V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   JPA-029

Identify and Apply the Applicable Overtime Restrictions

APPROVAL: *APPROVAL DATE:*

REV NO:

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

The examinee had identified that operator #1 would violate the restriction of working > 72 hours within a 7 Day period and operator #6 would violate the restriction of working > 24 hours within a 48 hour period.

PREFERRED EVALUATION LOCATION	*PREFERRED EVALUATION METHOD*
SIMULATOR	PERFORM

REFERENCES:

TOOLS: SAP-152
Tech Specs
Shift Schedule (Attached)

EVALUATION TIME   15   *TIME CRITICAL*   NO   *10CFR55:*

<u>*CANDIDATE:*</u>

TIME START:

TIME FINISH:

<u>*PERFORMANCE RATING:*</u>   SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

<u>*EXAMINER:*</u>

SIGNATURE   DATE

COMMENTS:

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS:

INITIAL CONDITION: You are the Control Room Supervisor. The plant is shutdown following a Reactor Trip. Preparations for Startup are in progress. Today is Tuesday, 12-20-05 Day shift (0700-1900). The Shift Supervisor has directed you to call in additional operators to work assisting the on-shift crew during startup. The operators will work 12 hours on Wednesday, 12-21-05, Day Shift, 0700 to 1900. The Operations Shift Rotation Schedule is attached. Assume all shifts worked (D &N) are 12.0 hours. Admin shifts (A) are 8.0 hours.

INITIATING CUES: Identify the operators, if any, that would violate overtime restrictions if called in to work on Wednesday, 12-21-05, Day shift. Also identify the overtime restriction(s), if any, that would be violated.

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

INITIAL CONDITION: You are the Control Room Supervisor. The plant is shutdown following a Reactor Trip. Preparations for Startup are in progress. Today is Tuesday, 12-20-05 Day shift (0700-1900). The Shift Supervisor has directed you to call in additional operators to work assisting the on-shift crew during startup. The operators will work 12 hours on Wednesday, 12-21-05, Day Shift, 0700 to 1900. The Operations Shift Rotation Schedule is attached. Assume all shifts worked (D &N) are 12.0 hours. Admin shifts (A) are 8.0 hours.

INITIATING CUES: Identify the operators, if any, that would violate overtime restrictions if called in to work on Wednesday, 12-21-05, Day shift. Also identify the overtime restriction(s), if any, that would be violated.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	SEQ		STEP:	1

Yes   No

The examinee references SAP-152 and/or Technical Specifications Section 6 for overtime policy.

STEP STANDARD:

The examinee reviews the Shift Rotation Schedule and determines that operator #1 and operator #6 would both violate the overtime restriction policy if both were called work on Wednesday, 12-16-05, day shift 0700-1900. Operator #1 would violate the policy of working >72 hours within 7 days; operator #6 would violate the policy of working >24 hours within a 48 hour period.

CUES:

COMMENTS:

Examiner ends JPM at this point.

SAT

UNSAT

JPM SETUP SHEET

JPM NO: JPA-029

DESCRIPTION: Identify and Apply the Appllicable Overtime Restrictions

IC SET:

INSTRUCTIONS:

COMMENTS:

2005

December

4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	
		D	**D**	**D**	**D**			**A**	**A**	**A**	**A**	**A**	**D**	**D**	**D**				**N**	**N**	**N**	**N**						
																			HA			**HA**						
		D	D	D	D			A	A		D	D	D	D	D	D			N	N	N	N						
		D	D	D	D			A	A	A		D	D	D	D	D			N	N	N	N						
		D	D	D	D			A	A	A	D		D	D	D	D			N	N	N	N						
		D	D	D	D			A	A	A	A	A	D	D	D				N	N	N	N						
		D	D	D	D			A	A	A	A	D		D	D	D			N	N	N	N						
		D	D	D	D			A	A	A	A		D	D	D	D+4			N	N	N	N						
		D	D	D	D			A	A	A	A	A	D	D	D				N	N	N	N						
		D	D	D	D			A	A	A		D	D	D	D	A			N	N	N	N						
		D	D	D	D			A	A	A	A	A	D	D		D			N	N	N	N						
		D	D	D	D			A	A	A	D		D	D	D	D			N	N	N	N						

