

KEWAUNEE
INITIAL LICENSE EXAM

DECEMBER 11 THRU 20, 2000

NRC Review Comments to facility-
developed written exam and operating
test (written exam comments are
attached to form ES-401-9)

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
O-LRQ-JPM-034-B.1.a (dropped rod) ENHANCEMENTS	<u>NRC:</u> E-CRD-49C requires a lead engineer and Fuels Management to specify recovery actions [i.e., develop a recovery plan]. This plan should be developed and provided to the applicant.
	<u>LICENSEE RESPONSE:</u> The licensee agreed. A recovery plan was developed and attached.
	<u>NRC:</u> Place a note in step 5 indicating that rod speed will be 48 steps/min.
	<u>LICENSEE RESPONSE:</u> The licensee agreed. A note was placed at step 5.
	<u>NRC:</u> Step 9 of the JPM should include as note stating that "TLA-1 Rod Supv" alarm is in until the rod deviation is cleared.
	<u>LICENSEE RESPONSE:</u> The licensee agreed. A note was placed at step 9.
	<u>NRC:</u> Step 13 of the JPM is N/A. This step should be deleted.
	<u>LICENSEE RESPONSE:</u> The licensee agreed. The step indicates that it does not apply to the given conditions.

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWB.1.b (loss of circ water pump)</p> <p align="center">UNSAT,</p>	<p><u>NRC:</u> This JPM is unsatisfactory due to:</p> <ul style="list-style-type: none"> • Procedure A-CW-04 does not list CW pump A stator temperature (point T2555A) as an entry condition (procedure issue?) therefore the JPM can not be performed as written.; and • The alternate path action (i.e., simply starting the CW pump B) does not provide the examiners with an opportunity to observe the applicant execute actions that would not otherwise be examined (as is discussed in NUREG-1021, Appendix C). <p><u>LICENSEE RESPONSE:</u> The licensee replaced the JPM with a loss of a service water pump. Subsequent to prep week the Chief Examiner went to Kewaunee to re-validate the replacement JPM. The licensee presented three possible replacements. The third JPM was the only suitable replacement due to the unacceptable alternate paths proposed in the first and second JPMs. Even the third needed alot of "massaging" to make it work.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-058A-B.1.c (start and load a diesel)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> Add two (2) cues to step 4 of the JPM that read:</p> <ul style="list-style-type: none"> • "Cue[Floor] If asked, the diesel was run within the last 24 hours." and • "Cue[Floor] If asked, the diesel has been tagged out." <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The cues were added as recommended.</p> <p><u>NRC:</u> Add a not to step 10 of the JPM that reads: "Do not time compress this step."</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. A note was placed at step 10.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-056D-B.1.d (manual cntrl of pzs press)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> To meet the intent of the task (i.e., manually control pressurizer pressure using heaters and/or sprays) the plant conditions will have to require the applicant to either energize heaters, adjust spray flow, or both.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and ensured that the applicants will manipulate controls to manually control pressurizer pressure during the JPM.</p> <p><u>NRC:</u> Step 6.7 of SP 36-018 has the applicant establish normal pressurizer pressure control per N-RC-36C. The appropriate steps of N-RC-36C WILL NEED TO BE steps in the JPM.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The JPM was modified to include Step 6.2.6.c of N-RC-36C.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
O-LRQ-JPM-NEWB.1.c (restore prt level) ENHANCEMENTS	<p><u>NRC:</u> Why do the initial conditions state that the PRT alarm is due to a low level? Once the applicant is directed to respond to the annunciator, he/she should be able to determine the condition of the PRT then take appropriate actions.</p>
	<p><u>LICENSEE RESPONSE:</u> The licensee stated that the simulator will provide these indications and removed that portion of the initiating cue.</p>
	<p><u>NRC:</u> The first step of the JPM should be to refer to the annunciator response procedure for annunciator 47043-B.</p>
	<p><u>LICENSEE RESPONSE:</u> The licensee agreed and modified the JPM to include this step.</p>
	<p><u>NRC:</u> The JPM expects the applicant to correct the problem using step 4.5 of N-RC-36B. Why couldn't they use step 4.1 which also establishes normal conditions in the PRT?</p>
	<p><u>LICENSEE RESPONSE:</u> The licensee stated that Step 4.1 only applies during start-up activities. This was verified during prep week.</p>
	<p><u>NRC:</u> The task directs the applicant to raise PRT level until the alarm clears. The procedure directs the applicant to raise level to 72%. Will the alarm be cleared at that point?</p>
