



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

January 25, 2018

Ernest J. Kapopoulos, Jr.  
Site Vice President  
H.B. Robinson Steam Electric Plant  
Duke Energy  
3581 West Entrance Road, RNPA01  
Hartsville, SC 29550

**SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT – NRC OPERATOR LICENSE.  
EXAMINATION REPORT 05000261/2017301**

Dear Mr. Kapopoulos:

During the period September 25 – October 5, 2017, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the H.B. Robinson Steam Electric Plant. At the conclusion of the tests, the examiners discussed preliminary findings related to the operating tests and the written examination submittal with those members of your staff identified in the enclosed report. The written examination was administered by your staff on October 11, 2017.

Eight Reactor Operator (RO) and four Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO and one SRO applicant passed the operating test, but failed the written examination. One SRO applicant passed the written examination, but failed the operating test. One SRO applicant failed both the operating test and the written examination. There was one post-administration comment concerning the operating test, and five post-administration comments concerning the written examination. These comments, and the NRC resolution of these comments, are summarized in Enclosure 2. A Simulator Fidelity Report is included in this report as Enclosure 3.

The initial examination submittal was within the range of acceptability expected for a proposed examination. All examination changes agreed upon between the NRC and your staff were made according to NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm.adams.html> (the Public Electronic Reading Room).

If you have any questions concerning this letter, please contact me at (404) 997-4551.

Sincerely,

***/RA: Eugene F. Guthrie for/***

Gerald J. McCoy, Chief  
Operations Branch 1  
Division of Reactor Safety

Docket No: 50-261  
License No: DPR-23

Enclosures:

1. Report Details
2. Facility Comments and NRC Resolution
3. Simulator Fidelity Report

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT – NRC OPERATOR LICENSE EXAMINATION REPORT 05000261/2017301

Distribution:

M. Meeks, RII

G. McCoy, RII

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS					
SIGNATURE	<b>MKM3 EMAIL</b>	<b>EFG FOR GJM1</b>					
NAME	MMEEKS	GMCCOY					
DATE	1/24/2018	1/25/2018					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\OLEXAMS\ROBINSON EXAMINATIONS\INITIAL EXAM 2017-301\CORRESPONDENCE\ROBINSON 2017-301 EXAM REPORT FINAL.DOCX

**U.S. NUCLEAR REGULATORY COMMISSION**

REGION II

Docket No.: 05000261

License No.: DPR-23

Report No.: 05000261/2017301

Licensee: Carolina Power and Light Company

Facility: H. B. Robinson Steam Electric Plant, Unit 2

Location: Hartsville, SC

Dates: Operating Test – September 25 – October 5, 2017  
Written Examination – October 11, 2017

Examiners: M. Meeks, Chief Examiner, Senior Operations Engineer  
D. Lanyi, Senior Operations Engineer  
G. Callaway, Senior Reactor Technology Instructor

Approved by: Gerald J. McCoy, Chief  
Operations Branch 1  
Division of Reactor Safety

## SUMMARY

ER 05000261/2017301; September 25 – October 5, 2017 & October 11, 2017; H. B. Robinson Steam Electric Plant, Unit 2; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 11 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." This examination implemented the operator licensing requirements identified in 10 CFR §55.41, §55.43, and §55.45, as applicable.

Members of the H. B. Robinson training staff developed both the operating tests and the written examination. The initial operating test, written Reactor Operator (RO) examination, and written Senior Reactor Operator (SRO) examination submittals met the quality guidelines contained in NUREG-1021.

The NRC administered the operating tests during the period September 25 – October 5, 2017. Members of the Robinson training staff administered the written examination on October 11, 2017. Eight RO and four SRO applicants passed both the operating test and written examination. One RO applicant and one SRO applicant passed the operating test, but failed the written examination. One SRO applicant passed the written examination, but failed the operating test. One SRO applicant failed both the operating test and the written examination. Twelve applicants were issued licenses commensurate with the level of examination administered.

There was one post-examination comment related to the operating test, and five post-examination comments related to the written examination.

