Facility: SUSQ Date of Examination: 12/10-18/07 OP 12/7/07 WRITTEN

Developed by: Written - Facility ☒ NRC ☐ // Operating - Facility ☒ NRC ☐

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	
-120	3. Facility contact briefed on security and other requirements (C.2.c)	
-120	4. Corporate notification letter sent (C.2.d)	
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	
{-75}	6. Integrated examination outline(s) due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, ES-D-1's, ES-401-1/2, ES-401-3, and ES-401-4, as applicable (C.1.e and f; C.3.d)	
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6, and any Form ES-201-3 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.l; C.2.g; ES-202)	
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.l; C.2.i; ES-202)	
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 4; ES-202, C.2.e; ES-204)	
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	

* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.
[Applies only] {Does not apply} to examinations prepared by the NRC.

Facility: **SSES** Date of Examination: **December 10, 2007 (Rev. 0)**

Item	Task Description	Initials a	Initials b*	Initials c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	FWO	RMP	
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	FWO	RMP	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	FWO	RMP	
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	FWO	RMP	
2. SIM	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications and major transients.	FWO	RMP	
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicant's audit test(s), and scenarios will not be repeated on subsequent days.	FWO	RMP	
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	FWO	RMP	
3. W/T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form. (2) task repetition from the last two NRC examinations is within the limits specified on the form. (3) no tasks are duplicated from the applicant's audit test(s). (4) the number of new or modified tasks meets or exceeds the minimums specified on the form. (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	FWO	RMP	
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form. (2) at least one task is new or significantly modified. (3) no more than one task is repeated from the last two NRC licensing examinations.	FWO	RMP	
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	FWO	RMP	
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	FWO	RMP	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	FWO	RMP	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	FWO	RMP	
	d. Check for duplication and overlap among exam sections.	FWO	RMP	
	e. Check the entire exam for balance of coverage.	FWO	RMP	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	FWO	RMP	

	Printed Name / Signature	Date
a. Author (1)	F. W. Ohlson / F. W. Ohlson	9/14/07
b. Facility Reviewer (*)	RM PEARL /	9/17/07
c. NRC Chief Examiner (#)	J. CARUSO /	10/4/07
d. NRC Supervisor	MARVIN D. SYKES / Marvin D.	10/5/07

Note:
Independent NRC reviewer initial items in Column "c", chief examiner concurrence required.

1 - Co-author on Written Exam, see attached facsimile.

1. Pre-Examination

Susquehanna 2007

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/10 & 12/17 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

*12/7/07 written

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 12/10-17/07. *From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Richard J. Brooks	Exam Coordinator/Lead Developer		3/28/07	(3)	1/9/08	
2.	Carol A. Burkhart	Data Base Administrator		3/28/07		1-9-08	
3.	Frederick G. Ohlson	Exam Coordinator		4/4/07	F. G. Ohlson	12/19/07	
4.	Chuck Hess	Exam Developer-LOR		5/7/07	(1)	1/5/08	
5.	Marvin Sutton	Unit Supervisor / Exam Development		06/05/07	(2)	1/9/08	
6.	Cleon Dodge	Simulator Lead		6/13/07		1/3/08	
7.	Scott Dieffenbacher	Simulator Support		6/15/07		12/19/07	
8.	John Capozzalli	Computer System Analyst Sim		6-16-07		1-4-08	
9.	Don Krupa	Simulator Support		7-8-07		12/20/07	
10	Vicky A. Horvat	Clerical Support		07/24/07		12/19/07	
11	R M Peal	Trng Mgr		9/14/07		12/19/07	
12	Robert Boesch	OPS Training Supv		9/27/07		12/19/07	
13	Stephen L. Huff	OPS		10/4/07		12/26/07	
14	Douglas F. Sitler	Unit Supervisor / Validation		10/4/07		12/26/07	
15	Joseph A. Brahus	PCE / Validation		10/4/07		12/26/07	