	<p><u>LICENSEE RESPONSE:</u> The licensee stated that the alarm will be cleared at 72%. This was verified during prep week.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-115MA-B.1.g (operate si in recirc)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> The JPM needs to include the actions of step 7 of ES-1.3 as JPM steps. Also need the following cue at this point "RWST level remains greater than 4%" or similar.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The JPM was modified to include step 7 of ES-1.3. Also, appropriate cues were added to make the alternate path work.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-162M-B.2.b (cntrl room evac, chrg)</p> <p align="center">UNSAT₂ and ENHANCEMENTS</p>	<p><u>NRC:</u> The alternate path selected for the JPM does not provide the examiners with an opportunity to observe the applicant execute actions that would not otherwise be examined (as is discussed in NUREG-1021, Appendix C). The alternate path is to verify that a particular valve is open, identify that it is closed, and turn a switch to open it. A more appropriate alternate path for this JPM could be a failure of the 1C charging pump in step 21.b.1 of E-0-06. The required actions in the RNO provide the examiners with an excellent opportunity to observe actions that would not otherwise be examined in this JPM.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and modified the JPM to include a more appropriate alternate path.</p> <p><u>NRC:</u> Need to provide each applicant with a copy of E-O-6 completed up thru step 21.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. Copies of E-0-6, marked-up to appear to have been completed thru step 21 are now part of the JPM package.</p> <p><u>NRC:</u> Add the following to the initiating cue: "The appropriate local/remote switches have been placed in "local" and the associated indicating lights are lit."</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. A note was placed in step 1 of the JPM.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-013M-B.2.c (ms-103 trip/reset)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> Do you have or can you get (maybe from Point Beach) a mock-up of the TD AFW pump trip and throttle valve?</p> <p><u>LICENSEE RESPONSE:</u> The licensee determined that no mock-up, of this trip/throttle valve was available.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-113-A.1-1S/R (cal-cal)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> The task conditions should include that the PPCS and PC mainframe are out of service.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and the JPM was modified.</p> <p><u>NRC:</u> Why will the applicant need to obtain plant computer readings for parameters, why can't they get them from the simulator?</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The applicant's will be expected to demonstrate that they can obtain the data then will be given the data sheet. Added the following note to step 2 of the JPM: "The applicant is expected to locate and each meter and/or gauge they would use to obtain the required data."</p> <p><u>NRC:</u> Appendix A, steps 9 and 10 will either have to be performed or a cue provided to tell the applicant that these actions have been completed.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. A note was placed at step 9 of the JPM.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.1-2-R (precrit checklist)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> The performance items for steps 5 through 9 are very confusing and need to be clarified for the examiners.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The JPM was be clarified.</p> <p><u>NRC:</u> The applicant will probably stop once he/she recognizes that Bus 61 is not energized. The JPM needs a cue to have the operator continue with the checklist.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The JPM was modified to include this cue.</p> <p><u>NRC:</u> Rather than stating the various electrical OOSs, the task conditions should simply state "conditions are as you see them on the electric plant control board."</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The initial conditions were modified such that the problem with the electrical line-up would not be given away.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.1-3-R (containment purge)</p> <p align="center">UNSAT₃</p>	<p><u>NRC:</u> JPM could not be performed on the simulator. The purge fan could not be started. The licensee was required to modify the JPM and use the vent capability of the purge system.</p> <p><u>LICENSEE RESPONSE:</u> The JPM was modified to use the vent portion of the containment purge system.</p> <p>NOTE: THE PROBLEM ENCOUNTERED WITH THE OPERATION OF THE PURGE FAN (N-RBV-18B, STEP 4.1.2) WAS DISCUSSED AT THE EXAM EXIT AND INCLUDED IN THE EXAM REPORT.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.4-R (emerg class notification)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> The phone plug should be pulled to simulate that it has failed. No cue should be required (see initiating cue and step 2 of the JPM), simply provide a phone mock-up.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed.</p> <p><u>NRC:</u> The JPM is missing step 5.2.1 of EPIP-AD-07 which has the applicant verify that a form AD 7.1 has been initiated.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The JPM was updated to include this step.</p> <p><u>NRC:</u> The STANDARD for Step 6 of the JPM should state that the applicant is to read each box number and the name of each box.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed. The standard was <i>DW</i></p>