No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Examinations

##### a. Inspection Scope

The NRC evaluated the submitted operating test by combining the scenario events and JPMs in order to determine the percentage of submitted test items that required replacement or significant modification. The NRC also evaluated the submitted written examination questions (Reactor Operator (RO) and Senior Reactor Operator (SRO) questions considered separately) in order to determine the percentage of submitted questions that required replacement or significant modification, or that clearly did not conform with the intent of the approved knowledge and ability (K/A) statement. Any questions that were deleted during the grading process, or for which the answer key had to be changed, were also included in the count of unacceptable questions. The percentage of submitted test items that were unacceptable was compared to the acceptance criteria of NUREG-1021, "Operator Licensing Standards for Power Reactors."

The NRC reviewed the licensee's examination security measures while preparing and administering the examinations in order to ensure compliance with 10 CFR §55.49, "Integrity of examinations and tests."

The NRC administered the operating tests during the period September 25 – October 5, 2017. NRC examiners evaluated eight RO and seven SRO applicants using the guidelines contained in NUREG-1021. Members of the Robinson training staff administered the written examination on October 11, 2017. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the H. B. Robinson Steam Electric Plant, met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

The NRC evaluated the performance or fidelity of the simulation facility during the preparation and conduct of the operating tests.

##### b. Findings

No findings were identified.

The NRC developed the written examination sample plan outline. Members of the H. B. Robinson Steam Electric Plant training staff developed both the operating tests and the written examination. All examination material was developed in accordance with the guidelines contained in Revision 11 of NUREG-1021. The NRC examination team reviewed the proposed examination. Examination changes agreed upon between the NRC and the licensee were made per NUREG-1021 and incorporated into the final version of the examination materials.

The NRC determined, using NUREG-1021, that the licensee's initial examination submittal was within the range of acceptability expected for a proposed examination.

Revision 11 of NUREG-1021 contains newly-amplified guidance on the prevention of unnecessary challenges to the plant Reactor Protection System (RPS), as related to the assessment of critical tasks in the simulator scenario portion of the operating tests. Specifically, NUREG-1021 Appendix D, page D-17, stated the following:

If an operator takes an action that the examiners did not expect, the examiners must further evaluate the individual's rationale for taking that action. Such preemptive actions may indicate a misunderstanding of plant conditions or a weakness in integrated plant knowledge that should be clarified with followup questions. Taking a preemptive manual action when an automatic action is imminent because of an incorrect action or inaction does not mitigate the initial incorrect action/inaction.

- Example: An applicant fails to manually control pressurizer pressure (where pressure is controllable per the validated scenario), and the pressure reaches a threshold at which the crew initiates a manual trip. This is a CT because pressure was intended to be a controllable variable in the scenario guide.

[...] Before administering the exam, developers and examiners should make an effort to identify events for which applicant inaction or common applicant error has the potential to result in an automatic RPS or ESF actuation. One method to accomplish this is to make a blanket statement in the scenario guide that "Causing an unnecessary plant trip or ESF actuation may constitute a CT failure. Actions taken by the applicant(s) will be validated using the methodology in Appendix D to NUREG-1021."

Using the above guidance, the NRC determined that two applicant crews created two (self-revealing) "new" critical tasks during the administration of the operating test. In one case, an applicant crew initiated an unnecessary manual reactor trip after failing to control pressurizer pressure during a failed-open spray valve event. In the other case, an applicant team initiated an unnecessary manual reactor trip after failing to control Volume Control Tank (VCT) level such that a manual reactor trip was required following an automatic "swap over" of charging pump suction alignment from the VCT to the Refueling Water Storage Tank (RWST).

Eight Reactor Operator (RO) and four Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO and one SRO applicant passed the operating test, but failed the written examination. One SRO applicant passed the written examination, but failed the operating test. One SRO applicant failed both the operating test and the written examination. Eight RO applicants and four SRO applicants were issued licenses.

Copies of all individual examination reports were sent to the facility Training Manager for evaluation of weaknesses and determination of appropriate remedial training.