NOTES: (1) F. G. Ohlson for C. Hess per telecon

(2) F. G. Ohlson for D. Duffy per telecon

(3) F. G. Ohlson for R. Brooks per telecon

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/10-12/17 2007 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

12/7/07 written

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 12/10-12/17/2007. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC. * 12/7/07 written 12/10/07, 12/17/07 operating exam

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Robert P. Bingman	Unit Supervisor - SRO	Robert P. Bingman	10/4/07	R P Bingman	12/26/07	
2.	Scott Cawley	Plant Control Operator - RO	Scott A Cawley	10/8/07	Scott A. Cawley	1/7/08	
3.	STEVE KOCH	UNIT SUPV. - SRO	Steve Koch	10/8/07	Steve Koch	1/7/08	
4.	Christopher Michaels	Developer	Christopher Michaels	10/16/07	Christopher Michaels	12/18/07	
5.	MARK WOZINSKI	PCO - RO	M Wozinski	10/24/07	M Wozinski	12/26/07	
6.	Doug LaMarca	UNIT SUPV - SRO	Doug LaMarca	10/24/07	(1)	1/9/08	
7.	PAUL MORAN	SIMULATOR INSTRUCTOR	Paul Moran	10/31/07	Paul Moran	12/27/07	
8.	PAUL HOMNICK	PCO - RO	Paul Homnick	11/13/07	Paul E Homnick	12/19/07	
9.	Thomas Ray	Unit Supervisor - SRO	Thomas Ray	11/14/07	(2)	1/10/08	
10	PETER BROWN	PCO - RO	Peter Brown	11/14/07	Peter Brown	12/19/07	
11	Patrick Bone	PCO - RO	Patrick Bone	11/14/07	Patrick Bone	12/19/07	
12	Nancy Kramer	clerk/steno	Nancy Kramer	11/20/07	Nancy Kramer	12/19/07	
13	CLIFFORD MCCRACKEN	SIMULATOR INSTRUCTOR	Clifford McCracken	12/5/07	Clifford McCracken	12/19/07	
14	ROBERT PUSEY	SIMULATOR INSTRUCTOR	Robert Pusey	12/6/07	Robert Pusey	12/20/07	
15	Jim Bleistein	SIMULATOR INSTRUCTOR	Jim Bleistein	12/10/07	Jim Bleistein	12/19/07	

NOTES: (1) per telecon, Doug LaMarca to Bob Boesch opt One 1/10/08
(2) per telecon, Thom Ray to Bob Boesch opt One 1/10/08

ES-20_ Examination Sec greement Form ES-

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/10/07 – 12/21/07 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 12/10 - 12/21/07. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	JAMIE WEISS	Sequester		12-10-07		12/19/07	
2.	Russell B DeVore	Escort		12/10/07		12/18/07	
3.	Thomas P. Cosco	Escort		12-10-07		12-19-07	
4.	Russ HALL	Sim #40		12/10/07		12/18/07	
5.	Kenneth P Klass	Escort + Sim		12/10/07		12/19/07	
6.	Ronald M. Fry	Training / OPS Mgmt Oversight		12/11/07		12/19/07	
7.	Pamela J Engel	Computer group support		12/12/07		12/21/07	
8.	Richard E Klinefelter	OPS Shift MNGR		12/12/07		12/26/07	
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NOTES:

SUSQUEHANNA

ES-201, Rev. 9 | Examination Security Agreement | Form ES-201-3

Pre-Examination

acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of _____ as of the date f my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the IRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered hese licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect eedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee=s procedures) and nderstand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or he facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security nay have been compromised.

Post-Examination

* 12/7/07 written
12/10/07, 12/17/07 operating exam

o the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered uring the week(s) of 12/7 & 12/10.* From the date that I entered into this security agreement until the completion of examination administration, I did not struct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted elow and authorized by the NRC.

RINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
STEVEN DENNIS	EXAM DEVELOPER	[signature]	6-19-07	(1)		

OTES:

(1) per telecon, F. [signature] for S. Dennis 12/19/07

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SEP-04-2007 12:24 PM ANDYS LIQUORS

Susquehanna

ES-201 Examination Security Agreement F

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the weeks(s) c as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any perso been authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does nc training content or provide direct or indirect feedback. Furthermore, I am aware of the physical security measures and requirer documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result i the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility managem chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination 12/7/07 written exam
12/10/07, 12/17/07 operating exam

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing exa administered during the week(s) of 12/7, 12/10/7 From the date that I entered into this security agreement until the completion administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these l examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	
1.	JOSEPH ARSENAULT	DEVELOPER/REVIEWER		5/24/07	(2)	
2.	STEVEN DENNIS	DEVELOPER		5/25/07	(1)	
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NOTES:
(1) F. Ollen for S. Dennis per telecon 12/19/07
(2) F. Ollen for J. Arsenault per telecon 12/19/07

Facility: SSES Date of Examination: 12/10/07 Operating Test Number: LOC-22 NRC

	1. GENERAL CRITERIA	Initials a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).			
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			
c.	The operating test shall not duplicate items from the applicants audit test(s)(see Section D.1.a).			
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.			
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			
	2. WALK-THROUGH CRITERIA			
a.	Each JPM includes the following, as applicable: • initial conditions • initiating cues • references and tools, including associated procedures • reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee • operationally important specific performance criteria that include: - detailed expected actions with exact criteria and nomenclature - system response and other examiner cues - statements describing important observations to be made by the applicant - criteria for successful completion of the task - identification of critical steps and their associated performance standards - restrictions on the sequence of steps, if applicable			
b.	Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.			
	3. SIMULATOR CRITERIA			
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.			

	Printed Name / Signature	Date
a. Author	Christopher Michaels /	11/29/07
b. Facility Reviewer (*)	ROBERT M. PEAL	11/29/07
c. NRC Chief Examiner (#)	JOHN CAMPO	11/30/07
d. NRC Supervisor	MARVIN SYKES	11/30/07

NOTE: * The facility signature is not applicable for NRC-developed tests.
Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

Facility: SSES Date of Exam: 12/10/2007 Scenario Numbers: ILO-402 / 302A Operating Test No.: LOC-22 NRC

QUALITATIVE ATTRIBUTES	Initials a	b*	c#
1. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			
2. The scenarios consist mostly of related events.			
3. Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)			
4. No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.			
5. The events are valid with regard to physics and thermodynamics.			
6. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
7. If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.			
8. The simulator modeling is not altered.			
9. The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			
10. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.			
11. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
12. Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			
13. The level of difficulty is appropriate to support licensing decisions for each crew position.			

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d)	Actual Attributes			
1. Total malfunctions (5-8)	8 / 6 /			
2. Malfunctions after EOP entry (1-2)	2 / 2 /			
3. Abnormal events (2-4)	4 / 2 /			
4. Major transients (1-2)	2 / 2 /			
5. EOPs entered/requiring substantive actions (1-2)	2 / 2 /			
6. EOP contingencies requiring substantive actions (0-2)	0 / 1 /			
7. Critical tasks (2-3)	3 / 2 /			

11/29/07

11/29/07

Facility: SSES Date of Exam: 12/10/2007 Scenario Numbers: ILO-604 / 503A/ 502A Operating Test No.: LOC-22 NRC

QUALITATIVE ATTRIBUTES	Initials a	b*	c#
1. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			
2. The scenarios consist mostly of related events.			
3. Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)			
4. No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.			
5. The events are valid with regard to physics and thermodynamics.			
6. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
7. If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.			
8. The simulator modeling is not altered.			
9. The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			
10. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.			
11. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
12. Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			
13. The level of difficulty is appropriate to support licensing decisions for each crew position.			

