INTEGRATED OUTLINE COMMENTS

Facility: GG-2017-12 First Exam Date: December 4, 2017

General Comments (August 10, 2017)		
	Comment	**Resolution**
1	Integrated outline submittal (dtd 7-5-2017) was signed by Acting-Regulatory Assurance Mgr who is not on the Exam Security Agreement.	Resolved. Submittal cover letter was signed by Management member but did not have access to exam materials. Future cover letters will be signed by members of Exam Team only.
2	ES-301, D.1.f requires • facility-specific and industry-generic operating experience be incorporated into the op test whenever possible. • PRA and IPE be used to evaluate dominant accident sequences to determine if they are suitable for testing • PRA and IPE be used to identify risk-important operator actions that may be appropriate for evaluation on the op test. Were these requirements met, and how are they documented on JPMs? While this paragraph is specific to the op test, the same could apply to written exam questions to some extent. If a question addresses the spirit of D.1.f, is the reference to Op E or PRA/IPE documented in the written exam question worksheet?	PRA and IPE information to be added to scenarios. PRA and IPE information has been added to JPM Summary document and JPMs themselves. 5 JPMs are associated with PRA systems or actions and one JPM is associated with plant Operating Experience. Written exam questions will be reviewed and PRA/IPE will be denoted.
3	Does GGNS plan to freeze procedures for the purposes of operator training and examination? Is so, the details of, and the basis for, the freeze proposal needs to be discussed with Chief Examiner IAW ES-201, C.2.c and Attachment 2.	Procedure freeze will be following Operations Validation on or about September 27, 2017. Forms will be sent to Chief Examiner when freeze is executed. Procedures changed after freeze will be tracked and reviewed with applicants post NRC Exam as a part of GAP training.
4	Has GGNS developed Exam Validation and Admin week schedules that includes JPMs and scenarios?	Submitted with comment resolution

General Comments (August 10, 2017)		
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5	Has it been determined whether or not any of the applicants will require a waiver/excusal/deferment to sit the NRC exam? At the initial facility contact meeting, it was discussed that GGNS would identify waivers by Integrated Outline submittal.	1 applicant Malcolm Smith will have a waiver for GFES > 2 years, Station will administer an update GFE randomly selected prior to application.
6	Short summary of each JPM task was not provided with the Integrated Outline submittal as previously discussed with licensee. Summaries are very helpful in evaluating suitability of JPMs prior to development effort, especially for alternate path and modified JPMs. Review feedback with Chief Examiner during outline comment discussion. Ensure key critical steps are identified in the summary, especially for Alt Path JPMs.	JPM Summary was provided on 7-13-2017, directly after request. Discussed comments with Chief Examiner and have added information to summary to clarify JPMs.

Written Exam Outline Comments (August 10, 2017)		
	Comment	**Resolution**
1	NRC generated Written Exam outline.	N/A
2	Form ES-401-4 file name contains “Rev 0” but the document does not contain the revision number. Put the revision number on the form itself (applicable to all forms, not just the 401-4).	Revision number added to forms
3	Revise form ES-401-4 per sample provided for Proposed Exam submittal. (GG-2017-12-ES-401-4 Record of Rejected KAs_Rev 1-btl.docx)	Updated form submitted with Comment resolution

4	ES-401-4: • Explanation to reselect 295016 from AA2.01 to AA2.02 states “Also, having an ATWS during a Control Room Abandonment is outside our design bases.” Need to explain comment as ATWS is not inferred by initial KA.	At GGNS we are unable to determine Reactor Power at the Remote Shutdown Panel or external from the main control room. The ability to determine or interpret reactor power for control room abandonment would infer ATWS which is outside our design bases. Explanation was changed and K/A rejection approved.
5	ES-401-4: • Explanation to reselect 295027 from 2.1.19 to 2.2.25: not clear on use of reference materials if indication is only Control Room panel.	At GGNS the use of plant computers to evaluate Containment Temperatures is limited due to the computer indication is an average of several instruments. Individual instrument indications are on the main Control Room panels. These indications are used more readily by ROs to determine the validity of RPV water level instrumentation by using Caution 1 of EOPs. Caution 1 uses a table and specific containment temperature instruments to determine RPV water level instrumentation validity. Explanation was changed and K/A rejection approved.
6	ES-401-4: • Explanation to reselect 295037 from EK3.08 to EK3.01: briefly explain how GGNS responds to ATWS conditions if not “circuitry.”	After discussion and clarification with lead evaluator the K/A rejection was approved.
7	ES-401-4: • Explanation to reselect 262002 from A1.02 to A4.01: a KA with IR of 2.4 is not automatically invalid if there is a site-specific reason to include it in the sample. Was the KA evaluated by GGNS and a determination made that it does not have a site-specific IR of 2.5 or higher?	Operation’s Representative reviewed the other KA and determined that the importance factor is below a 2.5, therefore A4 was randomly selected. Explanation was changed and K/A rejection approved.
8	ES-401-4: • Explanation to reselect 234000 from A4.02 to A4.01: the KA is to manually operate and/**or monitor** in the control room – is there a tie between Fuel Handling Equipment and the Neutron Monitoring system in the Control Room (other than “monitoring”)?	At GGNS the CRD system is considered to be the hydraulic and mechanism portion. The Control Rod blade is part of the Reactor Vessel Internal system, therefore, there is no tie between Fuel Handling Equipment and the CRD system at GGNS. Explanation was changed and K/A rejection approved.