The facility licensee submitted one post-examination comment concerning the operating test. The applicants submitted five post-examination comments concerning the written

examination. A copy of the final RO and SRO written examinations and answer keys, with all changes incorporated, may be accessed not earlier than December 18, 2019, in the ADAMS system (ADAMS Accession Number(s) ML17354B267 and ML17354B270). A copy of the Post Examination Comments (with PII redacted) may be accessed in the ADAMS system via ML17354B271.

#### 40A6 Meetings, Including Exit

##### Exit Meeting Summary

On October 5, 2017, the NRC examination team discussed generic issues associated with the operating test with D. Hoffman, Operations Manager (acting Plant General Manager), and members of the H.B. Robinson Steam Electric Plant staff. The examiners asked the licensee if any of the examination material was proprietary. No proprietary information was identified. On December 13, 2017, the NRC discussed the results of the examination with members of the H.B. Robinson staff.

### **KEY POINTS OF CONTACT**

#### Licensee personnel

L. Basta, Operations  
 C. Caudell, Regulatory Affairs  
 J. Conder, Operations  
 G. Curtis, Assistant Operations Manager-Support  
 R. Drehs, Supervisor Nuclear Training  
 F. Giannone, Training Manager  
 T. Giese, Manager Nuclear Operations Training  
 F. Holbrook, SPD  
 D. Hoffman, Operations Manager  
 T. Pilo, Manager Regulatory Affairs  
 J. Rackley, Operations Training Supervisor

#### NRC personnel

J. Rotton, Senior Resident Inspector  
 A. Beasten, Resident Inspector



## FACILITY POST-EXAMINATION COMMENTS AND NRC RESOLUTIONS

A complete text of the licensee's post-examination comments can be found in ADAMS under Accession Number ML17354B271.

### 1. Item

Simulator Scenario 6, Event 4; and Simulator Scenario 1, Event 3

#### Facility Licensee Comment:

The following comments are submitted on the RNP 2017301 Operating Examination. Both pertain to an ITS entry into 3.3.6 Condition A for Function 4, that was not initially included in the ES-D-2's for the scenarios identified, and it is an appropriate entry that should be added to the exam.

#### N17-1-6

In simulator scenario N17-1-6, Event 4, Failure of Main Steam Line "C" Pressure Transmitter (PT-495) HIGH, the exam team identified the following tech spec entry condition ONLY in the ES-D-2: LCO 3.3.2 CONDITIONS A and D.

In the performance of this exam scenario on Day 2, the 3 crews that were examined, each SRO additionally identified that they would enter ITS 3.3.6 Containment Ventilation isolation instrumentation for Function 4, Safety Injection, shown below: (LCO 3.3.6 CONDITION A).

The exam team concluded that this ITS entry would be appropriate, and once the OWP-025, STEAM GENERATOR PRESSURE (SGP) SGP-11 MAIN STEAM LINE "C" PRESSURE TRANSMITTER PT-495 was completed this ITS would be exited. Entry into ITS 3.3.6 Condition A for N17-1-6 Event 4 should be added to the Page 36 of the N17-1-6 ES-D-2.

#### N17-1-1

The same ITS 3.3.6 entry also was found to be applicable in Simulator Scenario N17-1-1 in Event 3, failure of S/G "A" STEAM FLOW TRANSMITTER (FT-474) LOW. Again the initially submitted ES-D-2 ONLY identified entry into ITS 3.3.2 CONDITIONS A and D. The crews that were examined with this scenario on Day 4, also entered ITS 3.3.6. The exam team concludes that this ITS entry would be appropriate, and once the OWP-034, STEAM FLOW (SF) SF-1 STEAM FLOW TRANSMITTER FT-474 was completed this ITS would be exited. Entry into Condition A for N17-1-1 Event 3 should be added to the Page 34 of the N17-1-1 ES-D-2.

#### NRC Resolution

The licensee's recommendation was accepted.

At Robinson, there is an interlock between the automatic Safety Injection actuation function (covered by Technical Specification (TS) LCO 3.3.2) with the Containment Ventilation Isolation function (which has specifications applicable in TS LCO 3.3.6). During development and validation of simulator scenarios 1 and 6, the exam developers, the NRC, and the operators involved in the validation of the scenarios agreed that only LCO 3.3.2 was required to be

entered for scenario 1, event 3, for a steam flow transmitter failure; and scenario 6 event 4, for a steam line pressure transmitter failure.

