

DRAFT OUTLINE COMMENTS

Facility: AN1

First Exam Date: 9/5/2008

Written Exam Outline (7/01/2008)		
Comment	Resolution	
RO		
1	Add E/APE and system numbers and short titles to all entries on the ES-401-4 form. (don't just list the KA)	Complete
2	ES-401-4: Fuel Handling Accident should be 036, not 037	Complete
3	T1G2 – 036 Fuel Handling Accident G2.1.28 - why not possible for RO's? KA asks for purpose and function of major system components. Why select a different E/APE instead of a different G2.1? Always need more refuel questions.	Explained reason for rejection on ES 401-4 and NRC agreed with reason.
4	Differentiate "not selected" from "suppressed" throughout the outline	Done
5	In random selection methodology:	
5a	Tier 1 is E & APE's, not "systems."	Complete
5b	Need to list "systems" that were suppressed with justification (i.e. ice condensor) Any others?	Complete
5c	Need justification for why KA's were suppressed	Complete
5d	Any other KA's with low operational value (078 Instru Air System, K3.01) that should be suppressed for future outline generation? (Previous exams Record of Rejected K/As)	Will work on this for future exams this will be an enhancement for future exam development. Does not need to be completed for this exam development
5e	Need a statement that you have reviewed all KA's less than 2.5 and that none of them should be included due to site specific considerations (since the software automatically suppressed them)	Placed a statement in the Selection process letter. Yes we looked and found no K/A's less than 2.5 that needed to be included in selection process.
6	Is G2.2.21 an RO or SRO level KA? (deals with operability requirements)	Both: we were able to come up with a question that is an RO level for this K/A. Basically asking who is responsible for it
7	Add revision numbers to all forms for change control.	Placed rev 1 on corrected sample plan so we will know which document is most current. Any other changes after this one will change rev number.
8	Add "RO" and "SRO" to ES-401-4 forms	Okay strike comment

	since there are two of them.	
9	T2G1 – 013 ESF Actuation: K5.02 on last two NRC exams. Randomly sample another knowledge KA.	Okay within guidelines of Nureg did not bust repeat questions stay as is. NRC lead examiner agreed with comment
10	T3 – 2.1.29 on last two NRC exams. Randomly sample another 2.1 KA.	Okay within guidelines of Nureg did not bust repeat questions stay as is. NRC lead examiner agreed with comment
SRO		
1	G2.3.5 – can you really write an SRO level question?	No; we have changed K/A to 2.3.4 found after outline submittal during development phase NRC lead examiner agreed with comment
2	004 CVCS 2.4.1 – why replace the KA? Keep the KA, just change the system.	We have another 2.4.1 K/A on system 13 ESFA felt that K/A was over sampled in T2/G1. 2 of 5 questions would be same K/A. NRC lead examiner agreed with comment
3	Explain why there is no credible tie for 026 Containment Spray and G2.4.21	Due to the simplicity of the system could not write a SRO question
4	061 Aux/Emer FW – all KA's that do not apply should be identified (<u>and justified</u>) in sampling methodology and suppressed prior to sampling.	Over site in suppression letter Completed
5	Reason for rejection of 061 AFW/EFW, KA A2.02 says “Additionally excluded A2.02...” How can it be additionally excluded?	Over site in suppression letter Completed

Administrative JPM Outline		
(7/01/2008)		
Comment		Resolution
1	Number JPMs A1, A2, etc.	Done
2	RO: Both Conduct of Ops KA's have been used on last two NRC exams. Select different KAs.	A2 new and good admin JPM keep Replaced A1 JPM with new JPM on valve line ups K/A 2.1.28 A1JPM-RO-LINE1 NRC lead examiner agreed with comment

Control Room / In-Plant System JPM Outline

(7/01/2008)

Comment		Resolution
1	Number JPMs S1, S2, etc	Done
2	Should have one more than the minimum for Alternate Path JPMs (RO-5, SRO-3)	Be ready to select faulted JPM incase of one being kicked out during validation or is compromised. NRC lead examiner agreed with comment
3	Were the two JPMs from previous NRC exams randomly selected? (RO)	Yes
4	Is P1-Relieve steam binding of EFW pump – considered emergency or abnormal in-plant? If so, then need to include an “E” code. If not, then need an “E” In-plant JPM.	Abnormal placed an E code complete
5	SRO outline does not contain a low power JPM (minimum is 1). Replace S5 with S4.	Done
6	S5 – Hydrogen Recombiner M-55B in operation was on 2005 NRC Exam. If the only difference is this year it's M-55A, then it would count as a “P” in the Type Code.	Placed “P” in the code for M-55A on form ES-301-2. NRC lead examiner agreed

