RNP SRO License Applicant

[redacted]

Docket Number 55-[redacted]

Post Exam Comments on The

NRC Written Exam Administered

on October 11, 2017

Post exam comments from SRO License Applicant - [redacted]

Question 12 – RO Section

Given the following:

- The crew was operating in EOP-ECA-0.2, LOSS OF ALL AC POWER RECOVERY WITH SI REQUIRED, following an Extended Loss of AC Power (ELAP)
- The PEAK CV pressure during the ELAP was 4.5 psig

Current conditions:

- The crew has just been directed to reset the Safety Parameter Display System (SPDS) and initiate monitoring of the Critical Safety Function Status Trees (CSFSTs)
- CURRENT CV pressure is 3.5 psig and slowly lowering

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

ERFIS ____(1)____ use adverse containment setpoints when evaluating the CSFSTs via SPDS.

IAW OMM-022, EMERGENCY OPERATING PROCEDURES USER'S GUIDE, adverse containment setpoints are ____(2)____ to be used.

A. (1) does
(2) required

B. (1) does
(2) NOT required

C. (1) does NOT
(2) required

D. (1) does NOT
(2) NOT required

Applicant's Comments:

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 CSFTSs via SPDS (Enclosure 1). 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: ERFIS IS or IS NOT using adverse containment set-points when evaluating the CSFSTs via SPDS. These above conditions support 'A' as the correct answer.

Correct Answer is 'A'

Question 23 – RO Section

Given the following:

- R-14C, PLANT VENT LOW RANGE GAS MONITOR is in alarm
- The crew is in AOP-005, RADIATION MONITORING SYSTEM
- The on-shift RC Tech reports that gas samples indicate "A" Waste Gas Compressor is the source of the activity

A clearance is prepared containing the following Waste Disposal (WD) system valves, all of which are proposed to be closed:

WD-1611, WASTE GAS COMPRESSOR "A" SUCTION

WD-1670, WASTE GAS COMPRESSOR "A" DISCHARGE

WD-1665, WASTE GAS COMPRESSOR "A" RECIRC

WD-1669, WASTE GAS COMPRESSOR "A" NITROGEN SUPPLY

WD-3335, WD-2063A ISOLATION

Which ONE of the following correctly completes the statements below?

The proposed clearance ____(1)____ completely isolate the "A" Waste Gas Compressor from the Gaseous Waste Disposal System.

IAW AD-OP-ALL-0200, CLEARANCE AND TAGGING, electrical power sources to the "A" Waste Gas Compressor are tagged ___(2)____ the mechanical isolation points.

REFERENCE PROVIDED

(1) does

(2) after

(1) does

(2) prior to

(1) does NOT

(2) prior to

(1) does NOT

(2) after

Applicant's Comments:

The key states 'B' is correct. Contrary to this part one of the question asks if a proposed clearance COMPLETELY isolates 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 (Enclosure 2). 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. (Enclosure 3). 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'

References Provided:

Enclosure 1 – Drawing HBR2 5379-00921, Gaseous Waste Disposal System Flow Diagram, Revision 35, Sheet 2 of 2

Enclosure 2 – OP-702, Waste Disposal – Gas, Attachment 1, Waste Gas System Initial Valve Lineup, pages 57 and 69

Question 62 – RO Section

Given the following:

- The plant is in MODE 5
- The equipment hatch is removed IAW OMM-033, IMPLEMENTATION OF CV CLOSURE
- A Containment Purge is in progress IAW OP-921, CONTAINMENT AIR HANDLING
- R-14C, PLANT VENT LOW RANGE GAS MONITOR is Out of Service (OOS)
- HVE-1A, CV PURGE FAN is in operation
- Containment radiation monitors are all trending up slowly

Which ONE of the following correctly completes the statements below?

To commence the Purge operation ____(1)____ MUST be in operation.

IF R-11, CV AIR & PLANT VENT PARTICULATE alarms, HVE-1A ____(2)____ automatically stop.

A. (1) both R-11 AND R-12

(2) will

B. (1) either R-11 OR R-12

(2) will

C. (1) both R-11 AND R-12

(2) will NOT

D. (1) either R-11 OR R-12

(2) will NOT

Applicant's Comments:

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 4]). 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'

Enclosure 3 – OMM-033, Implementation of CV Closure, Attachment 6, Requirements for CV Equipment Hatch Removal, page 39

Question 90: SRO Section

Given the following:

- The plant is at 100% RTP
- Containment Purge is in service to reduce CV temperature for CV entry
- R-12 is in alarm and confirmed to be VALID
- R-12 is reading lower than the release permit allowed level

Which ONE of the following correctly completes the statements below?