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   **JPA-025**

Perform RCS Leakrate Calculation in Mode 4 IAW STP-114.002

APPROVAL: *APPROVAL DATE:*

REV NO: 0

CANDIDATE

EXAMINER:

RO - ONLY

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

    leak quantified to be .525 GPM +/- .04 GPM

PREFERRED EVALUATION LOCATION   *PREFERRED EVALUATION METHOD*

      CLASSROOM   PERFORM

REFERENCES: TS-3.4.6.2   RCS Operational Leakage

                  STP-114.002   OPERATIONAL LEAK TEST

TOOLS: Calculator
STP-114.002 Attachment 1
VCS Station Curve book

EVALUATION TIME   1   *TIME CRITICAL*   NO   *10CFR55:*

CANDIDATE: TIME START:

                                                TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

                              QUESTION GRADE: PERFORMANCE

EXAMINER:

                                          SIGNATURE   DATE

COMMENTS:

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS: none

INITIAL CONDITION: The plant is in Mode 4
No Reactor Coolant Makeup System or diverting of primary water to the Recycle Holdup Tanks will occur during the performance of this test.
Chemical additions or primary samples will not be performed during this test.
RCS Tavg is being maintained within a 1°F band.
RCS pressure is being maintained between 350 psig and 400 psig or between 2220 psig and 2250 psig..
Reactor Power is being maintained within a 1% band.
VCT level less than 65%

INITIATING CUES: The CRS has directed you to perform an Operational Leak Rate Calculation in accordance with STP-114.002 beginning at step 6.4.a.1. The initial set of data is to be collected from SIPCS then the final data will be given. Since this is an RO JPM, a Tech Spec evaluation is not required.

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: none

INITIAL CONDITION: The plant is in Mode 4

No Reactor Coolant Makeup System or diverting of primary water to the Recycle Holdup Tanks will occur during the performance of this test.

Chemical additions or primary samples will not be performed during this test.

RCS Tavg is being maintained within a 1°F band.

RCS pressure is being maintained between 350 psig and 400 psig or between 2220 psig and 2250 psig..

Reactor Power is being maintained within a 1% band.

VCT level less than 65%

INITIATING CUES: The CRS has directed you to perform an Operational Leak Rate Calculation in accordance with STP-114.002 beginning at step 6.4.a.1.

The initial set of data is to be collected from SIPCS then the final data will be given. Since this is an RO JPM, a Tech Spec evaluation is not required.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR SEQ   STEP: 1

Yes No   Use Group Trend S114.002 or GRPDIS
           S114.002 and record information on
           Attachment I:

STEP STANDARD:

Initial parameters recorded

CUES: *SAT*

                                                                UNSAT

COMMENTS:

CR SEQ   STEP: 2

No No   Upon completion of the test period, record the
           monitored parameters from
           Step 6.4.a.1) as well as the test stop time in
           the appropriate column of Attachment I.

STEP STANDARD:

final parameters recorded

CUES: *SAT*

Test period is 60 minutes (compress to 1 - 2 minutes)   *UNSAT*

COMMENTS:

CR SEQ   STEP: 3

Yes No   Determine the RCS inventory deviation due to
           changes in Tavg,

STEP STANDARD:

change/deviation calculated accurately
with correct polarity

CUES: *SAT*

CUE: Skip step 6.4.c due to the simulator being kept frozen during this JPM   *UNSAT*

COMMENTS:

CR SEQ   *STEP:*   4   *STEP STANDARD:*

Yes   No   Determine the RCS inventory deviation due to   change/deviation calculated accurately
              Pressurizer level change   with correct polarity

      CUES: *SAT*

                                                      UNSAT

      COMMENTS:

CR SEQ   *STEP:*   5   *STEP STANDARD:*

Yes   No   Determine the RCS inventory deviation due to   change/deviation calculated accurately
              VCT level change

      CUES: *SAT*

                                                      UNSAT

      COMMENTS:

CR SEQ   *STEP:*   6   *STEP STANDARD:*

No   No   Determine the RCS inventory deviation due to   change/deviation calculated accurately
             PRT level change

      CUES: *SAT*

                                                      UNSAT

      COMMENTS:

CR SEQ   *STEP:*   7   *STEP STANDARD:*

  No No   Determine the RCS inventory deviation due to   change/deviation calculated accurately
               RCDT level change

    CUES: *SAT*

                                                                 UNSAT

    COMMENTS:

CR SEQ   *STEP:*   8   *STEP STANDARD:*

  Yes No   Perform calculations as indicated on   final leak rate is within +/- .04 gpm
               Attachment I, Part 2.

