Tier/Group	Randomly Selected K/A	Reason for Rejection
SYSTEM APPLICABILITY SCREENING		
2/1	206000	HPCI system does not exist at a BWR-6
2/1	207000	Isolation Condensers do not exist at a BWR-6
2/2	201002	RMCS is replaced with RCIS in a BWR-6
2/2	201004	RSCS is replaced with RCIS in a BWR-6
2/2	201006	RWM is replaced with RCIS in a BWR-6
2/2	214000	RPIS is replaced with RCIS in a BWR-6
2/2	215002	RBM is replaced with RCIS in a BWR-6
2/2	219000	RHR/LPCI Torus Cooling Mode is substituted by Suppression Pool Cooling in the BWR-6 Mark III Containment
2/2	230000	RHR/LPCI Torus/Pool Spray Mode is not a system installed at GGNS
2/3	215001	Traversing In-Core Probe is operated by Reactor Engineers at GGNS; Operators only hang tags on the system. Operations Management deems this system would have no discriminatory value for an Operator License Examination at GGNS.
RANDOM SYSTEM ELIMINATION		
1/2	295012	High Drywell Temperature randomly selected for elimination for tier totals
1/2	295018	Partial or Total Loss of CCW randomly selected for elimination for tier totals
1/2	295029	High Suppression Pool Water Level randomly selected for elimination for tier totals
2/2	215003	Intermediate Range Monitors randomly selected for elimination for tier totals
2/2	239003	MSIV Leakage Control randomly selected for elimination for tier totals
2/2	245000	Main Turbine Generator and Auxiliaries randomly selected for elimination for tier totals
2/2	263000	DC Electrical Distribution randomly selected for elimination for tier totals
2/2	400000	Component Cooling Water randomly selected for elimination for tier totals
2/3	201003	Control Rod and Drive Mechanism randomly selected for elimination for tier totals
2/3	288000	Plant Ventilation randomly selected for elimination for tier totals
2/3	290002	Reactor Vessel Internals randomly selected for elimination for tier totals

Tier/Group	Randomly Selected K/A	Reason for Rejection
K/A STATEMENT ISSUES		
2	Topic K4	On the initial K/A topic selection Tier 2 Topic K4 only had one topic randomly selected. NUREG 1021 requires a minimum of 2 systems for the topic. Tokens 1 – 11 were redrawn. Token #9 was drawn indicating Topic A3. Topic A3 had 4 systems randomly selected. These four were sequentially numbered and a redraw of tokens 1 – 4 was done. Token #1 was drawn. This was system 209001 LPCS and was moved to topic K4.
2/1	209002 Generic 2.1.3	HPCS random selection was Generic 2.1.3 Shift Turnover. This is not applicable for a systems question concerning HPCS. Randomly reselected to Generic topic 2.1.10.
1/2	295001 Generic 2.2.32	Partial or Complete Loss of Forced Core Flow Circulation random selection was Generic 2.2.32 Effects on Core Configuration. This has no effect on Core Configuration at GGNS. Randomly reselected to Generic topic 2.2.4. GGNS is not a multiunit. Randomly reselected to Generic topic 2.2.34.
1/1	295026 Generic 2.3.6	High Suppression Pool Temperature random selection was 2.3.6 Release Limits. This generic is not applicable to High Suppression Pool Temperature. Randomly reselected to Generic 2.3.2.
1/1	295016 AK1	Control Room Abandonment random selection was AK1 which has no topics. Randomly reselected to topic AA1.
1/2	295019 AK1	Partial or Total Loss of Instrument Air random selection was AK1 which has no topics. Randomly reselected to topic AK3.
2/1	211000 A1.05	SLC random selection was A1.05 Pump amps. GGNS has no indication of pump amps. Randomly reselected to topic A1.04.
2/1	241000 K2	Reactor / Turbine Pressure Regulator random selection was K2 which has no statements with a value of 2.5 or greater applicable to GGNS. Randomly reselected topic K4.
2/2	219000 K5.03	RHR/LPCI Pool Cooling random selection was K5.03 pressure measurement. This is N/A for GGNS RHR Suppression Pool Cooling System. Randomly reselected K5.01 system venting.
2/2	259001 K2	Reactor Feedwater random selection was K2 which had no statements with a value of 2.5 or greater applicable to GGNS. Randomly reselected to topic K6.