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d)	Actual Attributes			
1. Total malfunctions (5-8)	6 / 6 / 7			
2. Malfunctions after EOP entry (1-2)	2 / 2 / 2			
3. Abnormal events (2-4)	2 / 3 / 2			
4. Major transients (1-2)	2 / 2 / 2			
5. EOPs entered/requiring substantive actions (1-2)	2 / 2 / 2			
6. EOP contingencies requiring substantive actions (0-2)	1 / 1 / 1			
7. Critical tasks (2-3)	3 / 2 / 3			

11/29/07

11/29/07

Facility: **SSES** Date of Exam: **12/10/2007** Operating Test No.: **1**

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	ATC	BOP	2 CREW POSITION SRO	ATC	BOP	3 CREW POSITION SRO	ATC	BOP	4 CREW POSITION SRO	ATC	BOP	TOTAL	MINIMUM(*) R	I	U
RO ■ 1,5,7,12	RX		3											**1**	1	1	0
	NOR						**3**							**1**	1	1	1
	I/C		4,8				1,6,7, 10							**6**	4	4	2
	MAJ		6,10				5,8, 10,11							**6**	2	2	1
	TS													**0**	0	2	2
RO ■ 4,10,11	RX					4								**1**	1	1	0
	NOR					3								**1**	1	1	1
	I/C			5,8,9		1,2,4								**6**	4	4	2
	MAJ			6,10		5,8, 10,11								**6**	2	2	1
	TS													**0**	0	2	2
RO ■ 6,9	RX								4					**1**	1	1	0
	NOR								3				3,4	**3**	1	1	1
	I/C								1,5, 7,10				1,6, 8,10 ,11	**9**	4	4	2
	MAJ								8,11				9,11	**4**	2	2	1
	TS													**0**	0	2	2
RO ■ 3,8	RX											4		**1**	1	1	0
	NOR									3		3,4		**3**	1	1	1
	I/C									2,5,7, 9,10		5,7,8, 11		**9**	4	4	2
	MAJ									8,11		9,11		**4**	2	2	1
	TS													**0**	0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.
2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
3. Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant□s competence count toward the minimum requirements specified for the applicant□s license level in the right-hand columns.

Facility: **SSES** Date of Exam: **12/10/2007** Operating Test No.: **1**

APPLICANT	EVENT TYPE	Scenarios												TOTAL	MINIMUM M(*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP		R	I	U
RO -2 ■	RX					4								**1**	1	1	0
	NOR					3				3				**2**	1	1	1
	I/C			5,8,9		1,2,4				2,5,7, 9,10				**11**	4	4	2
	MAJ			6,10		5,8, 10,11				8,11				**8**	2	2	1
	TS														0	2	2
SRO-I-1 ■	RX	3			4				4					**3**	1	1	0
	NOR				3				3					**2**	1	1	1
	I/C	1,4,5 ,7,8, 9			1,2,4, 6,7,9, 10				1,5, 7,10					**17**	4	4	2
	MAJ	6,10			5,8, 10,11				8,11					**8**	2	2	1
	TS	1,5			1,2,4									**5**	0	2	2
■	RX																
	NOR																
	I/C																
	MAJ																
	TS																
SRO-U-1 ■	RX							4			4			**2**	1	1	0
	NOR							3			3,4			**3**	1	1	1
	I/C							1,2,5, 6,7,9, 10			1,2,5,6 ,7,8,10 ,11			**15**	4	4	2
	MAJ							8,11			9,11			**4**	2	2	1
	TS							1,5,6			2,5,6			**6**	0	2	2
SRO-U-2 ■	RX	3			4									**2**	1	1	0
	NOR				3									**1**	1	1	1
	I/C	1,4,5 ,7,8, 9			1,2,3, 4,6,7, 9,10									**14**	4	4	2
	MAJ	6,10			5,8, 10,11									**6**	2	2	1
	TS	1,5			1,2,4									**5**	0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.

2 Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.

3 Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant□s competence count toward the minimum requirements specified for the applicant□s license level in the right-hand columns.