    CUES: *SAT*

  Chemistry reports the latest CHP-307 shows no primary to secondary leakage   *UNSAT*
    COMMENTS:

Examiner ends JPM at this point.

JPM SETUP SHEET

JPM NO: JPA-025

DESCRIPTION: Perform RCS Leakrate Calculation in Mode 4 IAW STP-114.002

IC SET:

INSTRUCTIONS:

COMMENTS:

TEST DATA SHEET

PART 1

	TIME	TAVG MCB TI-___	TAVG COMPUTER T0499A/U0091	PZR LEVEL MCB LI-___	PZR LEVEL COMPUTER L0480A	VCT LEVEL MCB LI-___	VCT LEVEL COMPUTER L0112A	PRT LEVEL MCB LI-470	PRT LEVEL COMPUTER L0485A	RCDT LEVEL XPN-0007 ILI01003	RCDT LEVEL COMPUTER L1028
FINAL	T = 60 min		240.5°F		74.5%		36.4%		74.1%		60.0%
INITIAL	T = 0		241.5°F		74.7%		39.4%		74.1%		60.0%
CHANGE	60 min		-1°F		-0.2%		-3%	(4)	(4)	(5)	(5)
	FACTOR	(1)	(1)	(2)	(2)	(3)	(3)	N/A	N/A	N/A	N/A
	DEVIATION	*	-28 gal (27 – 30)	**	17.5 gal (17 – 18)		42 gal	(6)	(6)	(6)	(6)

PART 2

2a: ___-28___ gallons + ___17.5___ gallons + ___42___ gallons = ___31.5___ gallons ÷ ___60___ minutes
(6.4.d.3), Tavg)   (6.4.e.3), PZR Level)   (6.4.f.2), VCT Level)   (Test Time)

= ___0.525 ± .04___ gallons/minute TOTAL LEAKAGE

2b: ___0___ gallons + ___0___ gallons = ___0___ gallons ÷ ___60___ minutes
(6.4.g.3), PRT Level)   (6.4.h.3), RCDT Level)   (Test Time)

= ___0___ gallons/minute + ___0___ gallons/minute = ___0___ gallons/minute IDENTIFIED LEAKAGE
(6.4.i, Primary to Secondary leakage)

2c: ___0.525___ gallons/minute - ___0___ gallons/minute = ___0.525 ± .04___ gallons/minute UNIDENTIFIED LEAKAGE
(2a, Total Leakage)   (2b, Identified Leakage)

C

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   **JPA-026**

EOP-18.2 Maximum Allowable Head Vent Calculation

APPROVAL: *APPROVAL DATE:*

REV NO:

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

Calculation of Head Venting time of approximately 22.5 minutes.

PREFERRED EVALUATION LOCATION   *PREFERRED EVALUATION METHOD*

CLASSROOM

REFERENCES:

TOOLS: EOP-18.2
                Calculator
                Pen

EVALUATION TIME   15   *TIME CRITICAL*   *10CFR55:*

<u>*CANDIDATE:*</u>   TIME START:

                                                       TIME FINISH:

<u>*PERFORMANCE RATING:*</u>   SAT: UNSAT:

                                  QUESTION GRADE: PERFORMANCE

<u>*EXAMINER:*</u>
                                                       SIGNATURE   DATE
COMMENTS:

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS: None

INITIAL CONDITION: The following conditions exist:
1. RB Pressure is 0.9 psig on PI-950.
2. RB Temperature is 140°F on TI-9201A and TI-9203A.
3. Hydrogen Concentration is 1.8% on CI-8257 and CI-8258.
4. RCS Pressure is 290 psig on PI-402 and PI-403.

INITIATING CUES: The CRS has directed you to perform EOP-18.2 step 17 to determine the maximum allowable head venting time.