An NRC report_____(1)_____required IAW AP-030, NRC REPORTING REQUIREMENTS.

The CV purge_____(2)_____be restarted under the CURRENT permit.

REFERENCE PROVIDED

A. (1) is
(2) may

B. (1) is
(2) may NOT

C. (1) is NOT
(2) may

D. (1) is NOT
(2) may NOT

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 5]) 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'

Question 1: RO question

Given the following:

- The plant is at 100% RTP
- At TIME=0, an inadvertent turbine trip occurs
- At TIME=2 minutes, Intermediate Range N-35 indicates 5.0 E-7 AMPS

Which ONE of the following is the MINIMUM additional time expected for the POWER ABOVE PERMISSIVE P6 status light to EXTINGUISH on the IR N-35 Drawer?

A. 8 – 10 minutes

B. 11 – 13 minutes

C. 14 – 16 minutes

D. 17 – 19 minutes

To perform the calculation in this question a GFES equation from the GFES equation sheet (enclosure 6) 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.

Enclosure 1

2.7.3 Calculations

2.7.3.1 Core Exit Thermocouples (RXT0001)

The 49 core exit thermocouple points (RXT0001A - RXT0049A) are used to calculate the average temperature of the five highest thermocouples (T5HOT) which is output to point RXT0001. Invalid inputs are not used in the calculation. If less than 5 thermocouple points are valid then the calculation is not performed and the quality of point RXT0001 is set to BAD.

2.7.3.2 Low RCS Pressure (RCP0002)

The low RCS Pressure is calculated as follows and is output to point RCP0002:

- The lowest narrow range pressurizer pressure (RCP0480A, RCP0481A, and RCP0482A) is output to point RCP0002 as long as at least one valid pressure exists.
- If all narrow range pressurizer pressure points are invalid and at least one wide range pressurizer pressure (RCP0493A and RCP0494A) is valid, then the lowest wide range pressurizer pressure is output to point RCP0002.
- If all narrow and wide range pressurizer pressure points are invalid theo RCP0002 is not calculated and the quality is set to BAD.

2.7.3.3 Saturation Temperature at Low RCS Pressure (TSAT)

The saturation temperature at Low RCS Pressure (TSAT) is retrieved from steam table function TSL. The Low RCS Pressure must be converted from PSIG to PSIA prior to calling the TSL function.

2.7.3.4 RCS Subcooling (RCT0003)

RCS Subcooling (RCT0003) is the difference between the saturation temperature at the low RCS pressure and the average temperature of the five highest thermocouples (RXT0001). RCS Subcooling is output to point RCT0003. If the Low RCS Pressure or the average of the five highest thermocouples is invalid, then RCT0003 is not calculated and the quality is set to BAD.

2.7.3.5 Subcooling Target Value (RCT0004)

The subcooling target value (point RCT0004) is set to 37 DEGF if average containment pressure (CVP0001) is greater than or equal to 4 PSIG and is set to 18 DEGF if average containment pressure is less than 4 PSIG. If average containment pressure is invalid, then the subcooling target value is set to 37 DEGF.

- If one or two of the loop main feedwater flow averages are invalid and the sum of the remaining valid point(s) is greater than 0.2 MPPH, then the output is considered valid.
- If one or two of the inputs are invalid and the sum of the remaining valid point(s) is less than or equal to 0.2 MPPH, then the output is considered invalid and the quality of FWF0011 is set to a quality of BAD.
- If all the inputs are invalid, then the output is considered invalid and the quality of FWF0011 is set to a quality of BAD.

2.8.3.4 Sufficient Feedwater Flow Flag (FWF0012)

The Sufficient Feedwater Flow Flag is set to one to indicate sufficient feedwater flow exists (AFF0001 greater than 300 GPM or FWF0001 greater than 0.2 MPPH) or zero if insufficient feedwater flow exists. If both AFF0001 and FWF0011 are invalid, then FWF0012 is set to a quality of BAD. If FWF0011 is invalid and then value of AFF0001 less than or equal to 300, then the quality is set to BAD. If AFF0001 is invalid and then value of FWF0011 less than or equal to 0.2, then the quality is set to BAD.