However, as stated above by the facility licensee, following a post-examination assessment, entry into both LCO 3.3.2 and LCO 3.6.6 was determined to be the technically correct application of the appropriate specifications, given the conditions present in the scenario events. Therefore, the NRC agreed with the facility licensee's recommendation and modified the ES-D-2 forms for these two scenario events to add the additional entry into LCO 3.6.6 as technically accurate, in accordance with TS, for the given conditions.

All applicants who were given Scenarios 1 and 6 during exam administration of the operating test were evaluated as required to enter LCO 3.6.6 along with LCO 3.3.2 for these events.

## 2. Item

Question 1, K/A 007EK1.04

### Applicant Comment

A Robinson licensed operator applicant recommended the following concerning Question 1:

To perform the calculation in this question a GFES equation from the GFES equation sheet (provided by the licensed operator applicant as an enclosure to the post-examination comment) is required. These equations are not required to be memorized. During the NRC exam a GFES equation sheet was not provided to the applicants to use but was necessary to get the correct answer.

Due to an equation sheet not being provided to the applicants this question should be excluded from the exam as invalid.

### Facility Comment

The applicant's challenge is in regards to whether or not the GFES equation sheet was required to correctly answer the question. The facility wrote the question as a closed book, no reference provided question, and it was approved as such. Additionally, during the exam another candidate asked if the GFES equation sheet should be provided, and the Chief Examiner respond that the applicant should "Answer the question with the information provided." The facility maintains that position that the equation sheet is not required.

Recommend the applicant comment be rejected based on the above.

### NRC Resolution

The NRC agreed with the facility licensee's recommendation, and rejected the applicant's contention.

Contrary to the applicant's contention, a GFES equation sheet is not required to elicit the correct answer for this question. The applicant is required to know/understand/recall two specific facts: (1) first, that during the time frame of the question, the indicated Reactor Start-Up-Rate (SUR) will remain approximately a constant  $-1/3$  DPM; and (2) secondly, that the Robinson setpoint for

POWER ABOVE P-6 reset is approximately  $8 \times 10^{-11}$  Amps for Intermediate Range N-35 (the instrument specified in the question stem). Based on these two facts, and knowledge/understanding of what “decades” of nuclear power implies, an applicant can use first principles to determine that the reset will occur approximately 3.8 decades of power away from the hypothetical “current” time of the question. Simple unit conversion/division will then provide the applicant with the correct answer (3.8 decades/0.33 DPM = ~11.4 minutes). The GFES equation sheet is not required for this determination from basic principles and site-specific knowledge.

Note that there may be additional ways to determine the correct answer than the above discussion; for example, an applicant may simply remember the approximate time post-trip that the POWER ABOVE PERMISSIVE P6 status light extinguishes—whether from experience in the plant or from experience during simulator training—and determine the answer via that mental process.

In any event, as agreed by the facility licensee, a GFES equation sheet was not required for this question. In accordance with NUREG-1021, the written examination answer key was not changed based on this contention.

### 3. Item

Question 12, K/A 055EG2.1.19

#### Applicant Comment

A Robinson licensed operator applicant recommended the following concerning Question 12:

The answer key states ‘C’ is the correct answer. Contrary to this part one of the question describes the function of ERFIS to use adverse containment set-points when evaluating CSFSTs via SPDS is written as a general statement independent of plant conditions. Regardless of plant conditions, ERFIS DOES use adverse containment set-points when evaluating the CSFSTs via SPDS (reference material provided by the licensed operator applicant as an enclosure to the post-examination comment). Containment pressure reduction below 4 Psig does not remove the ability of SPDS to perform this function. If the intent of the questions was to describe the current state of ERFIS and the SPDS program under current plant conditions then the answers should have stated: EFRIS IS or IS NOT using adverse containment set-points when evaluating CSFSTs via SPDS. These above conditions support ‘A’ as the correct answer.

Correct answer is ‘A.’