Administrative JPM Outline Comments (August 10, 2017)		
	Comment	**Resolution**
1	Revise both form ES-301-1's per sample provided for Proposed Exam submittal. (GG-2017-12 - ES-301-1_RO Rev 1-btl.docx)	Updated revision of ES-301-1 for RO and SRO submitted with Comment Resolution
2	Ensure JPM Summary details (titles) match the form ES-301-1. Consider putting JPM Type Codes at the end of each JPM summary.	Added Type Codes to JPM Summary document
3	For Modified JPMs (AR2, AS1, AS4) – ensure a copy of original JPM is included in Proposed Exam submittal.	Original JPMs will be submitted with Modified JPMs
4	For RA2 – JPM Summary identifies AC Line Surveillance while 301-1 identifies AC/DC. Which is correct? Ensure JPM Summary details match the form ES-301-1.	Title of surveillance is AC/DC Lineup Surveillance. JPM will only address the AC portion of the Lineup since it deals with Tech Spec Action for degraded AC sources. Changed all titles of JPMs to AC Lineup Surveillance.
5	For RA2 – from JPM Summary, task appears to have LOD=1. Also, what is the frequency of performance of this surveillance? Is there any overlap with scenarios?	There is no overlap between JPM and scenarios. Scenarios will identify a need to perform surveillance. The JPM performs the surveillance which involves indications on multiple panels.
6	For RA3 – How are drawings obtained at GGNS? Full-size paper copies or electronic access? How many drawings are required to complete this JPM?	Copies of C size drawings will be available for applicants to request. Additional drawings will be available on stick files and reference library. Three drawings are required to complete the JPM (2 P&ID and 1 Electrical Drawing)
7	For SA1 – will this JPM be performed using laptop program?	Will use the Computer on the Control Room Supervisor Desk or a separate laptop with program installed.
8	For SA2 – how many discrepancies are included and are they more than LOD=1? Is the JPM based on OE?	Number of discrepancies has not been determined as JPM is currently unwritten.
9	For SA3 – how does this JPM test SRO knowledge? During what previous NRC exam was this given?	JPM tests skill of SROs to review relay affects both on plant operation and Tech Specs. JPM used in May 2017 SRO Upgrade class. Randomly selected.

10	For SA5 – the summary description is too general and lacks sufficient information for a quality/applicability review.	Time Critical JPM testing applicant ability to perform duties of Emergency Director for Emergency Plan EAL determination. EAL has not been determined.

Control Room / In-Plant System JPM Outline Comments (August 10, 2017)		
	Comment	**Resolution**
1	Revise both form ES-301-2's per sample provided for Proposed Exam submittal. (GG-2017-12 - ES-301-2_RO Rev 1-btl.docx)	Updated revision of ES-301-2 for RO and SRO submitted with Comment Resolution
2	Do any of the JPMs include Time Critical Operator Actions? Does GGNS have a program that identifies these actions?	None of the System JPMs are time critical. Time Critical Operator Actions are identified in Operations procedure 02-S-01-44.
3	Do any JPMs include risk-significant operator actions? Does GGNS have a program that identifies these actions?	Multiple JPMs have actions that are identified in the Station PRA for Core Damage Frequency. The JPMs have the PRA identified in the front of the JPM. The JPM Summary identifies which JPMs are associated with PRA and Station Operating Experience. Also covered by 02-S-01-44, Time Critical Actions.
4	Form ES-301-2 (RO) contains a Type Code of "P" for JPM P2 – but the form for SRO-I does not. Was JPM P2 used on previous 2 NRC exams? Update appropriate form.	JPM P2 was used on the 2014 NRC Exam which had RO applicants. The previous 2 NRC exams for SRO candidates did not include the 2014 exam. (2015 and May 2017) The May 2017 had no RO applicants.
5	Given 9 JPMs were Direct from bank (maximum allowed) – how large is the JPM bank at GGNS?	The standard GGNS JPM bank has 196 JPMs and there are additional JPMs contained in the NRC JPM bank that have not been transferred.
6	Do not any other JPMs (besides S3) qualify as "Low-Power/Shutdown"? Having only the minimum number of "L" JPMs contains some risk. Discuss with Chief Examiner.	Identified additional JPMs that are performed during conditions for which the plant would have been scrammed or during startup conditions.
7	Neither of the NEW JPMs are Alt Path – per form ES-301-2, at least one NEW or MOD JPMs must be Alt Path.	Changed one of the alternate path JPMs to modified and changed actions in the JPM.
8	For all JPMs identified as "P" – identify the NRC exam they were used on. Where all lessons learned from previous use incorporated into current revision?	JPMs used in previous 2 NRC exams are identified in the JPM and in the JPM Summary.
9	Ensure JPM Task Standards match-up with Critical Steps.	done

