J. Caruso
9/24/04 (reviewed comments with R. Conte-prior to calling licensee)

Comments on NMP-1 Exam Scenarios

Note: **Bold** reflects updates to original comments.

General (Apply to all Scenarios)

In general the operator actions appeared to be in good detail and the format was good.

Mark the steps in the text to clearly indicate those that are related to successful completion of the critical tasks - this is stated in the standards in Appendix "D". **Done.**

For the malfunctions in the scripts, you do not specify which steps would normally be performed by the RO or BOP (e.g. SOP-1, SCRAM procedure). Please do so in your final revise version. **Done.**

In the table for quantitative attributes for each scenario list the EOPs and EOP contingencies that you are taking credit for in your count. **Done.**

Guidance (per procedure) for shift briefs and communications is not included. **Done.**

Scenario #1

The scenario could be very long (2 hours). **Prep week made some minor revisions to scenario e.g. generator already parallel to grid to shorten slightly.**

You indicate 6 malfunctions. I only counted 5 - list your six malfunctions. Are you counting the MT as a malfunction? **Revised D-1 malfunction listing.**

CT 01 - Don't believe this is a CT since the EOPs provide guidance if RPV level can't be maintained above TAF. **Revised and better defined CT.**

Scenario #2

You indicate 6 malfunctions. I only counted 3 - list your six malfunctions. Are you counting the MT as a malfunction? **Revised D-1 malfunction listing.**

Event #5 - the turbine vibrations and the degraded vacuum lead to the manual scram. This looks to be the start of the MT. **Revised D-1 malfunction listing.**

Event #6 is also part of the MT but is another Component failure that can be dealt with separately.

Event #7 may really be part of the MT. It really depends on the timing of the degraded vacuum.

For example, if vacuum degrades to the point where the MSIVs would shut or approaching that point at the time of the trip then it is clearly part of the MT. However, if it subsequently worsens then it could be counted separately as you suggested. **Time delay is adequate to consider separate component failure.**

CT 02 and 03 should be better defined if possible to establish clear failure criteria based on meaningful plant requirements and/or FSAR or PRA insights. **Done.**

Scenarios #3

Event #6 Looks like the initiator for the MT. **Revised D-1.**

Event #7 - could count EDG 102 failure and loss of PB 102 if you specify discrete operator recovery actions required, if not part of the MT. **Combined 7 & 8 events for component failure. The timing was such for the Loss of offsite power that it occurred after the grid instability and the procedure guidance is different then for event 6, therefore evaluated to be separate component failure along with the loss of EDG 102.**

Event # 8 - Looks like a second or subsequent MT. **Revised D-1 to combine events 7 & 8 no real recovery actions for failure of EDG so combined LOOP with EDG failure.**

CT 02 should be better defined if possible to establish clear failure criteria based on meaningful plant requirements and/or FSAR or PRA insights. **Revised CT-2**

With the turbine tripped how is 13 FW pump injecting (it is shaft driven by turbine)? **Yes**

Backup Scenario

You indicate 8 malfunctions. I only counted 3 - list your eight malfunctions.

Event #5 looks the start of the major transient (MT). **Revised D-1**
Event #6 ATWS - component failure **Revised D-1**
Event #7 looks like just a continuation or worsening of conditions - part of the same MT. **Revised D-1.**

CT 01 not a valid CT to classify GE event. **Deleted**

JPMS

General

For the SRO test we could revise some of the Initiating Cues so that the SRO candidate would have to determine the procedure to use. **Done 4 JPMs revised - see below.**

The JPMs appear to be well written.

Please consider color coding all JPM handout paper (i.e., procedures and tear off briefing sheets) for the applicants to help avoid exam security issues. **Will do for exam.**

Please have a briefcase or another container that can be staged in the plant for in-plant JPMs

in the holding area with the sequestering person. I'll provide, if you don't have one available. **Will provide.**

For all JPMs and scenarios, please inform us when last used in the training program or for other exams (i.e., overlap with last 2 NRC exams and audit exam). **No repeats**

RO JPM outline - JPM "F" should be safety function #4, Heat Removal. **Revised outline.**
SRO JPM outline - JPM "F" safety function instruments - how did you arrive at that ? **Revised outline.**