#### Facility Comment

Which ONE of the following correctly completes the statements below based on the current plant conditions?

It is important to note that the stem of the question specifically asks the candidate to answer based on current plant conditions.

The current plant condition provided in stem is,

- CURRENT CV pressure is 3.5 psig and slowly lowering

The ERFIS Safety Parameter Display System (SPDS) Critical Safety Function Status Trees (CSFSTs) use adverse set-point values when adverse containment conditions are present. Adverse containment conditions are defined as containment pressure greater than or equal to four psig. The SPDS CSFSTs returns to normal set-point values when the adverse containment conditions are no longer present. This is in accordance with the SPDS Software Requirement Specification (RNP2-6004-SPDS-0001).

The stem of the question specifically asks about current plant conditions, therefore, for the current plant containment pressure of 3.5 psig ERFIS does NOT use adverse containment set-points when evaluating CSFSTs via SPDS.

Recommend the applicant comment be rejected based on above.

#### NRC Resolution

The NRC agreed with the facility licensee's recommendation, and rejected the applicant's contention.

Contrary to the applicant's contention, as the facility licensee pointed out, the question stem specifically directed the applicant to answer the question "... based on the **current plant conditions**" [emphasis added]. The question stem stated that peak containment pressure during the event was 4.5 psig, which requires the use of adverse containment setpoints in determining critical safety function status (CSFST), and then containment pressure lowered to 3.5 psig, which is below the adverse setpoint requirement. Under the current plant conditions of 3.5 psig in containment, the automatic system (ERFIS) will NOT be using adverse setpoints in its displays for CSFST. However, procedure OMM-022 requires the use of adverse setpoints for the current conditions because once adverse setpoints are required to be used they are required to be used throughout the event—even if containment pressure was to lower. Therefore, the question highlights an important point of knowledge to the operators that they must be able to interpret and understand computer indications for these given conditions.

Therefore, the NRC determined that 'C' remains the only technically correct answer to the question. In accordance with NUREG-1021, the written examination answer key was not changed based on this contention.

#### 4. Item

Question 23, K/A 060AA2.03

#### Comment

A Robinson licensed operator applicant recommended the following concerning Question 23:

The key states 'B' is correct. Contrary to this part one of the question asks if a proposed clearance COMPLETELY isolated the "A" Waste Gas Compressor from the Gaseous Waste Disposal System. The clearance uses the following valves: WD-1611, 1670, 1665, 1669, and 3335. This clearance does not COMPLETELY isolate the "A" Waste Gas Compressor from the

Gaseous Waste Disposal system, as shown in the reference provided. To COMPLETELY Isolate the "A" Waste Gas Compressor from the Gaseous Waste Disposal System the following valves must be included on the clearance as well: WD-1643, WD-3336 and LCV-1030 A/B. Piping runs ¾-WD-739 and 1-1/2-WD-152R-175 are part of the Gaseous Waste Disposal System. Additionally, WD-1643 and LCV-1030B and nomenclature were not mentioned in the stem of the question so there was no way to tell what part of the system they are. These valves go to a leg of piping which ends in an arrow pointing down. This arrow is unlabeled on the reference drawing so there is no way to tell where the rest of this piping ends nor what system it goes to. These above conditions support 'C' as the correct answer.

Note: The question does not ask if the clearance is adequate.

Correct Answer is 'C.'

#### Facility Comment

Which ONE of the following correctly completes the statements below?

The proposed clearance \_\_\_\_\_ completely isolates the "A" Waste Gas Compressor from the Gaseous Waste Disposal System.

The proposed clearance does completely isolate the "A" Waste Gas Compressor from the Gaseous Waste Disposal System. Neither, WD-1643 (Compressor "A" Moisture Separator Drain), WD-3336 (Test Connection at PC-1028), nor LCV-1030B (WGC "A" Moisture Separator Level Control) are required to isolate the "A" Waste Gas Compressor for the Gaseous Waste disposal system because they don't isolate any sources of energy associated with the compressor, nor do they establish a boundary between the compressor and the Gaseous Waste Disposal System.

Recommend the applicant comment be rejected based on above.