Simulator Scenario Outline Comments (7/15/2008)	
Comment	Resolution
1	Were facility-specific or industry-generic operating experience used? YES
2	Were dominant accident sequences for the facility used? YES as they relate to the PRA.
3	Was PRA used to identify risk-important operator actions? YES
4	All 3 scenarios have power reduction. Mix it up (1 up, 1 down, 1 steady-state) All three scenarios have a power reduction as their reactivity event for the ATC. The normal plant process for raising power requires reactor engineering support and a detailed brief. Many planned power increases also will involve 'Just In Time' training also. This process will result in an excessively long scenario. Power reductions can be driven by scenario events as directed by Abnormal operating procedures with the direct support of other groups or a detailed and lengthy brief..
5	Scenario 3 – replace Tube Rupture with Overheating for Major Event (tube rupture on last two NRC exams) SG tube rupture events have a high probability for occurrence in the industry. U1 recently replaced both SG's with an enhanced design. The 'A' SG has exhibited several bowed support rods which make a tube rupture event even more likely. Therefore having a tube rupture scenario is consistent with industry and ANO specific accident probability. Scenario 3 has a post rip tube rupture which is different than an at power rupture.
6	Scenario 2 – have seal failure result in transition to ICC. Also, add to manual start of #2 EDG – diesel starts but freq is low such that it will not auto tie to bus – operator must manually raise freq and tie to bus (if not auto) In order to drive the plant into an ICC event an incredible number of systems must fail. ICC events are trained in requailification scenarios. Already licensed operators are more accepting of the extraordinary conditions required to be simulated in order to create an ICC event.

Comment		Resolution
7	Assignment of events to operator positions is incorrect on several events. (Example – can't have the ATC receive N and R for same event; can't be given credit for an event with no operator actions (auto start of EDG))	The two specific examples have been corrected. All scenarios have been reviewed for similar errors and corrected when identified.
8	Scenario 3 – can't credit both N and C for EH pump. Since failed pump wasn't in service, then event is just a Normal evolution.	The EH pump failing to achieve normal pressure has been removed from the scenario. The pump swap will be a normal event without the component malfunction.
9	Identify all Tech Specs and action statement(s) in the D-2 for each TS call	All Tech Spec and action statements are added in the D-2.
10	Critical Tasks must be carefully defined, including time limits where applicable.	All critical task acceptance criteria are added to the scenarios with specific and measurable standards.
11	ES-301-5, Transient and Event Checklist and ES-301-6, Competencies Checklist are filled out incorrectly.	Form ES-301-5 and ES-301-6 have been corrected based upon input from the NRC examiner.
12	Is there a DRAFT schedule for scenarios?	A draft schedule has been sent to the NRC.
13	If not low power this year, then expect one next year (< 5% power)	This comment is noted for the next U1 license exam writing team.
14	Several Event Descriptions include more than one event	This was discussed with the NRC examiner. Some events are so closely related that one malfunction results in associated events.
15	Take "narratives" out of the D-1's	This was discussed with the NRC examiner and determined narratives would stay in the D-1's.
16	RPS failed on Scenario 1 and 3. Make one where DSS must be actuated.	Scenario 3 was modified to include the C03 manual reactor trip push button also failing requiring the operator to complete a reactor trip using the shunt trip push buttons. DSS on a B&W plant cannot be manually actuated. It is strictly an automatic feature.
17	Scenario 3 – what is a "winging failure" of the heater drain pump?	This is a typographical error that has been correct.

Comment		Resolution
18	Scenario 1 – take component failures (ULD and RPS) out of the Initial Conditions.	This was discussed with the examiner and he agreed that the initial condition is for the simulator operator. The crew receives only the turnover information.
19	IA compressor OOS is listed as Initial Condition <u>and</u> Turnover in all three scenarios. Make it an IC and make all scenarios consistent.	This was discussed with the examiner and he agreed that the initial condition is for the simulator operator. The crew receives only the turnover information. The IA Compressor OOS will be a part of each scenario's IC.
20	Scenario 2 – take EFIC failed out of Initial Conditions.	This was discussed with the examiner and he agreed that the initial condition is for the simulator operator. The crew receives only the turnover information.
21	How discriminating is making the Initial Conditions for all three scenarios the same?	The initial conditions have been modified to be more different. Two scenarios are at 100% with one at 80%. One has the site under a severe thunderstorm warning. One has a 500KV transmission line OOS. All three have an IA compressor OOS. The IA compressor OOS has no impact on any of the scenarios.