JPM a- Withdrawal of Control Rods that Double Notch. 1) Spelling- Control Rod vs. Control Rods 34-39. 2) Spell out "CRDDL". 3) Modify initiating cue for SRO to have them pick correct procedure. **Changes made.**

JPM b Line-up and Inject CS - 1) Why are steps #6 & 8 not critical? 2) Modify initiating cue for SRO to have them pick correct procedure. **Changes incorporated.**

JPM c The RO at the controls respond appropriately modify initiating cue to make possibly more than just "F" panel. **Change incorporated.**

JPM d- Vent PC via D/W thru the RBEVS- 1) Page 5, (Alt Path) when valve 201-32 will not open could the candidate make the decision on securing drywell venting and establishing torus venting? The way it is written currently may not be Alt. Path. 2) Modify initiating cue for SRO to have them pick correct procedure. **Licensee agreed not alt. path also revised initiating cue.**

JPM e- Perform N1-ST-M4A for EDG 102 (DG Operability). Have the candidate determine alt. path if possible Do we really need this prompt? The operators should all know how to properly secure the EDG. **Change incorporated.**

JPM f- Control Room Actions Prior to Control Room Evacuation per N1-SOP-9.1. In the initiating cue do we need to specify the applicant's specific control room position? **Change incorporated.**

JPM g- Respond to a Low SW Header Pressure/Loss of SW (PRA). 1) The JPM is alt. path but not so designated on the outline. 2) Consider modifying initiating cue you are the BOP watch respond appropriately. **Changes incorporated.**

JPM h start-up CR vent. - Step 9 critical? **Change incorporated.**

JPM j- RPV Injection for S/D Outside the Control Room per N1-SOP-9.1. On page 5 it says "start the electric fire pump..." , But the procedure indicates (step 6.0) that the diesel fire pump is the preferred one to start. **The licensee decided to write a different new than the diesel JPM that was already in the bank. The turnover was revised to indicate the diesel was inop.**

RO Admin.

Actions for Defeated Annuciators - 1) revise initial conditions to agree with handout. 2) Does not appear to adequately discriminate. **The applicant has to determine how many inputs are affected, if not all inputs affected so that need to review alarm contacts on prints then determine a yellow sticker.**
Verify Electronic Clearance - step #4 should also be critical to identify what point needs to be added to complete clearance. Follow-up question/cue, if not offered as part of the answer. **Revised to make missing points critical.**
Radiological Requirements High RAD & Contaminated Area - 1) spell out WCMOSSE 2) Order steps to match questionnaire format **WCMOSSE is the**

- **program used by work control. Format of JPM revised.**

Perform Actions For External Security Threats. This should be clearly and boldly marked as potential safeguards information and to be withheld from public disclosure due to the sensitivity of some of the information presented. **Clearly and boldly marked withhold from public disclosure.**

SRO Admin.

Evaluate plant Chemistry Report - JPM seems overly simplistic does not discriminate adequately?? **Rewrote to make more challenging.**
Determine PMT for Refuel Bridge Limit Switch - 1) Typos in initial conditions 2) What if the applicant wants to do all procedure steps how could we fail? **Rewrote to make more challenging.**
Direct An Exclusion Area Evacuation. 1) How is specific route determined - show me? 2) Convince me this is a good discriminating JPM and not a 50/50 thing about determining the correct evacuation route. **Rewrote to make more challenging.**
Classify Event/Complete Notification - How are planning to do this classify event after each scenario and then this JPM is for a notification that will be done later? We will do later in the classroom. **Yes, that is the intention.**

NMP-1
401-9
WRITTEN EXAM
COMMENTS

From: John Munro
To: John Caruso
Date: 11/17/04 4:19PM
Subject: Re: NMP 1 Written Exam

John - I talked with Dave and you have his concurrence I to proceed as you recommend with a few caveats.

First, you need Rich's approval as well. In other words, Dave's concurrence is NOT direction. Notwithstanding Dave's concurrence, Rich can still override your recommendation and state in the report that the overall examination submittal was outside the acceptable quality range as discussed in ES-501.

Second, please ensure that the licensee is "counseled at the exit meeting that this is [LIKELY] a one time exception" as discussed in your message below.

Finally, ensure that the wording of the report does not convey the wrong message. In other words, while Dave has concurred in your recommendation to not provide a negative observation regarding the adequacy of the facility's proposed examination, be careful that you do not indicate the converse - i.e., that the examination was adequate for administration as proposed - without some qualification.