Tier/Group	Randomly Selected K/A	Reason for Rejection
2	K2	With the changes to 241000 and 259001 Tier 2 topic K2 dropped from 3 random selections to 1. The next two systems (UPS and Offgas had no K2 statements 2.5 or greater. Random selection moved to the next system having K2 topics Radiation Monitoring and moved K3 to K2 to obtain two systems for topic K2 in Tier 2.
1/2	295037 Generic 2.4.39	Scram Conditions Present and Power Above APRM Downscale or Unknown random selection was Generic 2.4.39 RO Responsibilities regarding Emergency Plan. At GGNS SROs implement the Emergency Plan and ROs follow normal directions of the SROs. Changed to 2.4.40 SRO Responsibilities regarding Emergency Plan.
1/2	295028 EA2.02	High Drywell Temperature random selection was EA2.02 Reactor Pressure. Reactor pressure indication at GGNS is minimally influenced by high drywell temperature. High Drywell Temperature has a more significant influence on Reactor Water Level indications during accident conditions. Changed to EA2.03 Reactor Water Level with the same importance value.
2/3	256000 A2.12	Reactor Condensate random selection was A2.12 loss of equipment component cooling water. This selection is similar to the selection for Reactor Feedwater and has the same actions. Changed Reactor Condensate and randomly reselected A215 abnormal water quality.
3	2.1.30 and 2.1.31	For Conduct of Operations random selection selected 2.1.30 and 2.1.31 dealing with the locations and operating of components and indications. These K/As are better tested in the Operating Test Dynamic Simulator exam and System JPMs. Randomly reselected to 2.1.22 and 2.1.9.
3	2.4.48	For Emergency Procedures and Emergency Plan random selection was 2.4.48 dealing with the ability to interpret Control Room indications is already being tested as a part of the Dynamic Simulator Operating exam. Randomly reselected to 2.4.43.
1/1	295025 EK2.08	High Reactor Pressure random selection was EK2.08 Reactor/Turbine pressure regulating system interrelationship. This topic is already being tested in depth with the random selection for Abnormal event of SCRAM 295006 AA1.03. Randomly reselected to EK2.07. This topic was already covered on the second question for 295025 via topic EK3.05. Randomly reselected again to EK2.04 ATWS ARI/RPT.

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

PROCEDURES AND STANDARDS

ENTERGY NUCLEAR SOUTH

NUCLEAR MANAGEMENT MANUAL TQ-105 REVISION 2, NRC INITIAL LICENSE EXAMINATION DEVELOPMENT, VALIDATION, AND ADMINISTRATION

10 CFR 55, OPERATOR LICENSES SECTIONS 41, 43, 45

NUREG 1021 REVISION 8 SUPPLEMENT 1, OPERATOR LICENSING EXAMINATION STANDARDS FOR POWER REACTORS

RANDOM SELECTION PER ES-401 ATTACHMENT 1

NUREG 1123 REVISION 2, KNOWLEDGE AND ABILITIES CATALOG FOR NUCLEAR POWER PLANT OPERATORS: BOILING WATER REACTORS

NUREG 1123 Revision 2 was suppressed for systems not applicable to GGNS and K/A statements that were less than 2.5 in importance.

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

JUSTIFICATIONS FOR DELETIONS ON WRITTEN EXAMINATION OUTLINE

GENERAL COMMENTS

Generics selected in Tiers 1 and 2 were further selected via 1 – 4 draw and the total number of topics in the Generic 1 – 4 category were selected.

Abilities that were hit on the random method of topic selection for the Generic Knowledge and Abilities that would be better examined in the Operating Examination were replaced with alternate random selections.

Knowledge and Abilities which were hit on the random selection which had Importance values < 2.5 were replaced with alternate random selections.

Knowledge and Abilities that were hit on the random selection which NUREG 1123 listed as NONE were replaced with alternate topics for the System or Evolution.