2.8.3.5 Steam Generator Narrow Range Level Target Value (RCL0005)

The steam generator narrow range level target value (point RCL0005) is set to 18% if average containment pressure (CVP0001) is greater than or equal to 4 PSIG and 9% if average containment pressure is less than 4 PSIG. If average containment pressure is invalid, then the steam generator narrow range level target value is set to 18%.

2.8.3.6 Average Loop Steam Generator Narrow Range Level (FWL0002, FWL0003, and FWL0004)

The three narrow range levels for steam generator loop are combined in a 2 out of 3 logic and output to the respective steam generator narrow range level loop averages.

The steam generator A narrow range level inputs are FWL0400A, FWL0401A, and FWL0402A. The average steam generator A narrow range level is output to point FWL0002.

The steam generator B narrow range level inputs are FWL0420A, FWL0421A, and FWL0422A. The average steam generator B narrow range level is output to point FWL0003.

The steam generator C narrow range level inputs are FWL0440A, FWL0441A, and FWL0442A. The average steam generator C narrow range level is output to point FWL0004.

In the Heat Sink CSF there are two set-points for steam generator narrow range level, a variable low level set-point (RCL0005) and a high level set-point of 75 %. The low level set-point represents the worst case and takes priority over the high set-point. The loop average narrow range levels are calculated as follows:

- If two or more of the values are less than or equal to the low set-point, then only those values are averaged.
- If two or more of the values are greater than or equal to the high set-point, then only