>>> John Caruso 11/17/04 03:17PM >>>
Dave and John,

Region I would like your approval of the following recommendation.

The regional review of the NMP-1 written exam submittal concluded a total of 26 unsat. questions in the following areas: 4-LOD=1(RO-46, 51, 69 & SRO-10); 4-Direct Look-up (RO-27, 56, & SRO-6, 12); 6-more than one distractor not plausible (RO-5, 11, 29, 60 and SRO-8, 25); 9-K/A mismatches (RO-15, 22, 23, 53, 61, 73, & SRO-16,17, 20); 3-misc. (RO-16, 44, & SRO-7). The region would believes it necessary to invoke the new guidance in final revision 9, ES-501, E.3.a, page 10, footnote, "...no comment may be warranted if the same error was made in a number of questions..." In the case of the NMP-1, we would like to suggest with the program office's approval the four LOD=1 questions and the four direct look-up are each evidence of similar problems of misinterpretation of guidance. It is the chief examiner's opinion that this exam submittal (written and operating exams) was above average in quality when compared to other recent exam submittals and viewed overall. In addition, this exam appears to be a significant improvement over the last 2 submittals (U-1 and 2) about two years ago. Although, this exam exceeded the 20% threshold for unsat questions, the contractor author went out of his way to be responsive in resolving the exam team's comments. Furthermore, one could argue that LOD=1 is not well defined in the examiner standards and therefore is a somewhat subjective area. If the program office agrees and approves this region I recommendation then the licensee will be counseled at the exit meeting that this is a one time exception.

CC: David Trimble; Richard Conte

QUESTION #	COMMENT RESOLUTION
1	Added discussion on how battery voltage is addressed to justification for correct answer.
2	Revised question stem to remove procedure stem focus. Changed distracter "b" to a new distracter and added new discussion for distracter "b". Changed CFR reference to 55.43(b)(5).
3	BOLD and CAPS words and phrases in the question and question stem. Revised question stem to reference the "above event".
4	Changed RPV level to -90 inches (Fuel Zone) form -97 inches.
5	No change. SRO reviewed and determined okay as is.
6	New Question. Same K/A.
7	Double jeopardy with Q#4. New question. Same K/A.
8	Added new distracter "c" and new distracter "d" and added correct discussion for each. Changed distracter "b" to EPIP-EPP-18 (EPIP-EPP-08 was a typo).
9	Okay.
10	New question. New K/A randomly selected.
11	Okay.
12	New question. New K/A randomly selected.
13	Okay.
14	Changed to NO references provided.
15	Revised question stem to remove specific stem focus. Revised references provided to CORE MAP; N1-FHP-27C will not be a referenced authorized for use.
16	New question. New K/A randomly selected.
17	New question. New K/A randomly selected.
18	Corrected justification for the correct answer.
19	Okay.
20	New Question. Same K/A.
21	Okay.
22	Okay.
23	Replaced question with RO Q#73 which was determined to be SRO only.
24	Okay.
25	New Question. Same K/A.

QUESTION #	COMMENT RESOLUTION
1	Corrected editorial comments in justification.
2	Okay.
3	Okay.
4	Okay.
5	Added new distracters "a" and "b" and "c" and justifications for these distracters.
6	Added a new bullet to the question to identify FW flow magnitude. Corrected justification for answer to "c".
7	Added "following a reactor scram" to the following conditions exist. Added a new bullet to the question to identify CR evacuation in progress. Changed SOP number to SOP-21.2 which is the new number - the correct answer is not affected by the SOP change. Updated procedure reference to SOP-21.2.
8	Corrected spelling for the word stabilized.
9	Okay.
10	Correct the K/A reference which was incorrectly listed.
11	New question. Same K/A.
12	Okay. Changed to only EOP-4 provided.
13	No change. Question evaluates the response to of the pressure regulating system to a high reactor pressure and although the reactor pressure sensed is an instrument failure the question still evaluates the system response to high reactor pressure regardless of whether or not actual reactor pressure was changing rather than the instrument failure indicated.
14	Okay. Changed to only EOP-2 and EOP-4 provided.
15	Replaced with question #23. New question developed for question #23. Changed to only EOP-2 and EOP-4 provided.
16	~~Added a rate of loss of water from the torus. Changed to No references.~~ Replaced question & randomly selected New K/A.
17	Okay. Changed to only EOP-2 provided.
18	Okay. Changed to only EOP-3 provided.
19	Okay.
20	Okay.
21	Added sequence of events occur to the question introduction statement. Removed unexpectedly from the last bullet.
22	~~Okay.~~ Replaced question using Same K/A.
23	New question. New K/A randomly selected.
24	Okay.
25	added a new bullet (07:55) indicating a point in time (500 psig) during the reactor startup. Added a discussion on this information with regards to the point in time for the reactor startup and the action in response to the related reactor pressure.
26	Added correct EOP bases to question stem.
27	New question. Replaced with SRO#12. Changed to No reference.
28	Okay.
29	New question. Same K/A.
30	Okay.
31	Revised question to remove "with a valid initiation signal present" and added "for continued operation of EC11 following this isolation, the operator".
32	Added "each quarter" to question.
33	Revised question stem wording to "which valve(s) will".
34	Changed "CRD Pump 12" is third bullet to "RMCS". Capitalized "QUICKEST METHOD" in the question stem. Corrected discussion for distracters "c" and "d" to SYS 11.
35	Corrected procedure reference.
36	Added "then" to the fourth bullet.