#### NRC Resolution

The NRC agreed with the facility licensee's recommendation, and rejected the applicant's contention.

Contrary to the applicant's contention, as the facility licensee noted, the proposed isolations in the question stem do isolate the "A" Waste Gas Compressor (WGC) from the Gaseous Waste Disposal (GWD) system. During the exam administration, there were no questions from any applicant concerning the nomenclature of the additional components mentioned by the applicant above. Furthermore, the additional components identified by the applicant above as required to isolate the "A" WGC do not, in fact, interface with the GWD system.

Therefore, the NRC determined that 'B' remains the only technically correct answer to the question. In accordance with NUREG-1021, the written examination answer key was not changed based on this contention.

5. Item

Question 62, K/A 029A1.02

Comment

A Robinson licensed operator applicant recommended the following concerning Question 62:

The key states 'C' is correct. Contrary to this part two of the question states the equipment hatch is removed per OMM-033. No other components were referenced in the stem of the question so it cannot be assumed that any other components were manipulated. Additionally, there are times when the equipment hatch is removed and the leads for R-11 and R-12 are NOT lifted (i.e., performance of OST-163 [Enclosure provided by the licensed operator applicant]). With the information provided in the stem of the question an R-11 alarm would cause HVE-1A to automatically stop. These above conditions support 'A' as the correct answer

Correct Answer is 'A'

Facility Comment

Which ONE of the following correctly completes the statements below?

To commence the Purge operation \_\_\_\_\_ MUST be in operation.

If R-11, CV AIR & PLANT VENT PARTICULATE alarms, HVE-1A \_\_\_\_\_ automatically stop.

Per OMM-033 (Implementation of CV Closure), Section 5.6.1

“If the Equipment Hatch has been removed, then the automatic closure signal from R-11 and 12 has been defeated per Attachment 6 Section 1.0 Step 2.b, in support of CM-603, Disassembly and Assembly of the Containment Equipment Hatch and Missile Barrier. The automatic signal from SI and the Manual signal are still available.”

Attachment 6 Section 1.0 Step 2.b states,

2. **Ensure** CV Purge has been established as follows: ..... \_\_\_\_\_

a. CV Purge is in progress per OP-921, Containment Air Handling \_\_\_\_\_

b. R-11 and R-12 leads are lifted as follows: ..... \_\_\_\_\_

(1) At Safeguards Cabinet, Rack 52 (rear), Train 'A', **lift** and **tape** Cable C2279N at Terminal Board 6L, Terminals ..... \_\_\_\_\_

(2) At Safeguards Cabinet, Rack 64 (rear), Train 'B', **lift** and **tape** Cable C2279T at Terminal Board 6L, Terminals 1 and 2 .. \_\_\_\_\_

There is nothing in the stem of the question about any other procedures being in progress. With the leads lifted an alarm on R-11 would not result in HVE-1A automatically stopping. As stated in OMM-033 the automatic signal from SI and manual signals are available.

Recommend the applicant comment be rejected based on above.

### NRC Resolution

The NRC agreed with the facility licensee's recommendation, and rejected the applicant's contention.

The applicant's contention is centered on unsupported assumptions that other procedures are in progress that are not stated in the question stem. The insistence of an unsupported assumption of unstated procedures in progress is contrary to the guidance contained in Appendix E to NUREG-1021.

The question stem clearly specifies that "The equipment hatch is removed IAW OMM-033, IMPLEMENTATION OF CV CLOSURE." Procedure OMM-033 clearly specifies that the automatic closure signals from R-11 and R-12 are defeated for the given plant conditions due to the procedural requirement to lift the leads for these signals. Furthermore, OMM-033 requires R-14C to be in operation for the special test OST-163 mentioned in the applicant's contention to be performed. However, the question stem states that R-14C is out-of-service (OOS). Therefore, with R-14C OOS, special test OST-163 cannot be in progress under the given conditions, and the leads would be in a "lifted" status. It is technically correct to assert that given the conditions present in the question's stem, if R-11 were to alarm, then HVE-1A will NOT automatically stop, as specified in the question.