Enclosure 2

VENTYX
AN ABB COMPANY

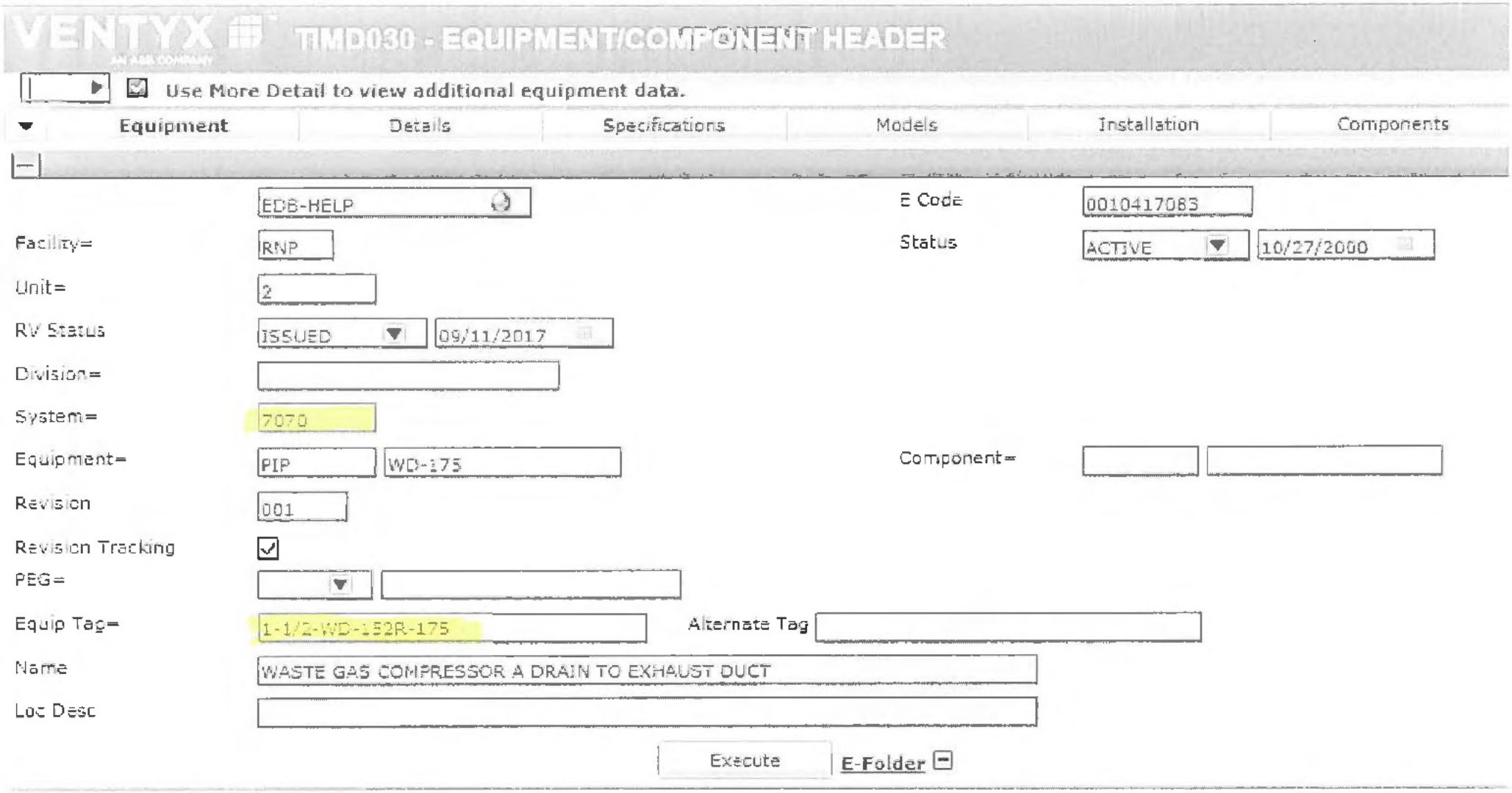
TIMX18A - SYSTEM CODE PR

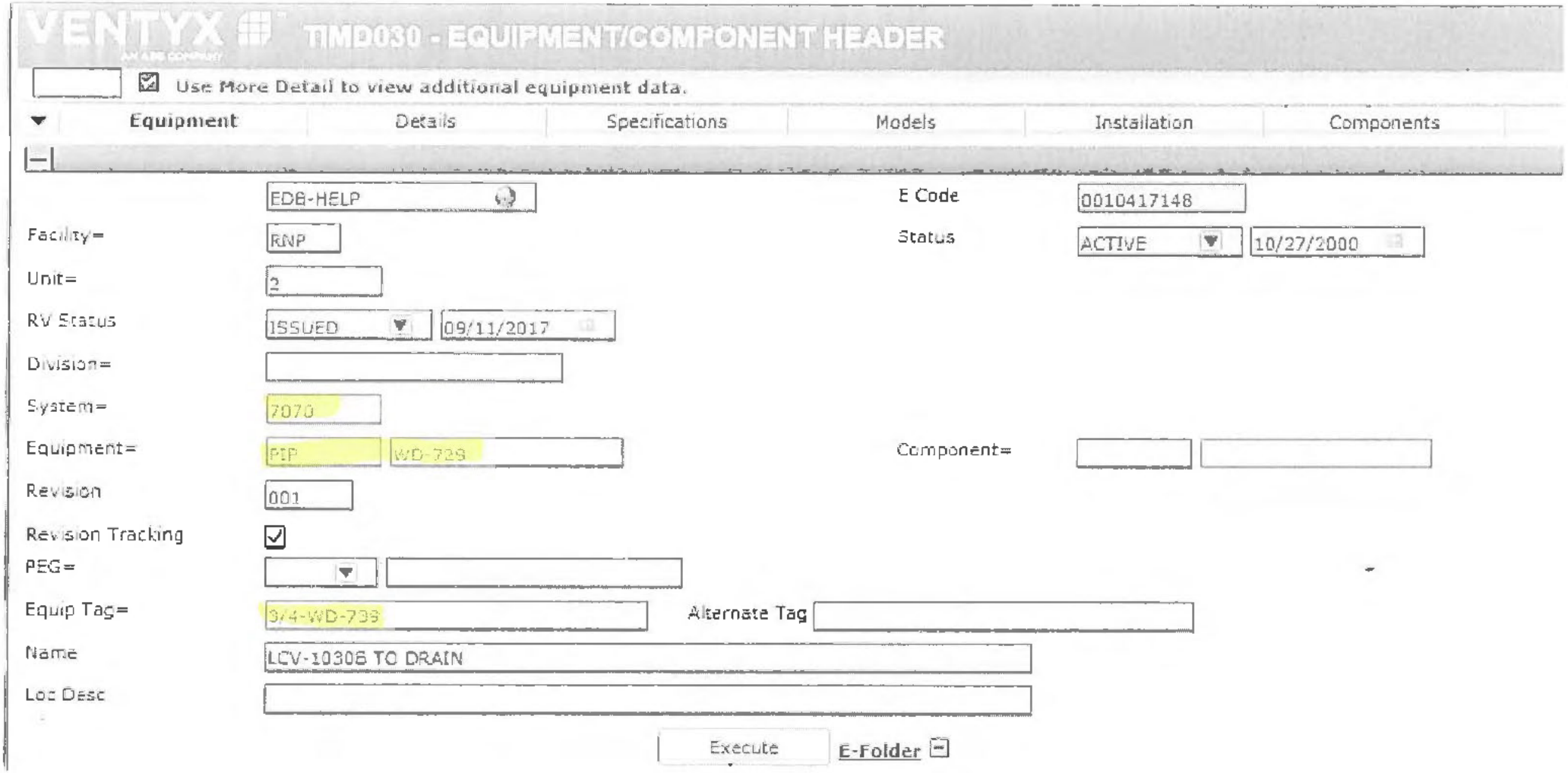
Select to return a System code.

