

## DRAFT OUTLINE COMMENTS

Facility: PVNGS

First Exam Date: 3/2012

Written Exam Outline (9/21/2011)		
Comment		Resolution
1	The SRO-only outline does not reflect the changes described in the ES-401-4 Rejected KAs document.	This will be on Rev 1 of the 401-2.
2	RO Tier 1 / Group 2: CE/A11 RCS Overcooling - PTS, "EK3.1" should read "AK3.1"	The error was corrected and subsequently this KA was rejected.
3	RO Tier 1 / Group 2: CE/A13 Natural Circ., <u>EK1.2</u> - Normal, abnormal and emergency operating procedures associated with (Natural <u>Selection</u> Operations). SHOULD READ " <u>AK1.2</u> - Normal, abnormal and emergency operating procedures associated with (Natural <u>Circulation</u> Operations)	This is Correct and will be changed to reflect AK1.2 Natural Circulation Operations.
4		
5		

Administrative JPM Outline (11/9/11)		
Comment		Resolution
1	Label the JPMs A-1 through A-9 starting with the RO JPMs.	Done
2		

Control Room / In-Plant System JPM Outline (11/9/11)		
Comment		Resolution
1	JPM e., should "RDT" read "RTD"?	No, RDT is correct for Reactor Drain Tank.
2	Label the JPMs S-1, S-2, P-1, etc., and make the JPMs line up between RO, SRO-I, and SRO-U so that it's easily identified which ones are common among all applicants.	Done as much as practical.
3	JPM "g" on the SRO-I outline (JPM "c" on SRO-U) does not appear on the RO outline. Clarify if this is intentional or not.	This is correct. The 'g' JPM on the SRO-I will not be done by the ROs.

<b>Simulator Scenario Outline Comments</b> (11/9/11)		
Comment		Resolution
1	On final D-1s, include the chart of "Target Quantity Attributes" found at the bottom of Form ES-301-4 as an examiner's aid.	Done
2	Scenario 1, should there be a Critical Task to commence cooldown prior to lifting the SG Safety Valve?	No, SBCS is available so this would not happen without a SBCS failure.
3	Scenario 2 Event 5 could be a Component Malfunction instead of Normal Evolution.	Changed (also changed on 301-5)
4	Scenario 2 Events 8 and 9, the word "CRITICAL" is misspelled.	Fixed
5	Scenario 4 Event 8 is a Major transient.	Changed to a major (also changed on 301-5)
6	When the D-2s are generated, for each scenario, include a one page synopsis of how each event will play out.	Done

<b>General Outline Comments</b> (9/21/11)		
1	Need to send the original copy of draft outline quality checklist ES-201-2 (may send it with the draft op test outline)	Received with Operating Test outline submittal.
2	What plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections?	<p>Aux Feed and Class electrical power issues are covered on the exam. These are 2 major inputs to PRA.</p> <p>Will add to comment section of appropriate question.</p> <p>RO#s 12,14,15,48,49</p>
3	Any recent OE included (plant specific or other)?	<p>Yes. Previous site specific OE has been incorporated into written and operating exams.</p> <p>Will add to comment section of appropriate question.</p> <p>RO#s 18,50,51</p>
4	Are differences between units being tested on?	<p>Yes, Unit differences are slight at PVNGS but a sampling of topics will address this.</p> <p>Will add to comment section of appropriate question.</p> <p>RO# 14</p>

5	Are there any operationally-important, site-specific systems/evolutions which are not included on form ES-401-2 that should be?	No, PVNGS has not added any systems or evolutions that meet this criterion.
6	Outline Generation Methodology: Describe how the program functions, how it ensures a random and systematic sampling, and how the K/A Suppression List is incorporated into it. Also, the document provided describes the 2010 exam, not the 2012 exam.	This is the Westinghouse KA exam generator program. The suppression list is incorporated by manually deselecting the KA from the programs database as a suppressed KA. The list of suppressed KAs was generated by the Westinghouse program and sent as such.  Less than 2.5 has been evaluated per our previous correspondence.  See attached documentation provided by Westinghouse.

## XXI. Random Selection Methodology

For the random selection of both the RO and SRO exam, the random number generator is seeded with the ticks from the system clock. This helps to ensure a different seed every time an exam outline is generated.

### Random Selection: RO Exam

Create two identical lists of systems for Tier, ROGroup, Category

Generate Random Number Between 1 and number of systems in the list.

Begin Loop

1) Look for available system number in first system list in the same row as the random number. If system number is found, use it and blank out entry in first list. If a blank is found at that row number, then try to find system number in second list at same row number. If found, then use it and blank out entry in second list. If not found in second list, then generate another random number and go back to first list and look for new system.

2) Select the system in the same row as the random number.

3) Create list of KAs for Tier, ROGroup, and randomly selected system number.

4) Generate a random number between 1 and number of KAs in KA list.

5) Pick KA from KA list at the row designated by the random number.

6) Check to see if KA is in master list of KAs already selected. If it is in master list, then select another random number and select KA at that row number. If not selected, then add to master KA list.

7) Add KA To RO outline.

Loop Back (until number of required KAs have been selected for specific tier, group, and category)

Go back to top of list until all tiers, groups, and categories have been cycled through.

36

### Random Selection: SRO Exam

25 SRO Only KAs are first selected for the following categories:

Tier 1: A2 and G (10 KAs are selected)

Tier 2 A2, G, and Fuel Handling KAs (8 KAs are selected)

Tier 3 (7 KAs are selected, at least one for each category)

System lists are generated based upon the following criteria:

Tier, SROGroup, Category, SROOnly = True in tblCFRs

Then 25 KAs are selected based upon systems selected with the following criteria:

Tier, SROGroup, Category

Select Tier, Group, and Category to add KAs to.

Generate Random Number Between 1 and number of systems in the list.

Begin Loop

1. Look for available system number in first system list in the same row as the random number. If system number is found, use it and blank out entry in first list. If a blank is found at that row number, then try to find system number in second list at same row number. If found, then use it and blank out entry in second list. If not found in second list, then generate another random number and go back to first list and look for new system.

2. Select the system in the same row as the random number.

3. Create list of KAs for Tier, SROGroup, and randomly selected system number.

4. Generate a random number between 1 and number of KAs in KA list.

5. Pick KA from KA list at the row designated by the random number.

6. Check to see if KA is in master list of KAs already selected. If it is in master list, then select another random number and select KA at that row number. If not selected, then add to master KA list.

7. Add KA To SRO outline.

Loop Back (until number of required KAs have been selected for specific tier, group, and category)

Go back to top of list until all tiers, groups, and categories have been cycled through.