37	Okay.
38	Changed to cognitive level 1.
39	Changed to cognitive level 1.
40	Changed to cognitive level 1.
41	Added bullet to identify drywell pressure. Modified distracter "a" so that it is incorrect even if low reactor pressure (50 psig) is assumed.
42	Essentially a new question now. Changed to cognitive level 3. Rather than provided a inerting lineup, the applicable prints will be provided and the examinee must determine the valves that are aligned for inerting and those affected by the changing plant conditions.
43	Added bullet to identify the state of the blue lights.
44	New question. New K/A randomly selected.
45	Changed to cognitive level 2.
46	New question. New K/A randomly selected.
47	There are no additional actions to take other than manually closing the valves. Added "by the control room operator" to answers "a" and "c" to be more evident that these are actions and fulfill the action part of the A.2 K/A.
48	Added K/A wording.
49	Added a specific voltage to the question and revised distracter "d". Updated the justification to discuss the significance of the voltage that was added to the question.
50	Okay.
51	Essentially a new question now. Rewrote the question to remove the LOD=1. Same K/A.
52	Okay.
53	New question. New K/A randomly selected.
54	Added "may result in" to "b" and "d" distracters.
55	Corrected identifiers (I.e., a, d) for justifications for correct answer and for distracters.
56	Rewrote the question to remove the LOD=1. Same K/A. Changed to only EOP-3 provided.
57	Removed the statement identifying the failure from the question stem.
58	Okay.
59	Added discussion to the justification for the correct answer on why this is integrated plant.
60	New question. Same K/A. Rewrote the question to remove the LOD=1.
61	New question. New K/A randomly selected.
62	Okay.
63	Okay.
64	Okay.
65	Changed question stem to "which one of the following is correct regarding the above operator actions.
66	Added discussion why working hour limitations are considered part of the facility license.
67	Okay.
68	Okay.
69	New question. Same K/A.
70	Changed to/added cognitive level = 1.
71	Okay.
72	Okay.
73	New question. Same K/A.

74	Changed "many control rods" to "twenty (20) control rods" in the question and added that that "they are at position 48".
75	Added the correct K/A reference. The wrong K/A was referenced.

ES-401 NineMile Point Unit 1 Written Examination 11/04 Form ES-401-9

Review Worksheet

Licensee verified minimum overlap of written exam questions for last 2 NRC administered exams at this site. G. Johnson, H. Williams, and J Caruso reviewed this exam completed review and consolidating comments on Oct 2, 04. Provided to licensee on Oct 6, 04.

NOTE 1: Reviewed all questions against K/A statements specified in the question.

NOTE 2: All answers were verified to be correct in accordance with supplied references. Additional references were requested/used for additional technical verification.