Facility RNP

Description

	System	Description
	7070	GASEOUS WASTE PROCESSING


VENTYX
TIMD030 - EQUIPMENT/COMPONENT HEADER
Use More Detail to view additional equipment data.
Equipment
Details
Specifications
Models
Installation
Components
EDB-HELP
E Code
0010417083
Facility=
RNP
Status
ACTIVE
10/27/2000
Unit=
2
RV Status
ISSUED
09/11/2017
Division=
System=
7070
Equipment=
PIP
WD-175
Component=
Revision
001
Revision Tracking
PEG=
Equip Tag=
1-1/2-WD-152R-175
Alternate Tag
Name
WASTE GAS COMPRESSOR A DRAIN TO EXHAUST DUCT
Loc Desc
Execute
E-Folder


VENTYX
TIMD030 - EQUIPMENT/COMPONENT HEADER
Use More Detail to view additional equipment data.
Equipment
Details
Specifications
Models
Installation
Components
EDB-HELP
E Code
0010417148
Facility=
RNP
Status
ACTIVE
10/27/2000
Unit=
2
RV Status
ISSUED
09/11/2017
Division=
System=
7070
Equipment=
PIP
WD-729
Component=
Revision
001
Revision Tracking
PEG=
Equip Tag=
3/4-WD-729
Alternate Tag
Name
LCV-10306 TO DRAIN
Loc Desc
Execute
E-Folder

<< Waste Gas System Initial Valve Lineup >>

Waste Gas Compressor Area				
VALVE NO.	**VALVE DESCRIPTION**	**POSITION**	**INIT**	**TAG ATTD**
PCV-1026	Waste Gas Compressor Suction Control	OPERABLE		
WD-3331	PCV-1026 Isolation	OPEN		
WD-1615	PT-1025 Isolation	OPEN		
WD-1875	Test Connection At PCV-1026	CLOSED		
		CAPPED		N/A
WD-2249	PI-1026 Isolation	OPEN		
WD-1870	Waste Gas Compressor Discharge Header Drain	CLOSED		
		CAPPED		N/A
WD-1611	Waste Gas Compressor A Suction	OPEN		
PCV-1031	Waste Gas Compressor A Disch Press Control	OPERABLE		
WD-1670	Waste Gas Compressor A Discharge	OPEN		
PCV-1028	Waste Gas Compressor A Discharge To CVCS HUTs	OPERABLE		
WD-1676	Waste Gas Compressor A Discharge To CVCS HUTs	OPEN		
PCV-1050	Waste Gas Compressor A Recirc Control	OPERABLE		
WD-1665	Waste Gas Compressor A Recirc	OPEN		
PCV-1023	WGC A Nitrogen Supply Pressure Control	OPERABLE		
WD-1669	Waste Gas Compressor A Nitrogen Supply	CLOSED		
LCV-1030A	WGC A Moisture Separator Level Control	OPERABLE		
LCV-1030B	WGC A Moisture Separator Level Control	OPERABLE		
WD-1643	Compressor A Moisture Separator Drain	CLOSED		
WD-2064A	Compressor A Moisture Separator Sight Glass Isol	OPEN		
WD-2065A	Compressor A Moisture Separator Sight Glass Isol	OPEN		
WD-2063A	Moisture Separator A Relief	NOT GAGGED		
WD-1612	Waste Gas Compressor B Suction	OPEN		

