. This question is not linked to the job requirements of an RO as required by ES-401-9 (i.e. This level of detail is not expected to be recalled from memory) • The tagging requirements for a removed annunciator card as specified in OP-1015.001, section 10.1 is ambiguous (step 10.1.4.A: install appropriate tag on pulled card) and

		<p>the type of tag would be decided by and directed by the CRS. Based on this information, both distractors 'C' and 'D' are correct based on both; CRS has the ability to direct the type of tag to be used (i.e. Caution Card, Temporary Equipment tag, Work Incomplete tag, etc...) and the lack of specific procedural guidance.</p> <ul style="list-style-type: none"> • During exam debrief with the applicants, they stated that removing an annunciator from service is a SRO task not an RO task. The task standard is contained in the SRO qualification guide A2QC-SRO-QUAL (A2QC-SRO-QUAL, Rev. 17, page 35, step 3.1, 3.5, and 4.1). It is not contained in RO Qualification Guide (A2QC-RO-QUAL). <p>Recommend deleting the question from this exam.</p>
95	2019	<p>Question had a 67% (4/6) failure rate.</p> <p>This question has a 67% failure rate. Four of six SRO's missed, all chose "C". The correct answer is "A".</p> <ul style="list-style-type: none"> • Question has distractors that are partially correct (e.g. the applicant can make unstated assumptions that are not contradicted by stem) with is not allowed by EN-401-9. • Question asks which procedure directs performance of a Reactivity Brief. The question gives conditions which infer a plant transient is in progress. In this situation COPD-032, Transient Conduct of Operations, (listed in answer "A") would be a valid document. However, COPD-030, ANO Reactivity Management Program, also contains Shift Manager responsibilities for performance of Reactivity Briefings during a Transient condition (refer to COPD-030, Rev. 007, step 4.5, 11th bullet, page 10 of 59). <p>During the exam debrief with the applicants, the applicants that chose the incorrect answer stated that they interpreted the question as asking what procedure provides overall guidance for performing reactivity briefings.</p> <p>Recommend accepting two correct answers ("A" and "C") for this question.</p>