NOTE 3: Initial evaluation of exam quality: 17 UNSAT for RO; 9 UNSAT for SRO overall = 26% unsat.. overall

NOTE 4: Resolution of comments in bold and italics print.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
1	F	2										Y	N	S	
2	H	2										Y	N	S	
3	H	3										Y	N	S	Completed further technical review using drawings C-19957 and C-19409 requested from licensee.
4	F	1										Y	N	S	
5	F	2				X						Y	N	U	Answers A and C not credible. ***Replaced distractors and modified justifications.***
6	H	2										Y	N	E	Include feedwater flow in stem to confirm failure of setdown rather than some other cause for level > 45". Also, the explaination indicates "A" is correct answer. ***Comments incorporated- added new bullet to identify FW flow magnitude and corrected justifcation for "C".***
7	H	3										Y	N	E	***Modified stem and changed procedure number to reflect new procedure number.***
8	F	3										Y	N	E	Typo: Stabilized. ***Fixed***
9	F	2										Y	N	S	Inadequate technical references to confirm none of the remaining distractors are correct Set point question okay in limited number. Completed further technical review using additional excerpts from N1-OP-20 requested from licensee.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
10	F	2				X						Y	N	S	
11	F	1				X						Y	N	(U)	LOD=1. Also distractors "A&B" not credible considering no fuel damage occurred and nothing dropped into the core or evidence of core damage. ***Replaced question same K/A..***
12	F	2										Y	N	S	Note: this an "F" since it involves, simply, recalling a step in the EOPs, which are provided - licensee had marked H.
13	H	3										Y	N	S	K/A match, although an instrument failure still tests interrelationships of High Reactor Pressure and turbine regulating system.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
14	F	1				X	X					Y	N	S	
15	H	2										N	N	U	K/A mismatch. K/A is for drywell temperature, but question is about drywell pressure. ***Replaced with question #23 and new question developed for question #23.***
16	F	3	X									Y	N	U	This area tested on operating exam, scenario #1, event #7 seismic event with torus water leak and implementation of EOP-1, attachment 18. ***Replaced question and randomly selected new K/A.***
17	H	2										Y	N	S	changed reference to only EOP-2 provided.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
18	H	3										Y	N	S	changed to only EOP-3 provided.
19	H	2										Y	N	S	
20	H	3										Y	N	S	
21	H	3	X									Y	N	E	According to stem, the FWP-11 is already running. No indication that it tripped. Why should re-start be an issue? ***Revised stem to add words "sequence of events" also deleted word "unexpectedly".***
22	F	2	X									N	N	U	K/A specifies a Low Reactor Water level. The question relates to a failed level recorder. Also "explain" part of K/A not addressed. ***Replaced question same K/A..***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
23	H	3	X									N	N	(U)	K/A is for Drywell Temperature as it relates to Drywell temperature. Question is related to the effect that drywell temperature has on level instruments. ***Question replaced. New K/A randomly selected.***
24	H	2										Y	N	S	
25	F	3										Y	N	E	Question is "F" LOK since the applicant needs only memorize the step in N1-SOP-5.1. Licensee decided to modify stem slightly.
26	H	3	X									Y	N	E	Modify the stem "Which of the following identifies the correct EOP basis for inserting the scram? ***Change made.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
27	F	1		X								N	N	U	1) LOD=1 due to quoting parameter that is entry condition to EOP-5. More or less a set point question. "D" is the only distrator that mentions EOP-5. Also if provide eops to the SRO applicants this would be a direct look-up if you left the entry conditions on the flow charts. 2) not a strong K/A match determine or interpret water level in affected area. Question only has the examinee determine that EOP entry condition. 3) answer not technically correct per EOP remove and maintain water level below alarm point. EOP takes priority over annunciator repsonse. Dlete last prt of "D" ***Replaced question with SRO-12 - same K/A changed to no reference.***
28	F	2										Y	N	S	
29	F	2				X						Y	N	U	1) Distractors B and D are implausible with the stem condition of turbine trip and (subsequent) reactor scram. #13 RFP shaft driven would not expect the remaining elctric pump FCVs to close. 2) K/A match not strong - question tests knowledge of valve operation on electrical failure not knowledge of elctrical powere supplies to valves. ***Replaced question- same K/A***
30	F	3										Y	N	S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
31	H	3	X	X								Y	N	E	No correct answer. According to NI-OP-13 the EC is NOT returned to service with a valid isolation signal. ***Modified stem* to address concern.**
32	F	3	X									Y	N	E	***added words to focus stem - "...that are performed <u>each quarter</u> .."***
33	F	3										Y	N	E	***Revised the stem "...which valve(s) will receive.."***
0	H	3										Y	N	E	***Corrected explanation for distractors C and D should refer to Sys 11, not 12. Also minor revisions to stem.*** ***Completed further technical review using drawing C-19409 to confirm CRD Pump 12 affected by loss of EDG 103.*** ***Please provide the original question for all modified questions.***
35	H	2										Y	N	S	corrected procedure reference.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
36	H	3										Y	N	S	
37	H	2										Y	N	S	Rx Control Mode Switch still in s/u during h/u - now what is the impact of IRM makes it higher order question.