NUREG 1021 Rev 8 Supp 1 ES-401 Att. 1 does not specify a question breakdown for the Plant Wide Generics so below describes the breakdown used for Generics for GGNS.

Plant Generics Knowledge and Abilities

Based on 127 topic areas that apply to a single unit BWR.

			RO	SRO
Conduct of Operations	34 topics	= 27%	4	5
Equipment Control	32 topics	= 25%	3(2)	4
Radiation Control	11 topics	= 9%	1(2)	2
Emergency Procedures/Plan	50 topics	= 39%	5	6
TOTAL	127	100%	13	17

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

SYSTEMS DELETED
Systems which do not exist at GGNS.
Tier 2 Group 1

206000 High Pressure Core Injection (HPCI) - This system is not incorporated into the BWR 6 design.

207000 Isolation (Emergency) Condenser - This system is not incorporated into the BWR 6 design. This was replaced by the Mark III Containment Suppression Pool.

Tier 2 Group 2

201002 Reactor Manual Control System - This system is not incorporated into the BWR-6 design. The functions of this system are incorporated into the Rod Control and Information System.

201004 Rod Sequence Control System - This system is not incorporated into the BWR-6 design. The functions of this system are incorporated into the Rod Control and Information System.

201006 Rod Worth Minimizer System - This system is not incorporated into the BWR-6 design. The functions of this system are incorporated into the Rod Control and Information System.

214000 Rod Position Information System - This system is not incorporated into the BWR-6 design. The functions of this system are incorporated into the Rod Control and Information System.

215002 Rod Block Monitor System - This system is not incorporated into the BWR-6 design. The functions of this system are incorporated into the Rod Control and Information System.

219000 RHR/LPCI: **Torus** Cooling Mode - The BWR 6 Mark III Containment utilizes a Suppression Pool instead of a Torus. Topic included in Sample Plan is RHR/LPCI: Suppression Pool Cooling Mode.

230000 RHR/LPCI: Torus/Pool Spray Mode - This system is not incorporated into the BWR 6 Mark III Containment design.

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

Tier 2 Group 3

215001 Traversing In-Core Probe - This system is operated by Reactor Engineering at GGNS. Operations deems this system as having no discriminatory value for an operator license examination at GGNS.

Tier 1 Group 1 has an allotment of 26 questions. For GGNS there are 20 applicable Emergency and Abnormal events. Requires 6 events to have 2 questions. The following events were randomly selected to receive 2 questions:

295015 Incomplete SCRAM
295017 High Off-site Release Rate
295025 High Reactor Pressure
295026 Suppression Pool High Water Temperature
295030 Low Suppression Pool Water Level
295031 Reactor Low Water Level

Tier 1 Group 2 has an allotment of 17 questions. For GGNS there are 20 applicable Emergency and Abnormal events. Requires elimination of 3 events. Random selection eliminated the following systems:

295012 High Drywell Temperature
295018 Partial or Total Loss of CCW
295029 High Suppression Pool Water Level

Tier 2 Group 1 has an allotment of 23 questions. For GGNS there are 22 applicable systems. Requires 1 system to have 2 questions. The following system was randomly selected to receive 2 questions:

262001 AC Electrical Distribution

Tier 2 Group 2 has an allotment of 13 questions. For GGNS there are 18 applicable systems. Requires elimination of 5 systems. Random selection eliminated the following systems:

215003 Intermediate Range Monitors
239003 MSIV Leakage Control
245000 Main Turbine Generator and Auxiliaries
263000 DC Electrical Distribution
400000 Component Cooling Water

Tier 2 Group 3 has an allotment of 4 questions. For GGNS there are 7 applicable systems. Requires elimination of 3 systems. Random selection eliminated the following systems:

201003 Control Rod and Drive Mechanism
288000 Plant Ventilation
290002 Reactor Vessel Internals

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

K/A Statement Issues

NUREG 1021 requires a minimum of two systems for the topic. No process is described in ES-401 Attachment 1 to reselect for a category that on random has less than two. On the initial K/A topic selection Tier 2 topic K4 only had one topic randomly selected. Tokens 1 – 11 were redrawn. Token # 9 was selected identifying A3. Topic A3 had four topics randomly selected. These four were sequentially numbered 1 – 4, and tokens 1 – 4 drawn. Token #1 was drawn. This system was 209001 LPCS to be moved to K4.