Simulator Scenario Outline Comments (August 10, 2017)		
	Comment	**Resolution**
1	All scenario D-1s have in the Event Type blocks an "A (CREW)" – apparently this is an identification for the crew using an AOP? Discuss with Chief Examiner.	Discussed with Chief Examiner. Designation is for crew use of AOPs.
2	In Scenario Activities (summary), it would be helpful to add name of the event. These titles will be used on D-2s in Proposed Exam submittal.	Titles were added to Event summaries.
3	All Critical Tasks (CTs) must have as references licensing bases documents and specific procedures identified for all required operator actions and performance limits.	Critical Tasks are referenced to BWR Owners' Group EPG/SAGs steps and site specific Emergency Procedure Basis procedure.
4	If possible, provide the Chief Examiner an electronic copy of the BWR Owners Group Appendix for Critical Tasks.	Provided Chief Examiner with electronic copy of BWR Owners' Group EPGs/SAGs.
5	OE from multiple NRC exams in Region IV: All Tech Spec entries **must** be validated by Operations management (Shift Manager qualified individual).	Tech Spec entries for all scenarios have been validated by the Operations Representative, who is Shift Manager qualified.
6	Forms ES-301-5, Transient and Event Checklist, and ES-301-6, Competencies Checklist, need to have a revision number in header or footer (Rev 0)	Revision number added to Forms ES-301-5, Transient and Event Checklist, and ES-301-6, Competencies Checklist.
7	Review each scenario from the perspective of leading the applicants before Critical Tasks. Example: Scenario 3 – there is a Division 2 inadvertent actuation. The applicants will implement procedure and verify the actions. The Critical Task is to manually actuate Div 1 when it fails to actuate – has the crew been cued for this action?	Discussed comment with Chief Examiner. Verified that the actions of the applicant are different. One event requires the applicant to implement procedure to secure equipment actuated by the spurious ECCS initiation. The Critical Task is to recognize that one division of ECCS did not actuate when the initiation signal is present and take action to manually initiate the respective division of ECCS.

Simulator Scenario Outline Comments (August 10, 2017)		
	Comment	**Resolution**
8	All scenario CT's – need to verify they are distinctly measurable by examiners with sufficient guidance provided in the D-2's. Also need to ensure each CT provides sufficient challenges to the applicants such that competence can be determined.	Verified that all Critical Tasks are measurable by the examiners. Operations Representative has reviewed the CTs and concurs that the CTs are sufficiently challenging to determine competency for the applicants. Scenarios are designed that the applicants can fail the CTs if action is not taken.
	Scenario 1: Is CT-1 a Critical Task given the crew can essentially operate indefinitely is the condition?	Discussed with Chief Examiner. Comment resolved. CT-1 is a valid CT.
	Scenario 1: With 3 failures to isolate a system on a signal, are we leading the crew to check more frequently for the failure of isolation before it is important to recognize in CT-3?	Discussed with Chief Examiner. Recognition of failure of RCIC to isolate is not required for CT-3. CT-3 required recognition of two areas exceeding their max safe temperature levels. Even if the candidate recognizes the failure to isolate of RCIC, the CT is still valid because the leak cannot be isolated due to power loss of the isolation valves. Additionally, no applicant action is credited for the failure of RCIC to isolate.
	Scenario 1: Event 5 - What if the applicant fails to isolate? Will this lead to a turbine trip? Will this affect the next event?	Failure of the candidate fails to isolate the low pressure heater string will not cause a turbine trip, Reactor power will rise due to the loss of feedwater heating, but will not reach reactor scram setpoints.
	Scenario 1: Event 7 - Is this a Critical Task? The containment isn't threatened, the fuel is threatened and they can continue to depressurize. Depending on how fast they insert control rods, they could get all rods in, before CT-3. How many control rods have to be inserted vs how long to reach the two max safes?	Scenario was revised to remove the fuel failure and use temperatures exceeding their max safe values, resulting from the RCIC steam leak. CT-3 is based on a required emergency depressurization when two areas reach max safe temperature levels. Temperature levels are due to steam leak and will not be affected by the insertion of control rods.
	Scenario 1: Event 8 - HPCS starts on low level, however, is there any value to the action? HPCS will have been terminated in CT-3 so you have a diesel running, with no cooling water, but no load either. What is the significance of failing to secure the diesel?	Allowing the HPCS Diesel to run with no cooling water, even with no load, will result in significant damage to the engine and potential fire.