Therefore, the NRC determined that 'C' remains the only technically correct answer to the question. In accordance with NUREG-1021, the written examination answer key was not changed based on this contention.

### 6. Item

Question 90, K/A 103A2.02

### Comment

A Robinson licensed operator applicant recommended the following concerning Question 90:

The key states 'A' is correct. Contrary to this part two of this question asks if a containment purge may be started under the current permit. Under the plant conditions described in the stem of this question a containment ventilation isolation signal from R-12 has isolated the purge. In the current plant conditions, IAW OP-921 CONTAINMENT AIR HANDLING, the Containment purge MAY NOT be restarted (step 6.4.1.24 e [Enclosure provided by licensed operator applicant] under the current permit until steps 6.4.1.24 a., b., c., and d of OP-921 have been completed (i.e. the containment isolation signal has been reset). These above conditions support 'B' as the correct answer.

Correct answer is 'B'

Facility Comment

Which ONE of the following correctly completes the statements below?

The CV Purge \_\_\_\_\_ be restarted under the CURRENT permit.

The question is asking if the CV Purge may be restarted. In this case the fact that the verb "may" was used is relevant. May means; have permission to. The question is asking of [sic] the procedure gives the operator permission to restart the CV purge under the CURRENT permit. OP-921 (Containment Air Handling) contains the following steps which permit the CV purge to be restarted under the CURRENT permit:

- 10. **IF AT ANY TIME** the following occurs:
  - R-11 (CV and Plant Vent Air Particular Monitor) alarms during Purge, **AND** Setpoint are lower than setpoint on release permit,
  - R-12 (CV and Plant Vent Radioactive Gas Monitor) alarms during Purge, **AND** Setpoint are lower than setpoint on release permit,

**THEN perform** the following: ..... \_\_\_\_\_

- a. **Adjust** RMS setpoints as required IAW values on release permit .. \_\_\_\_\_
- b. **RESET** Containment Isolation Vent Iso ..... \_\_\_\_\_
- c. **Check** the following Safeguards Relay lights EXTINGUISHED: .. \_\_\_\_\_
  - CV Ventilation Isolation Signal V-1 ..... \_\_\_\_\_
  - CV Ventilation Isolation Signal V-2 ..... \_\_\_\_\_
- d. **Place** CV Press Relieve V12-10 and V12-11 Control Switch to OPEN position ..... \_\_\_\_\_
- e. **Check**, by position indicating lights, Containment Pressure Relief valves are OPEN ..... \_\_\_\_\_
  - V12-10 (Containment Pressure Relief) OPEN ..... \_\_\_\_\_
  - V12-11 (Containment Pressure Relief) OPEN ..... \_\_\_\_\_

Recommend the applicant comment be rejected based on above.

NRC Resolution

The NRC agreed with the facility licensee's recommendation, and rejected the applicant's contention.

The applicant is correct that additional steps in OP-921, CONTAINMENT AIR HANDLING, are required to be performed in order to restart the containment purge under the conditions



specified in the question stem. However, the applicant is incorrect in the statement that the additional steps that are required to be performed make distractor 'B' a correct answer. The second part question statement clearly states: "The CV purge [may or may NOT] be restarted under the CURRENT permit." It is technically correct that the CV purge may be restarted under the CURRENT permit (once the additional steps in OP-021 are performed as required). It is technically incorrect to state that the CV purge may NOT be restarted, which is the alternative choice. Therefore, as stated above by the facility licensee, the applicant's contention is technically inaccurate. The question is asking whether or not the procedure allows the operators to restart the CV purge under the current permit; OP-921 contains steps (listed above) that allow the CV purge to be restarted under the current permit.

Therefore, the NRC determined that 'A' remains the only technically correct answer to the question. In accordance with NUREG-1021, the written examination answer key was not changed based on this contention.

## **SIMULATOR FIDELITY REPORT**

Facility Licensee: H. B. Robinson Steam Electric Plant, Unit 2

Facility Docket No.: 05000261

Operating Test Administered: September 25 – October 5, 2017

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with Inspection Procedure 71111.11 are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

No simulator fidelity or configuration issues were identified.