① 209002 HPCS - Random selection was Generic 2.1.3 Shift Turnover. This is not applicable for a systems question concerning HPCS. Randomly reselected to topic 2.1.10.

② 295001 Partial or Complete Loss of Forced Core Flow Circulation - Random selection was Generic 2.2.32 Effects on Core Configuration. This has no effect on Core Configuration at GGNS. Randomly reselected to 2.2.4. GGNS is not a multiunit. Randomly reselected to 2.2.34.

③ 295026 High Suppression Pool Temperature - Random selection was 2.3.6 Release Limits. This generic is not applicable to High Suppression Pool Temperature. Randomly reselected to 2.3.2.

④ 295016 Control Room Abandonment - Random selection was AK1 which has NONE. Randomly reselected to Topic AA1.

⑤ 295019 Partial or Total Loss of Instrument Air - Random selection was AK1 which has NONE. Randomly reselected to Topic AK3.

⑤ 211000 Standby Liquid Control - Random selection was A1.05 Pump Amps. GGNS has no indication of pump amps. Randomly reselected to Topic A1.04.

⑤ 241000 Reactor/Turbine Pressure Regulator - Random selection was K2 which had no statements with a value of 2.5 or greater. Randomly reselected to Topic K4.

⑤ 219000 RHR/LPCI Pool Cooling - Random selection was K5.03. This was pressure measurement. This is N/A for GGNS RHR Suppression Pool Cooling System. Randomly reselected K5.01 System Venting.

⑤ 259001 Reactor Feedwater System - Random selection was K2 which had no statements with a value of 2.5 or greater applicable to GGNS. Randomly reselected to Topic K6.

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

⑤ With the changes to 241000 and 259001, Tier 2 Topic K2 dropped from 3 random selections to 1. The next two systems (UPS and Offgas) following Reactor Feedwater had NO K2 statements 2.5 or greater. Random selection moved to the next system having K2 topics Radiation Monitoring and moved a K3 to K2 to obtain 2 questions from Tier 2 K2.

⑤ 295037 SCRAM Conditions Present and Power Above APRM Downscale or Unknown - Random selection was Generic 2.4.39 RO responsibilities regarding Emergency Plan. At GGNS SROs implement the Emergency Plan and ROs follow normal directions of the SROs. Changed to 2.4.40 SRO responsibilities regarding Emergency Plan.

⑤ 295028 High Drywell Temperature - Random selection was EA2.02 Reactor pressure. Reactor pressure indication at GGNS is minimally influenced by high drywell temperature. High Drywell temperature has a more significant influence on Reactor Water Level indications during accident conditions. Changed to EA2.03 Reactor Water Level with the same importance value.

⑤ 256000 Reactor Condensate - Random selection was A2.12 Loss of equipment component cooling water. This selection is similar to the selection for Reactor Feedwater. Changed Reactor Condensate and randomly reselected A2.15 abnormal water quality.

⑤ Generics - Random selections 2.1.30 and 2.1.31 for Conduct of Operations dealing with operation of components and locating and observing indications are better tested in the Operating test Dynamic Simulator and System JPMs. Randomly reselected to 2.1.22 and 2.1.9.

⑤ Generics - Random selection 2.4.48 for Emergency Procedures and Emergency Plan dealing with the ability to interpret Control Room indications is already being tested as a part of the Dynamic Simulator test. Randomly reselected to 2.4.43.

⑤ 295025 High Reactor Pressure - random selection was EK2.08 Reactor/Turbine pressure regulating system interrelationship. This topic is already being tested in depth with the random selection for Abnormal event of SCRAM 295006 AA1.03. Randomly reselected to EK2.07. This topic was already covered on the second question for 295025 via topic EK3.05. Randomly reselected again to EK2.04 ATWS ARI/RPT.

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

SCENARIOS HISTORY

Initial turnover data for each scenario is essentially the same at various power levels. This precludes anticipation based on initial equipment out of service.