Simulator Scenario Outline Comments (August 10, 2017)		
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	Scenario 2: Are Events 3 through 6 in the same procedure? What value is provided to examiners in having the SRO use the same ONEP in 4 successive events? Is there not a wide variety of I/C failures available that would require the SRO applicant to demonstrate knowledge of more than one ONEP? Is this same issue in other scenarios? (multiple and/or sequential events from the same procedure)	The referenced procedure contains multiple sections for different failures of a system. SRO will have to implement different sections of the procedure for most of the events. Per discussion with Chief Examiner, event sequence of the scenario was modified to required SRO to implement a different procedure between the events. Reviewed remaining scenarios for this issue and found no other instances where the same procedure is used in sequential.
	Scenario 2: Event 7 - CT-1, what is the bases for the five groups being enough? This issue is in multiple scenarios.	The bases for the five groups in CT-1 is to reduce the number of repetitions required for inserting all control rods. Per discussion with Chief Examiner, the reference to five groups of control rods was removed from the CTs and placed in the D-2s as a cue to the examiners to allow all control rods to be fully inserted during the scenario after they have observed applicant actions to scram and drive control rods.
	Scenario 2: Event 3 - No mention of accumulator faults due to the loss of a CRD pump. How frequently do these come in on the simulator? Is it an extra TS call? Will it extend the scenario timeline past what is expected?	The loss of a CRD pump will not cause a CRD accumulator fault in the simulator for approximately 10 minutes, based on simulation of the accumulator check valves. Applicants should have the standby CRD pump restarted before this time.
	Scenario 2: For CT-1, does EOP require both SLC and rod insertion? Not sure the AND/OR statement is appropriate here. Is description meant to mean both? Is this in other scenarios?	EOP requires both SLC and control rod insertion if reactor power is > 5%. CT-1 of scenario 2 has been edited to remove “OR” from the CT statement. EOP does not require SLC if power is < 5%, so CT-1 in scenario 1 does not have SLC as part of the statement.
	Scenario 2: For CT-3, what is the lower limit for RPV water level that would constitute applicant failure?	Failure criteria for CT-3 in Scenario 2 is failure to restore Condensate/Feedwater injection before RPV water level lowers to less than -191” Compensated Fuel Zone, with concurrence from Operations Representative.

Simulator Scenario Outline Comments (August 10, 2017)		
	Comment	**Resolution**
	Scenario 2: Shouldn't this scenario also have a CT for inhibiting ADS (like Scenario 3, CT-1) since RPV water level is intentionally lowered due to ATWS >5%?	CT-2 added to Scenario 2 for inhibiting ADS.
	Scenario 3: Another example of cueing the applicants - first an inadvertent ECCS, followed by the failure of ECCS to actuate.	See Scenario Outline Comment #7
	Scenario 3: Event 6, Respond to a failure of Division 1 ECCS to automatically initiate (CT-3) – is this a well-defined Critical Task? Doe it only apply to Div 1 ECCS? What if RPV level is restored with something else?	CT-3 is a valid task for this scenario. Only Division 1 ECCS systems are available for injection into the RPV due to the failures in the scenario and applicant will be required to manually start Division 1 ECCS pumps and direct manual opening of associated injection valves from locations outside the Control Room.
	Scenario 3: CT-3 – Is HPCS not available to restore level?	HPCS pump trips when it receives an initiation signal in Scenario 3.
	Scenario 4: Review comments for Scenario 1-3 events and Critical Tasks and ensure identified discrepancies are not repeated in Scenario 4.	Scenario 4 has been reviewed to ensure identified discrepancies are not repeated.