Facility: SSES	Date of Examination: 12/10/07				Operating Test No.:LOC-22 NRC											
Competencies	**APPLICANTS**															
	RO#1 ☑ ILO-604 / ILO-503A				RO#2 ☑ ILO-604 /ILO-503A /ILO-502A				RO#3 ☑ ILO-502A / ILO-402				RO#4 ☑ ILO-604 / ILO-503A			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnosis Events and Conditions	4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11			4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,5, 6,7 ,8, 9, 10, 11				1,2 ,5, 6,7 ,8, 9, 10, 11	1,2 ,5, 6,7 ,8, 9, 10, 11	4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11		
Comply With and Use Procedures (1)	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11			1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2, 3,4, 5,6, 7,8, 9,1 0	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11		
Operate Control Boards (2)	2,3 ,4, 5,6 ,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11			2,3 ,4, 5,6 ,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,3 ,4, 5,6 ,7, 8,9 ,10 ,11	2,3, 4,5, 6,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11		
Communicate and Interact	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11			1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2, 3,4, 5,6, 7,8, 9,1 0	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11		
Demonstrate Supervisory Ability (3)																
Comply With and Use Tech. Specs. (3)																

Notes:

(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

Check the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Facility: SSES	Date of Examination: 12/10/07								Operating Test No.:LOC-22 NRC							
Competencies	**APPLICANTS**															
	RO#5 ☑ ILO-604 / ILO-503A				RO#6 ☑ ILO-502A/ILO-402				RO#7 ☑ ILO-604 /ILO-503A				RO#8 ☑ ILO-502A/ILO-402			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnosis Events and Conditions	4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11					1,2 ,5, 6,7 ,8, 9, 10, 11	1,2 ,5, 6,7 ,8, 9, 10, 11	4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11					1,2 ,5, 6,7 ,8, 9, 10, 11	1,2 ,5, 6,7 ,8, 9, 10, 11
Comply With and Use Procedures (1)	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11					1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11					1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11
Operate Control Boards (2)	2,3 ,4, 5,6 ,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11					1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,3 ,4, 5,6 ,7, 8,9 ,10 ,11	2,3 ,4, 5,6 ,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11					1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,3 ,4, 5,6 ,7, 8,9 ,10 ,11
Communicate and Interact	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11					1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11					1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11
Demonstrate Supervisory Ability (3)																
Comply With and Use Tech. Specs. (3)																

Notes:

(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

Check the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Facility: SSES	Date of Examination: 12/10/07								Operating Test No.:LOC-22 NRC							
Competencies	**APPLICANTS**															
	RO#9 ☑ ILO-502A/ILO-402				RO#10 ☑ ILO-604 / ILO-503A				RO#11 ☑ ILO-604 / ILO-503A				RO#12 ☑ ILO-604 / ILO-503A			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnosis Events and Conditions			1,2,5,6,7,8,9,10,11	1,2,5,6,7,8,9,10,11	4,6,8,10	1,2,3,4,5,6,7,8,9,10,11			4,6,8,10	1,2,3,4,5,6,7,8,9,10,11			4,6,8,10	1,2,3,4,5,6,7,8,9,10,11		
Comply With and Use Procedures (1)			1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11			1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11			1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11		
Operate Control Boards (2)			1,2,3,4,5,6,7,8,9,10,11	1,3,4,5,6,7,8,9,10,11	2,3,4,5,6,8,9,10	1,2,4,5,6,7,8,9,10,11			2,3,4,5,6,8,9,10	1,2,4,5,6,7,8,9,10,11			2,3,4,5,6,8,9,10	1,2,4,5,6,7,8,9,10,11		
Communicate and Interact			1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11			1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11			1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11		
Demonstrate Supervisory Ability (3)																
Comply With and Use Tech. Specs. (3)																

Notes:

(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

Check the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Facility: SSES	Date of Examination: 12/10/07	Operating Test No.:LOC-22 NRC

