



DATE: December 18, 2019

TO: Thomas Farina (USNRC)

FROM: Andrew Servaes (WCNOC)

SUBJECT: Wolf Creek Generating Station Initial License Post-Exam Submission.

Dear Mr. Farina,

Enclosed are the Post Exams and supporting forms for the Wolf Creek Generating Station (WCGS) Initial License Examination – completed between December 6 and December 14, 2019. All electronic materials enclosed shall be withheld from public disclosure until after a two-year period to allow for use on future audit examinations. Included in the post exam submittal are:

1. Graded Original Written Exam Scantron Forms.
2. Graded Original ES-401-7 and ES-401-8 exam cover sheets.
3. Copy of Original Written Exam Scantron Forms.
4. Copy of Written Exam Scantron Key.
5. Vision Generated results with grades for RO and SRO Written Exams.
6. Vision Generated Written Question Performance Report.
7. Document containing every missed written question, with annotation of which answer choice was selected by which applicant.
8. ES-403-1, Written Exam Grading Quality Checklist.
9. Seating Chart, including results and durations.
10. Summary of Written Post Exam High Miss Question Analysis, including NISP TR-01, Form 9.
11. Disk containing Simulator Scenario Files for 13 Simulator Exams.
12. Condition Reports generated post Exam. (2)
13. Training Requests generated post Exam. (7)
14. Simulator Modification Packages generated post Exam. (2)
15. Procedure Change Requests generated post Exam. (1)
16. Final closed copy of Exam Security Checklist, Form ES-201-3.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Servaes".

Andrew Servaes
Exam Author

A handwritten signature in black ink, appearing to read "James Knapp".

James Knapp
Facility Representative

2019 Wolf Creek NRC Written Exam – Post Examination Activities.

AI 30B-011, INITIAL LICENSE OPERATOR EXAMINATION GUIDELINES, paragraph 6.10

6.10.1 – Perform post exam validation of the as given written exam. Per NUREG 1021, OPERATOR LICENSING EXAMINATION STANDARDS FOR POWER REACTORS, conduct an analysis of all questions missed by half (50%) or more of the applicants. This analysis shall be provided to the NRC Chief Examiner.

6.10.2 – The post examination validation process may contain any of the following techniques.

1. Debrief the applicants using their examination to identify areas for further evaluation. **Completed 12/17/19.**
2. Validate all questions missed by any applicant. **Completed 12/17/19.**
3. Select a validation team that consists of instructors and Operators. **(Andy/Bill/Marcy)**
4. The validation team shall have no other duties during the validation effort.
5. The exam validation report shall be written to include all of the following analysis.
 - Verification that all questions are technically accurate. **Yes**
 - Verification that all questions are free of question flaws. **Yes**
 - Verification that high miss items are determined to be either question concerns, student knowledge concerns or training program concerns. **Yes**
 - Verification that if any questions are deleted, the sample plan remains failed for the examination. **N/A**
 - Summary of examination activities. **Listed Below**

High Miss Question Analysis as follows:

#33 – 7/17 (41%) – ESFAS Actuations are caused by Gas Channels. Question is technically accurate and free of question flaws. This question was high miss due to student knowledge as the information is adequately covered by lesson plans LO1302800 (Objective 7) and LO1407300 (Objective 4). No changes to lesson plan material is required. Knowledge gap closed during exam debrief.

#49 – 8/17 (47%) – There is no auto MFP Trip for high Vibrations. Question is technically accurate and free of question flaws. This question was high miss due to student knowledge as the information is adequately covered by lesson plan LO4705900 (Objective 2). No changes to lesson plan material is required. Knowledge gap closed during exam debrief.

#81 – 3/8 (37.5%) – Failure of two of four PZR Level channels results in unanalyzed condition and LCO 3.0.3 entry. Answer choice wording confused the students, but none asked for clarification during the exam. They indicated they recognized LCO 3.0.3 conditions were met, but once they reduced power to <P-7 setpoint (10%), they would no longer be in the MODE of applicability, so entry to MODE 3 was not required. Operationally, Reactor power is lowered to 30% before opening reactor trip breakers, so power would NOT be purposely lowered to <P-7 setpoint from 100% normal power operation within 6 hours and this action is NOT required by LCO 3.3.1, COND M. This question (LO153452) is inactivated in the bank and will NOT be reused. This question is better suited for LCO 3.0.3 entry scenarios that are applicable below P-7, or distractors changed to eliminate reference to P-7. No changes to lesson plan material is required.

#85 – 4/8 (50%) – Given a scenario where the crew is in EMG E-3 with lowering RCS pressure, criteria is met for transition to EMG C-31. The question is technically accurate and free of question flaws. This question was high miss due to student knowledge as the information is adequately covered by lesson plan LO1732325, Objective 4. No changes to lesson plan material is required. Knowledge gap closed during exam debrief.

#97 – 3/8 (37.5%) – AP 21-001, Paragraph 6.15, RCA Fast Entry Guidelines. The question is technically accurate and free of question flaws. This question was high miss due to student knowledge as the information is adequately covered by lesson plans LO1733258 (Objective 1) and LO1733204 (Objective 2). Four of the 8 students didn't differentiate between dosimetry staged for control room evacuation (per OFN RP-017 through Security Central Alarm Station (CAS)) and dosimetry staged for use at RCA Access for emergent response as allowed by AP 21-001, CONDUCT OF OPERATIONS, and AP 25B-100, RADIATION WORKER GUIDELINES. No changes to lesson plan material is required. Knowledge gap closed during exam debrief.

Other Poor Performing Questions with Student Debrief Feedback

#30 – 9/17 (52%) – Normal Rod programming does not affect radial power distribution when rods are below the Bank LOLO Rod Insertion Limit. The question is technically accurate and free of question flaws. Four of 17 students missed because of the one-hour tech spec action which is adequately covered by LO4700100, Rod Control Lab, Objective 2. Those students who selected answer choice A missed due to student knowledge. However, Four of 17 students missed because they thought rods below the Bank LOLO Rod Insertion limit would affect QPTR in addition to AFD. A review of the applicable lesson plans identified an opportunity to enhance training on how normal control rod insertion affects power distribution. **TR 2019-0254-1** written to suggest training on this topic by enhancing any of the five lesson plans taught for Rod Control System, Rod Position Indication, and/or Rod Control Malfunctions. Knowledge gap closed during exam debrief.

#98 – 5/8 (62.5%) – AP 06-004, EQUIPMENT IMPORTANT TO EMERGENCY RESPONSE directs use of portable devices to measure radiation levels outside of the Personnel Access Hatch in response to degraded CTMT Radiation monitors (GT RE-59 and -60) for evaluating loss or potential loss of fission product barriers. The question is technically accurate and free of question flaws. Three of 8 SRO students missed because they could not recall specific actions placed in affect as a result of existing degraded CTMT Radiation Monitors. This compensatory action was not specifically covered in ILO Training. **TR 2019-0251-1** was written to suggest inclusion of this procedure AP 06-004 in LO1733215, Emergency Classification and Protective Action Recommendations (PAR), particularly for known degraded conditions at the station. Knowledge gap closed during exam debrief.