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JPM/Scenario Event Number	Comment(s)
O-LRQ-JPM-NEWA.1-2S (review of cal-cal) ENHANCEMENT	NOTE: The licensee replaced the originally submitted JPM with JPM O-LRQ-JPM-13-A.1-1S/R. This JPM was NOT replaced due to poor quality. It was replaced to allow the SRO perform a manual cal-cal rather than simply review one. This provided the examiners with a better overall evaluation tool.

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JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.1S (approve fuel move)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> In order to have steps 5 and 6 as "critical" steps, should have a core map staged for each applicant to review. Otherwise, the examiners will have no basis for successful completion of these steps.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and provided a full size core map for the applicant's use.</p> <p><u>NRC:</u> Will step 12 of the FAMS remain unsigned? I would assume that the refueling SRO would annotate the form or reference the applicable FAHDR to indicate what had happened.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and annotated the FAMS to reference the FAHDR.</p> <p><u>NRC:</u> Need to correct the task conditions to match the step numbers on the FAMS sheet.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and changed the task conditions accordingly.</p> <p><u>NRC:</u> The initiating cue should be modified to read "You are to review FADHR #2000-2 and determine whether it should be approved or not. Use the included core map to justify your decision.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed.</p>

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JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.2-S (review tagout)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> The Task Conditions should be modified to read “A tagout to support the seat repair of valve SW-601A, Service Water to AFW Pump A isolation” has been prepared. The tagout control sheet and tags have been prepared and verified by a Nuclear Control Operator.”</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM.</p> <p><u>NRC:</u> The Initiating Cue should be modified to read “You are directed to review the tagout control sheet and tags prior to requesting the Shift Supervisor approval...”</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM.</p> <p><u>NRC:</u> The tagout control sheet provided to the applicants needs the following changes made:</p> <ul style="list-style-type: none"> • Fill in the tagout group number at the top of the sheet ; • Fill in the tag number at the bottom of the sheet; • Put a “dummy” signature in the adequacy/accuracy block; • The restoration blocks are normally completed; and • The tagout should include valves AFW-100A and AFW-3A. <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.3S (review gas discharge)</p> <p align="center">UNSAT₄ and ENHANCEMENTS</p>	<p><u>NRC:</u> The JPM should either be a review of the completed gas decay tank release permit or completion of the form. Observing an applicant “supervising” and individual completing the form is too difficult to evaluate and requires additional licence staff to perform.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and significantly modified the JPM such that the task is an SRO level review of the completed permit.</p> <p><u>NRC:</u> The Cue in step 6 of the JPM should be deleted, it is not used.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM.</p> <p><u>NRC:</u> Step 7 of the JPM should be deleted. it is not used.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>O-LRQ-JPM-NEWA.4-R (emerg class notification)</p> <p>ENHANCEMENTS</p>	<p><u>NRC:</u> Each applicant will need a blank EPIP form AD 7.1 and a completed version indicating the current classification of Site Area Emergency.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM package to include a blank 7.1.</p> <p><u>NRC:</u> The initiating cue would be better stated as: "You are to adjust the initial protective action recommendations based on the event reclassification to General Emergency."</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and changed the cue to the above.</p> <p><u>NRC:</u> The JPM as submitted is actually two (2) tasks: 1) determine the initial PARS and complete form AD 7.1 and 2) subsequent validation of the initial PARS. The JPM should be modified to be either one or the other (The exam team recommends the JPM be the first task).</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the JPM.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p align="center">Scenario 1</p> <p align="center">ENHANCEMENTS</p> <p>Initial Conditions</p> <p>Turnover</p> <p>Event 1</p> <p>Event 2</p> <p>Event 6</p>	<p><u>NRC:</u> The ICs should state that severe weather has been reported in the area.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the IC.</p> <p><u>NRC:</u> The turnover should state that the crew is at step 4.27 to account for skipping the transfer to the main feed control valves (see below).