RPS MG 'B' is out of service with RPS 'B' bus being supplied via the Alternate Source.
APRM 'H' is out of service
RHR 'C' Pump out of service
CCW 'B' Pump out of service
Scattered thundershowers in Louisiana

Scenario 1

Reactor at 34% power plant startup in progress.

- Shift Reactor Recirculation pump to fast speed.
- Take actions for a Control Rod drift.
- Respond to a trip of the remaining RPS Motor Generator.
- Take actions for a second Control Rod Drift.
- Control plant parameters and take actions for an ATWS without bypass valves and a failure of SLC.

Scenario 2

Reactor at 44% power, raising power with control rods.

- Startup 2nd Reactor Feed Pump.
- Raising power with control rods single control rod stuck cleared using ONEP.
- Take actions for a failure of an ESF Inverter and power panel.
- Respond and control plant systems following a momentary loss of the Grid (April 2003 GGNS Scram 107
- Feedwater rupture in Drywell with ability to close B21-F065B and restore Condensate and Feedwater. (Rupture on line used for RCIC)
- Failure of Division 2 to initiate on High Drywell Pressure
- Failure of HPCS Injection valve to open.

Scenario 3 (old 4)

Reactor at 45% power with a plant startup in progress

- *Raise Reactor power by withdrawing control rods.*
- *Start 2nd Circulating Water Pump.*
- *Respond to an EHC failure*
- *Take actions for a loss of Main Condenser Vacuum.*
- *Insert a manual reactor scram using Alternate Rod Insertion following a failure of automatic and manual RPS actuation and recognize the failure of two control rods to fully insert.*
- *Respond to steam leak outside Primary Containment with a failure to automatically isolate followed by a failure to completely isolate the main steam lines.*

Scenario 4 (Backup)(old 3)

Reactor at 100% power

Start Division 2 Diesel Generator and parallel with grid.
Take actions for a Low Pressure Feedwater Heater tube rupture
Take actions for a trip of the operating Diesel Generator.
Respond to a trip of Service Transformer 21 (no automatic response for bus 16AB Division 2 ESF)
Small break LOCA with degraded ECCS systems.

Scenarios 3 & 4 swapped per NRC request. 11/25/2003 telecon w/ M. Hare

Scenarios for August 2002

(Equipment out of service APRM 'H', RHR 'C' and TBCW 'C' were out of service in all scenarios.)

Two scenarios were used in 2002.

Scenario 1 for 2002

Reactor Power at 100%

Startup Standby Service Water 'B' for chemical addition.
Respond to a failure of a second APRM on the opposite division upscale
Low Pressure Feedwater Heater tube rupture and ONEP response.
Loss of Main Condenser Vacuum manual scram with ATWS no Main Steam Bypass valves.
Loss of SLC
Failure of Division 1 ECCS to manually initiate when called for requiring monitoring of ECCS with ATWS.

Scenario 2 for 2002

Reactor Power at 44%

Secure Diesel Generator 12 from service.
Raise reactor power by withdrawing control rods and take actions for a stuck control rod.
Respond to a loss of bus 12HE and trip of Recirculation Pump 'B'
Respond to a Feedwater line 'B' failure in the Drywell with a failure of Division 1 ECCS to automatically initiate. Reduced High Pressure injection capability.

U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR AND SENIOR OPERATOR LICENSE EXAMINATION
FEBRUARY 2004
GRAND GULF NUCLEAR STATION
NPF-29 DOCKET # 50-416
JUSTIFICATIONS

Administrative Job Performance Measures

Topic A.2 *Post Maintenance Operability K/A 2.2.21: 3.5*

Submitted was "Given a work order, determine the retest requirements for the component and enter into PASSPORT system."

Operations Shift personnel during development and validation determined this task due to the new nature of the computerized system is excessively complicated for an inexperienced SRO candidate to attempt during an examination process. Operations suggested another task dealing with maintenance operability that is an SRO function of determining and assigning the operability for a Condition Report and entering this into the Paperless Condition Reporting System (PCRS). This was discussed with the NRC Reviewer and accepted as a change to the Examination outline as submitted.

Pre-Maintenance Operability K/A 2.2.21: 3.5

New – "Given a Condition Report, determine the operability requirements for the component and enter into PCRS."