38	F	2										Y	N	S	This is an interlock question and is an "F", not "H" LOK. ***Licensee agreed and changed to memory level/fundamental.***
39	F	3										Y	N	S	This is an interlock question and is an "F", not "H" LOK. ***Licensee agreed and changed to memory level/fundamental.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
40	F	2										Y	N	S	1) This is an interlock question and is "F" not "H" LOK. ***Licensee agreed and changed to memory level/fundamental.***
41	H	2										Y	N	E	1) Ensure stem conditions are sufficient to deduce a High Drywell Pressue exists Need to provide additional information in stem that 2) indicates the reactor pressure remains constant for >111 seconds. **Modified stem to identify DW pressure and modified distractor "A".**
42	H	3		X								Y	N	E	***Added P&ID as a reference and deleted noun name description from stem. Applicants must determine the valves that are aligned for inerting from prints.***
43	H	2										Y	N	E	no reference provided for validating the correct answer and verifying distractors are incorrect. Both green and red lights for ERV-111 psotion indiction extinguished would seem to indicate no power availalbe to the valve meaning that maybe there is no correct answer Green light should be lit. ***Modified stem to identify state of blue lights.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
44	F	3		X								Y	N	U	Questions 43 and 44 are too clsoely related both are testing knowledge of the ERV indication and operation and both are esentially examining the same K/A. Should replace one of these questions and it looks like 43 is the better of these questions. Need references that indicate the significance (if any) that the blue lights OFF have on lift pressure. Did a further technical validation using N1-OP-1, obtained from licensee. ***Replaced questions and randomly selected new K/A.***
45	H	2										Y	N	S	higher cognitive level because need to know to facts that feed flow will follow steam demand and that this failure will result in a scram.
46	F	1										Y	N	U	LOD=1 (only a setpoint question). For "D" change low to HIGH-LOW. The only thing the applicant really needs to know to answer this question is the set point for low level alarm is 65", if the applicant knows that then the 3 distrators can easily be eliminated. ***Replaced questions and randomly selected new K/A.***
47	F	2										Y	N	E	***Modified "A&C" to include corrective actions required by operators to manually close valves to comport with K/A statement..***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
48	H	3										Y	N	S	Completed further technical review to confirm "C" is correct answer. Used Drawing C-19409 requested from licensee. Added K/A wording.
49	F	2				X						Y	N	E	"D" distractors is not credible and can easily be eliminated since manual actions should not be required to transfer power for an uninterruptable power supply. ***Added specific voltage value to stem to make more discriminating so that applicants have to evaluate and determine fault also revised "D".***
50	H	3										Y	N	S	
51	F	1				X						Y	N	U	1) Distractor "B" implausible with 111 locked out (in stem) 2) LOD=1 simple power supply question too simplistic does not discriminate between safe and unsafe. ***Rewrote question using same K/A.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
52	H	2	X									Y	N	S	
53	H	2										N	N	U	Although the K/A is for CCW a service water question is acceptable since service water is NOT in NUREG 1123 even though it is a very important system in CDF. **John Monro indicated should have added SW to systems before doing random sample not acceptable.** ***Replaced question - randomly selected new K/A.***
54	H	2										Y	N	E	"may result in damage to index tube" No correct answer otherwise. ***Enhanced "B&C" distractors.***
55	H	2										Y	N	E	TYPO Not clear which is correct answer. Page 157 says "A" but page 158 says "D". ***Revised justifcations.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
56	H	1		X								Y	N	U	LOD= 1 with EOPs available this is a direct look up. ***Rewrote question using same K/A. Changed to only EOP-3 provided as reference.***
57	F	2										Y	N	E	Suggest that condition deleting stem condition "if you suspect a failed reed switch for position 12" that would hit the predict piece and make it a more challenging question. ***Removed the statement from the stem identifying the failure.***
58	H	2										Y	N	S	Verified per EOP-3, EC's are initiated during ATWS.
59	H	3	X									N	N	S	
60	H	1-2	X			X						Y	N	U	This is simply a set point question. In addition, "A" and "D" not credible. ***New question - same K/A to make more discriminating***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
61	H	2	X									N	N	U	Does not meet K/A since K/A is for Max Combined Flow which is a different function from Load Limit. ***New question using randomly selected new K/A.***
62	F	3										Y	N	S	
63	F	2										Y	N	S	Meets K/A since it is testing loss of RPS affect on Rad monitors which then in turn affects vent systems got Rcih Cont's opinion he agrees
64	H	2										Y	N	S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
65	H	2		X								Y	N	E	delete in stem the words " accurateness of the" 2 choices are wrong maybe cuing. ***Modified stem***
66	H	2										Y	N	S	***K/A mismatch verified that admin section of TS limit working hours therefore part of licensing bases.*** Higher order since involves computation and application of fact.
67	H	2										Y	N	S	Confirmed technical accuracy of answer using prints C-18000-C and C-18039-C
68	F	2										Y	N	S	