</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the turnover</p> <p><u>NRC:</u> This appears to be a rather lengthy evolution.</p> <p><u>LICENSEE RESPONSE:</u> During the validation, it was decided that the transfer to the main feed control valves was too time consuming and resulted in excessive SG level perturbations. The applicant's are likely to want to wait for more stable conditions to continue which could take hours.</p> <p><u>NRC:</u> Should add a note that letdown may isolate due to low pressurizer level upon rod insertion.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and added the note.</p> <p><u>NRC:</u> The failure of SW301B complicates the Major event nicely, resulting in a station blackout. However, the actual actions necessary to address the valve failure cannot be credited as an instrument/component failure for the applicants.</p> <p><u>LICENSEE RESPONSE:</u> Although the licensee felt that actions were required specific to the SW valve failure, these actions complicate the LOOP and do not address the specific component failure. The comment stands.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
Scenario 2 ENHANCEMENTS	
Event 2 UNSAT_s	<p><u>NRC:</u> This event is repeated almost verbatim in Scenario 4, Event 3. Although the event provides good competency evaluation opportunity for the RO and SRO, watching the same applicants potentially respond to the same event is unsat. Either replace this event or Event 3 of Scenario 4.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and replaced the event with a VCT level channel failure.</p>
Event 3	<p><u>NRC:</u> The CRS Tech Spec review (Sheet 9) should include the TDAFW pump start T/S from Table 3.5.3.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p>
Event 5	<p><u>NRC:</u> BOP should note (sheet 14) that the A zone vent fan did not start.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p>
	<p><u>NRC:</u> Crew should report (sheet 17) that S/G A had a known leak NOT S/G B.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p>
Event 6	<p><u>NRC:</u> The failure of the auxiliary feed pump complicates the Major event nicely; however, the actual actions necessary to address the valve failure cannot be credited as an instrument/component failure for the applicants.</p> <p><u>LICENSEE RESPONSE:</u> The licensee understood.</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p>Scenario 3</p> <p>Event 2 UNSAT₆</p> <p>ENHANCEMENTS</p> <p>Event 4</p> <p>Event 6</p> <p>Event 7</p>	<p><u>NRC:</u> These events all require the applicants to respond to failures of the rod control system. NUREG-1021, Appendix D states that a scenario should be developed such that a variety of systems are affected. Recommend replacing event 2, very little to credit the RO with.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed will replaced event 2 with a power range channel failing high.</p> <p><u>NRC:</u> Include "N44 Fails High" in title of Event 2</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p> <p><u>NRC:</u> Should state (sheet 8) that prerequisite alignments are performed per A-MI-87.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p> <p><u>NRC:</u> CRS (sheet 12) contacts maintenance to investigate trip of the main feed pump not a condensate pump.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p> <p><u>NRC:</u> Include "small break LOCA" in the title of event 6.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p> <p><u>NRC:</u> Should change description of event based on validation week determination that the plant will trip on high rate (NI).</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and updated the event.</p> <p><u>NRC:</u> The failure of the turbine to trip and MSIVs to close complicate the Major event nicely, resulting in a station blackout. However, the actual actions necessary to address the valve failure cannot be credited as an instrument/component failure for the applicants.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed with the exception of the RO who, they claim, has substitutive actions during the event..</p>

COMMENTS ON KEWAUNEE OPERATING EXAM

JPM/Scenario Event Number	Comment(s)
<p align="center">Scenario 4</p> <p align="center">Event 3 UNSAT₇</p> <p align="center">ENHANCEMENTS</p> <p align="center">Event 4</p>	<p><u>NRC:</u> The charging pump B trip does not require any operator action to mitigate. It also does not complicate the previous event. There is no value in this event.</p> <p><u>LICENSEE RESPONSE:</u> The licensee agreed and replaced this with a failure of the A pump which was in automatic and upon its loss, requires the operator to take actions that can be evaluated against competencies.</p> <p><u>NRC:</u> Based on review of the applicant's actions, the BOP would not be credited with having responded to the instrument/component failure. The plant is already below 60% power so no load reduction is necessary.</p> <p><u>LICENSEE RESPONSE:</u> The licensee stated that in accordance with station procedures, the BOP will be required to manually reduce load from 55% to 50% due to the condensate pump trip. This was verified during prep week.</p>