Competencies	APPLICANTS															
	SROI #1 ☑ ILO-604/ILO-503A / ILO-502A				SROU #1 ☑ ILO-502A / ILO-402				SROU #2 ☑ ILO-604 / ILO-503A							
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnosis Events and Conditions	4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,5, 6,7 ,8, 9, 10, 11				1,2 ,5, 6,7 ,8, 9, 10, 11	1,2 ,5, 6,7 ,8, 9, 10, 11	4,6 8, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11						
Comply With and Use Procedures (1)	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11						
Operate Control Boards (2)	2,3 ,4, 5,6 ,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,3 ,4, 5,6 ,7, 8,9 ,10 ,11	2,3 ,4, 5,6 ,8, 9, 10	1,2 ,4, 5,6 ,7, 8,9 ,10 ,11						
Communicate and Interact	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11						
Demonstrate Supervisory Ability (3)	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11				1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11	1,2 ,3, 4,5 ,6, 7,8 ,9, 10	1,2 ,3, 4,5 ,6, 7,8 ,9, 10, 11						
Comply With and Use Tech. Specs. (3)	1,5	1,2 ,4					1,5 ,6	2,5 ,6	1,5	1,2 ,4						

Notes:

(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

Check the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

ES-401 **Written Examination Quality Checklist** **Form ES-401-6**

Facility: SSES Date of Exam: 12/07/2007 Exam Level: RO ☑ SRO ☑

	Item Description	Initial a	Initial b*	Initial c#
1.	Questions and answers technically accurate and applicable to facility			
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			
3.	SRO questions are appropriate per Section D.2.d of ES-401			
4.	The sampling process was random and systematic (If more than 4 RO or 2 SRO questions are repeated from the last two NRC licensing exams, consult the NRR OL program office.)			
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: __ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or ✓ the examinations were developed independently; or __ the licensee certifies that there is no duplication; or __ other (explain)			
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank: 35/14; Modified: 7/2; New: 33/9		
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent If the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	M/F: ~~30~~/7 31; C/A: 14 ~~45~~/18		
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.			
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified			
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.			
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet			

	Printed Name / Signature	Date
a. Author	Christopher Michaels	11/29/07
b. Facility Reviewer (*)	Robert M. Peal	11/29/07
c. NRC Chief Examiner (#)	John Caruso	11/30/07
d. NRC Regional Supervisor	Marvin D. Sykes	11/30/07

Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations.
Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

Facility: Susquehanna | Date of Exam: 12/07/2007 | Exam Level: RO ☑ SRO ☐

Item Description		Initials a	Initials b	Initials c
1.	Clean answer sheets copied before grading			
2.	Answer key changes and question deletions justified and documented			
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)			
4.	Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail			
5.	All other failing examinations checked to ensure that grades are justified			
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants			

	Printed Name/Signature	Date
a. Grader	Chris Michaels /	12/21/07
b. Facility Reviewer(*)	R M Peal	1/3/08
c. NRC Chief Examiner (*)	J. Caruso	1/4/08
d. NRC Supervisor (*)		1/15/08

(*)The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.

NOTE: TODD FISH CHECKED GRADING ALSO

Facility: Susquehanna	Date of Exam: 12/07/2007	Exam Level: RO ☐ SRO ☑

Item Description		Initials a	Initials b	Initials c
1.	Clean answer sheets copied before grading			
2.	Answer key changes and question deletions justified and documented			
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)			
4.	Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail			
5.	All other failing examinations checked to ensure that grades are justified			
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants			

	Printed Name/Signature	Date
a. Grader	Chris Michaels	12/21/07
b. Facility Reviewer(*)	RM PEAL	1/3/08
c. NRC Chief Examiner (*)	J. CARUSO	1/4/08
d. NRC Supervisor (*)		1/15/08

(*)The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.

NOTE: TODD FISH ALSO INDEPENTLY CHECKED GRADING