69	F	1		X								Y	N	U	As written the question is, simply, a math problem since all acceptance criteria is specified in stem. LOD=1 does not discriminate adequatlely does not require any specific plant knowledge to answer. ***Replaced question and randomly selected new K/A.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
70	F	3										Y	N	S	Question is "F" LOK, not "H" since it requires only recollection of a fact. ***Licensee agreed and changed to memory level/fundamental.***
71	H	3										Y	N	S	
72	H	2										Y	N	S	
73	F	3	X									N	N	(U)	1) Question is on adherence with administrative controls, not on reducing excessive levels of radiation. K/A Mismatch. 2) Is this required knowledge from memory. ***Replaced question used same K/A.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
74	H	2	X									Y	N	E	May need additional stem condition(s) to ensure "A" is the only correct answer. "A" would NOT be correct, for example, if this were a hydraulic ATWS. Suggest specifying a number of rods equivalent to one group. ***Modified stem to specify number of rods affected and position.***
75	H	3	X									Y	N	E	***Typo fixed for K/A mismatch now agrees with outline.***
S1	H	3	X									Y	Y	S	***Appeared to be K/A mismatch licensee, however, licensee explained why question was a K/A match in the justification for correct answer.***
S2	H	3				X						Y	N	E	Distractor B not plausible. The limit for Shutdown Margin relates to decreasing temperatures (< 68 degrees). Not SRO level. Procedure # is given (no assessment). Not fuel movement (no fuel moves started) This question does not meet 55.43 (b)(6) as indicated. ***Modified stem to remove reference to procedure and changed "B" distractor***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
S3	F	2					X					Y	Y	E	***Minor revision to stem also bold and caps key words.***
S4	H	3	X					X				Y	N	E	***revised values in stem for Fuel Zone level.*** Used EOP-3 to confirm correct answer.
S5	H	3										Y	Y	S	Used EOP-4 and transient mitigation strategy to confirm correct answer
S6	F	1				X						Y	Y	U	1) LOD=1, with EOPs in hand diretct lookup. Does not discriminate step TL-3, EOP-4. 2) Distractor B implausible since no Blowdown requirement for ANY hydrogen condition ***Replaced question using same K/A.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
S7	H	1										Y	Y	U	1)Redudent testing to SRO-4; 2) With EOP-3 in hand direct look-up LOD=1; 3) Also answer looks like it it wrong for 11% power should be -123" do you interprolate when using this table? ***Replaced question using same K/A.***
S8	F	3				X						Y	Y	U	"C" and "D" not credible considering EAL tables available. This is an "F" LOK since the EAL tables are available. ***Revised all distractors.***
S9	F	2										Y	Y	S	
S10	F	1										Y	Y	U	GFE knowledge all reactors in US are designed this way. With EOP-3 in hand direct look-up LOD=1. ***Replaced question using a new randomly selected K/A.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
S11	F	2										Y	Y	S	
S12	F	1										Y	Y	U	With EOP-5 in hand direct look-up LOD=1. Unless this eop not provided at all for the exam still very simplistc exam question basically another set point question - too many on this exam. ***Replaced question using new randomly selected K/A.***
S13	H	3										Y	Y	S	
S14	H	1-2										Y	Y	S	1) With the TS provided looks like a direct look-up question. TS questions for SROs should be of a more integrated plant nature and challenging to include multiple TS entries. ***No reference will be provided. K/A statement is testing knowledge of Tsbases for redundent equipment - determined to be acceptable.***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
S15	H	1	X									Y	Y	E	1) With N1-FHP-27C provided (along with core map) this may be LOD=1. Need to review N1-FHP-27C to determine suitability of question. Confirmed that Section 4 of N1-FHP-27C provides a direct look up for this question. 2) the stem of this question is too leading especially for an SRO applicant. Your providing too mu ch information per TS requirements, why can't step 226 be performed this is too leading. It looks lie fuel movement could proceed in another quadrant maybe that could in revising the question. Need to ensure the provided reference(s) do not provide clues to other questions. ***Revised question stem to remove specific stem focus for procedure also revised references provided.***
S16	F	1-2	X									N	Y	U	1)How many questions on this exam regarding EC systme it seem to me too many. I'd like the licensee to go back and count up how many questions on exan involve EC system. 2) K/A mismatch testing TS operability not ability to perfom this ST or any integrated procedure. 3) LOD=1 to answer this question all you need to know about TS is that these valves are both primary containment isolation and EC valves. Might be okay for an RO question as far as LOD. . ***Replaced question using new randomly selected K/A made more challenging as well as operationally oriented.***
S17	F	2						X				N	N	U	1) Not SRO only. Not 55.43(b)(5) since no assessment of which procedure to use. Procedure number is provided in stem 2) K/A match poor how does this question predict the impact of TIP and then use procedures to correct or mitigate. The question part already does all that for you the answer is who authorizes the action. . ***Replaced question using new randomly selected K/A.***
S18	H	2										Y	Y	E	What on this ST failed the flow is <1600? Ensure references provided do not give clues to other questions. The answer appears correct (according to references provided) but the explaination is wrong. The Flow is <1600 (as required by TS) but the dP is not negative enough given a 10 MPH wind (should be .28) ***revised justifcation***