<< Waste Gas System Initial Valve Lineup >>

Waste Gas Compressor Area (continued)				
VALVE NO.	VALVE DESCRIPTION	POSITION	INIT	TAG ATTD
WD-3332	WD-2063B Isolation	LOCKED OPEN		
WD-3327	Test Connection At PCV-1023	CLOSED		
		CAPPED		N/A
WD-3328	PCV-1028 Downstream Isolation	CLOSED		
		CAPPED		N/A
WD-3329	Test Connection At PCV-1050	CLOSED		
		CAPPED		N/A
WD-3330	Test Connection At PCV-1031	CLOSED		
		CAPPED		N/A
WD-3333	Test Connection At PC-1035	CLOSED		
		CAPPED		N/A
WD-3334	PC-1035 Isolation	OPEN		
WD-3335	WD-2063A Isolation	LOCKED OPEN		
WD-3336	Test Connection At PC-1028	CLOSED		
		CAPPED		N/A
WD-3337	PC-1028 Isolation	OPEN		
WD-3338	PCV-1028 Upstream Isolation	CLOSED		
		CAPPED		N/A
WD-3339	Test Connection At PCV-1023	CLOSED		
		CAPPED		N/A
WD-3340	Test Connection At WD-1899A	CLOSED		
WD-3341	PCV-1035 Upstream Isolation	CLOSED		
		CAPPED		N/A

Enclosure 3

- APPLICANT PROVIDED MARKED-UP COPY OF PLANT P&ID DWG 5379-00921 REV 35 SHEET 2 OF 2 (TOO LARGE TO SCAN INTO ADAMS/PDF)

Enclosure 4

<< (Reference Use) Requirements for CV Equipment Hatch Removal >>

1.0 CV Closure Requirements (continued)

c. **IF AT ANY TIME** OST-163, Safety Injection Test and Emergency Diesel Generator Auto Start on Loss of Power and Safety Injection, will be performed and fuel handling or core alterations are **NOT** in progress, **THEN connect** lifted leads as follows: ..... _____

(1) **Check** R-11 and R-12 are **NOT** in alarm..... _____

(2) **Check** R-14C is available..... _____

(3) **Notify** I&C to reconnect the lifted leads for R11 and R12 as follows: ..... _____

(a) At Safeguards Cabinet Rack 52 (rear), Train 'A' Terminal Board 6L, Terminals 1 and 2, **connect** cable C2279N. ..... _____ I&C

(b) At Safeguards Cabinet Rack 64 (rear), Train 'B' Terminal Board 6L, Terminals 1 and 2, **connect** cable C2279T. ..... _____ I&C

_____ _____

Work Control Center SRO Print / Sign Date

Enclosure 5

6.4.1 (Continuous Use) - Operation of CV Purge Fans HVE-1A or 1B for Containment Purge (continued)

22. **Check**, by indicating lights, Containment Purge Supply and Exhaust valves are OPEN.

- V12-6 (Containment Purge Supply) ....._____
- V12-7 (Containment Purge Supply) ....._____
- V12-8 (Containment Purge Exhaust) ....._____
- V12-9 (Containment Purge Exhaust) ....._____

23. **Check** APP-010-F7 (CV Intake Air Lo Temp) annunciator is EXTINGUISHED. ....._____

24. **IF AT ANY TIME** the following occurs:

- R-11 (CV and Plant Vent Air Particulate 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. **Stop** CV Purge Fan previously started.[8.2.1]....._____

HVE-1A / HVE-1B
(Circle one)

b. **Adjust** RMS setpoints as required IAW values on release permit. ....._____

c. **Reset** Containment Isolation Vent ISO. ....._____

d. **Check** the following Safeguards Relay lights extinguished:

- CV Ventilation Isolation Signal V-1 ....._____
- CV Ventilation Isolation Signal V-2....._____

6.4.1 (Continuous Use) - Operation of CV Purge Fans HVE-1A or 1B for Containment Purge (continued)

e. **Restart** CV Purge previously stopped in Section 6.4.1 Step 24.a. _____

HVE-1A / HVE-1B
(Circle one)

NOTE

The Containment Purge can be stopped and then restarted as required by plant conditions without completing the remainder of this procedure.