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
S19	H	3										Y	Y	S	
S20	H	2	X									N	Y	U	K/A mismatch. The K/A is directed at using the computer to obtain data. The question relates to what needs to be done if/when the computer is unavailable. . ***Replaced question using same K/A.***
S21	F	3	X									Y	Y	S	Confirmed correct answer in Section 3.4.4 of NIP (obtained 9/21)
S22	F	3										Y	Y	S	good question

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
S23	F	1-2										Y	Y	E	LOD=1. This is a GET question. Really equivalent to a set point type question - low discriminatory value. . ***Licensee voluterarily agreed to replace this question with RO-73 which was determined to be SRO level.***
S24	F	2										Y	Y	S	
S25	F	2		X		X						Y	Y	U	Will the EAL matrix provided for Question #3 aid the applicant in answering the question? If so, this may be a LOD=1 question. It should also be common knowledge (without reference to a procedure) that a SAE does NOT require a PAR which eliminates distractors A and B as not plausible. . ***Replaced question using same K/A.***

The regional review of the NMP-1 written exam submittal concluded a total of 26 unsat. questions in the following areas: 4-LOD=1(RO-46, 51, 69 & SRO-10); 4-Direct Look-up (RO-27, 56, & SRO-6, 12); 6-more than one distractor not plausible (RO-5, 11, 29, 60 and SRO-8, 25); 9-K/A mismatches (RO-15, 22, 23, 53, 61, 73, & SRO-16, 17); 3-misc. (RO-16, 44, & SRO-7). The region would believes it necessary to invoke the new guidance in final revision 9, ES-501, E.3.a, page 10, footnote, "...no comment may be warranted if the same error was made in a number of questions..." In the case of the NMP-1, we would like to suggest with the program office's approval the four LOD=1 questions and the four direct ook-up are each evidence of similar problems of misinterpretation of guidance. It is the chief examiner's opinion that this exam submittal (written and operating exams) was above average in quality when compared to other recent exam submittals and viewed overall. In addition, this exam appears to be a significant improvement over the last 2 submittals (U-1 and 2) about two years ago. Although, this exam exceeded the 20% threshold for unsat questions, the contractor author went out of his way to be responsive in resolving the exam team's comments. Furthermore, one could argue that LOD=1 is not well defined in the examiner standards and therefore is a somewhat subjective area. If the program office agrees and approves this region I recommendation then the licensee will be counseled at the exit meeting that this is a one time exception.