25. **IF** Refueling,
THEN before Containment Purge is stopped, **contact** Maintenance to inspect and clean Purge Valve sealing surfaces. _____

26. **IF** necessary to temporarily stop CV Purge with Equipment Hatch open,
THEN perform Section 6.4.6, (Continuous Use) - Stopping Containment Purge With Equipment Hatch Open. _____

27. **IF** necessary to temporarily stop CV Purge with Equipment Hatch closed,
THEN perform the following:

a. **Stop** running CV Purge Fan _____

HVE-1A / HVE-1B
(Circle one)

b. **WHEN** reason for temporarily stopping CV Purge **NO** longer exists,
THEN start CV Purge Fan stopped in previous step _____

HVE-1A / HVE-1B
(Circle one)

c. **IF** HVE-1A (CV Purge Air Handling Unit) **AND** HVE-1B (CV Purge Air Handling Unit) breakers are closed,
THEN check APP-010-B6, HVE-1A/B Air Flow Lost/OVLD annunciator EXTINGUISHED. _____

Enclosure 6

GENERIC FUNDAMENTALS EXAMINATION
EQUATIONS AND CONVERSIONS HANDOUT SHEET

EQUATIONS

$\dot{Q} = \dot{m}c_p\Delta T$

$\dot{Q} = \dot{m}\Delta h$

$\dot{Q} = UA\Delta T$

$\dot{Q} \propto \dot{m}^3_{Nat\ Circ}$

$\Delta T \propto \dot{m}^2_{Nat\ Circ}$

$K_{eff} = 1/(1 - \rho)$

$\rho = (K_{eff} - 1)/K_{eff}$

$SUR = 26.06/\tau$

$\tau = \dfrac{\bar{\beta} - \rho}{\lambda_{eff}\,\rho}$

$\rho = \dfrac{\ell^*}{\tau} + \dfrac{\bar{\beta}}{1 + \lambda_{eff}\tau}$

$\ell^* = 1 \times 10^{-4}$ sec

$\lambda_{eff} = 0.1\ sec^{-1}$ (for small positive ρ)

$DRW \propto \varphi^2_{dp}/\varphi^2_{avg}$

$P = P_o 10^{SUR(t)}$

$P = P_o e^{(t/\tau)}$

$A = A_o e^{-\lambda t}$

$CR_{S/D} = S/(1 - K_{eff})$

$CR_1(1 - K_{eff1}) = CR_2(1 - K_{eff2})$

$1/M = CR_1/CR_X$

$A = \pi r^2$

$F = PA$

$\dot{m} = \rho A\bar{v}$

$\dot{W}_{Pump} = \dot{m}\Delta Pu$

$E = IR$

Eff. = Net Work Out/Energy In

$$v(P_2 - P_1) + \frac{(\bar{v}_2^2 - \bar{v}_1^2)}{2g_c} + \frac{g(z_2 - z_1)}{g_c} = 0$$

$g_c = 32.2$ lbm-ft/lbf-sec^2

CONVERSIONS

1 Mw = 3.41×10^6 Btu/hr

1 hp = 2.54×10^3 Btu/hr

1 Btu = 778 ft-lbf

°C = (5/9)(°F - 32)

°F = (9/5)(°C) + 32

1 Curie = 3.7×10^{10} dps

1 kg = 2.21 lbm

1 gal_{water} = 8.35 lbm

1 ft^3_{water} = 7.48 gal

1 ALI = 5 REM

1 ALI = 2000 DAC-hrs

HB Robinson 2017-301
[redacted], AOM – Shift

Facility Licensee Position on NRC written questions challenges

Question 1:

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 the position that the equation sheet is not required.

Recommend the applicant comment be rejected based on above.

Question 12:

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 containment pressure of 3.5 psig ERFIS does NOT use adverse containment set-points when evaluating CSFSTs via SPDS.

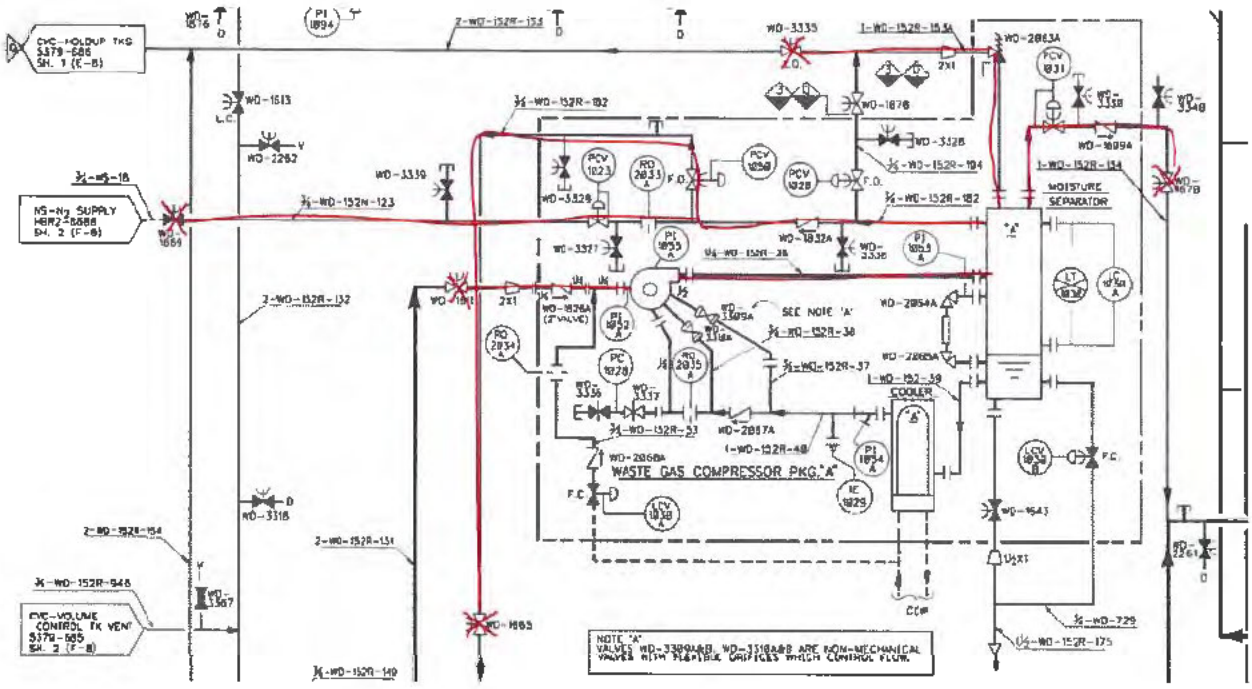
Recommend the applicant comment be rejected based on above.

Question 23:

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.

Question 62:

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..... _____
I&C

(2) At Safeguards Cabinet, Rack 64 (rear), Train 'B', **lift** and **tape** cable C2279T at Terminal Board 6L, Terminals 1 and 2..... _____
I&C

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.

Question 90:

Which ONE of the following correctly completes the statements below?

The CV purge _____ be restarted under the CURRENT permit.

The questions 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 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 Particulate 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 Relief 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.

[redacted]

NRC exam author

NRC post exam comments – Operating Test

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 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:

TECHNICAL SPECIFICATION LCO 3.3.2, ENGINEERED SAFETY FEATURE ACTUATION SYSTEM (ESFAS) INSTRUMENTATION			
	CRS	LCO 3.3.2 The ESFAS instrumentation for each Function in Table 3.3.2-1 shall be OPERABLE.	
	CRS	APPLICABILITY: According to Table 3.3.2-1.	
	CRS	ACTIONS	
CONDITION		REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels or trains inoperable.		A.1 Enter the Condition referenced in Table 3.3.2-1 for the channel(s) or train(s).	Immediately
D. One channel inoperable		NOTE For Function 4.c, a channel may be taken out of the trip condition for 6 hours for maintenance. D.1 Place channel in trip. OR D.2.1 Be in MODE 3. AND D.2.2 Be in MODE 4.	 6 hours 12 hour 18 hours

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.

TECHNICAL SPECIFICATION LCO 3.3.6, CONTAINMENT VENTILATION ISOLATION INSTRUMENTATION			
	CRS	LCO 3.3.6 The Containment Ventilation Isolation instrumentation for each Function in Table 3.3.6-1 shall be OPERABLE.	
	CRS	APPLICABILITY: According to Table 3.3.6-1.	
	CRS	ACTIONS	
CONDITION		REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more manual or automatic actuation trains inoperable. OR One or more radiation monitoring channels inoperable.		A.1 Place and maintain containment purge supply and exhaust valves in closed position. AND A.2 Enter applicable Conditions and Required Actions of LCO 3.9.3, "Containment Penetrations," for containment ventilation isolation valves made inoperable by isolation instrumentation.	Immediately Immediately

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 IT5 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 IT5 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 ITS 3.3.6 Condition A for N17-1-1 Event 3 should be added to the Page 34 of the N17-1-1 E5-D-2.

Submitted by: [redacted] 10/26/17
Date

Approved by: [redacted] 10/27/17
Date