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

SAFETY CONSIDERATIONS: None

INITIAL CONDITION: The following conditions exist:
1. RB Pressure is 0.9 psig on PI-950.
2. RB Temperature is 140°F on TI-9201A and TI-9203A.
3. Hydrogen Concentration is 1.8% on CI-8257 and CI-8258.
4. RCS Pressure is 290 psig on PI-402 and PI-403.

INITIATING CUES: The CRS has directed you to perform EOP-18.2 step 17 to determine the maximum allowable head venting time.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR SEQ	STEP: 1	STEP STANDARD:

CR SEQ **STEP:** 1

No No

Record values for the following parameters:
a. TI-9201A, RB TEMP "F. "F
b. TI-9203A, RB TEMP "F. "F
c. CI-8257, RB H2 CONC %. %H2
d. CI-8258, RB H2 CONC %. %H2
e. PI-402, RCS WR PRESS PSIG. psig
f. PI-403, RCS WR PRESS PSIG. Psig

STEP STANDARD:

140"F is entered for TI-9201A and TI-9203A; 1.8 % Hydrogen Concentration is entered for CI-8257 and CI-8258; 290 psig is entered for PI-402 and PI- 403.

CUES:

SAT

UNSAT

COMMENTS:

CR SEQ **STEP:** 2

Yes No

Use the higher of the two readings recorded above to calculate:
a. Reactor Building volume
(at standard temperature and pressure):
RB AIR VOLUME = (1.84E6 ft3) x [492"R/(RB TEMP ("F) + 460)]
RB AIR VOLUME = ft3
b. Maximum hydrogen volume to be vented
(when RB H2 CONC is LESS THAN 3%):

MAX VENTED VOL = (3% - RB H2 CONC %) x (RB AIR VOLUME (STP)) ft3/100%

MAX VENTED VOL = ft3

STEP STANDARD:

RB Air Volume is approximately 1.51E6 ft3 and Max Vented Volume is approximately 1.81E4 ft3.

CUES:

SAT

UNSAT

COMMENTS:

CR SEQ   **STEP:**   3   **STEP STANDARD:**

Yes No   From the graph on the next page, determine   SCFM calculated to be approximately 800
               the hydrogen flow rate using   SCFM. A tolerance of 800 plus or minus
               the higher RCS pressure recorded from Step   25 SCFM is acceptable.
               1:
               HYDROGEN FLOW RATE =   SCFM

        CUES: *SAT*

                                                                                  UNSAT

        COMMENTS:

CR SEQ   **STEP:**   4   **STEP STANDARD:**

Yes No   Calculate maximum allowable head venting   A calculated Maximum Allowable Head
               period: Venting Time of approximately 22.5
                                                                 minutes. Based on a plus or minus 25
               MAXIMUM ALLOWABLE HEAD VENTING TIME SCFM tolerance, the maximum allowable
               = (MAX VENTED VOL) ft3 /(HYDROGEN   venting time should be from 21.9 minutes
               FLOW RATE) SCFM   to 23.4 minutes.
               MAXIMUM ALLOWABLE HEAD VENTING TIME
               = Minutes

        CUES: *SAT*

                                                                                  UNSAT

        COMMENTS:

Examiner ends JPM at this point.

JPM SETUP SHEET

JPM NO: JPA-026

DESCRIPTION: EOP-18.2 Maximum Allowable Head Vent Calculation
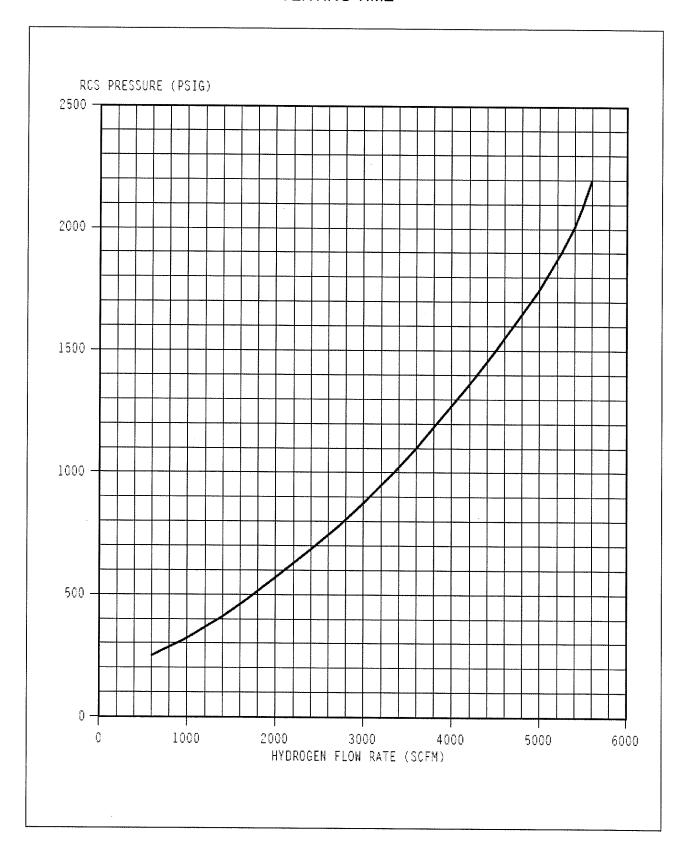
IC SET:

INSTRUCTIONS:

COMMENTS:

CALCULATION OF MAXIMUM ALLOWABLE HEAD
VENTING TIME

OPERATOR ACTIONS

1. Record the following parameters:

   a. TI-9201A, RB TEMP °F.   <u>140</u> °F

   b. TI-9203A, RB TEMP °F.   <u>140</u> °F

   c. CI-8257, RB H_2 CONC %.   <u>1.8</u> %H_2

   d. CI-8258, RB H_2 CONC %.   <u>1.8</u> %H_2

   e. PI-402, RCS WR PRESS PSIG.   <u>290</u> psig

   f. PI-403, RCS WR PRESS PSIG.   <u>290</u> psig

2. Use the higher of the two readings recorded above to calculate:

   a. Reactor Building volume

   (at standard temperature and pressure):

   RB AIR VOLUME = (1.84E6 ft^3 x [492° R/(RB TEMP (°F) + 460)]

   RB AIR VOLUME = <u>1.51E6   (1.84 x 0.82)</u> ft^3

   b. Maximum hydrogen volume to be vented

   (when RB H_2 CONC is LESS THAN 3%):

   $$MAX\ VENTED\ VOL = \frac{(3\% - RB\ H_2\ CONC\ \%)X\ (RB\ AIR\ VOLUME\ (STP))\ ft^3}{100\%}$$

   MAX VENTED VOL= <u>1.81E4   (1.2 x 1.51/100)</u> ft3

3. From the graph on the next page, determine the hydrogen flow rate using the higher RCS pressure recorded from Step 1:

   HYDROGEN FLOW RATE = <u>800 +/-25</u> SCFM

4. Calculate maximum allowable head venting period:

   $$\text{MAXIMUM ALLOWABLE HEAD VENTING TIME} = \frac{(MAX\ VENTED\ VOL)\ ft^3}{(HYDROGEN\ FLOW\ RATE)\ SCFM}$$

   MAXIMUM ALLOWABLE HEAD VENTING TIME = <u>22.6 +/-0.8   (1,81/800)</u> minutes

CALCULATION OF MAXIMUM ALLOWABLE HEAD
VENTING TIME

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   **JPA-001**

REVIEW WORK PACKAGE FOR SFP HEX 'A'

APPROVAL: DOW   *APPROVAL DATE:*   12/7/2005

REV NO: 0

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

Work package reviewed and the following are noted:

1) No EOOS Stamp on the green PM Task Sheet
2) Component Log tags XVD16656 vs. XVD16659.
3) Waste Holdup Tank is too full to accept drainage from the SFP HEX (via the Miscellaneous Waste Drain Tank).

PREFERRED EVALUATION LOCATION

    CLASSROOM

PREFERRED EVALUATION METHOD

    PERFORM

REFERENCES:

TOOLS: SAP-205, STATUS CONTROL AND REMOVAL AND RESTORATION
SAP-201, ATTACHMENT 1C
PMTS FOR XVR16662-SF
D-302-651, SPENT FUEL COOLING
D-302-736, LIQUID WASTE SYSTEM
E-911-103, BUILDING SERVICE FLOOR & EQUIPMENT DRAINS STATION
DRAINAGE FLOW DIAGRAM - AUXILIARY BUILDING 412' TO 374'
FEEDER EFFECTS LIST FOR XPP00032A, A SPENT FUEL COOLING
PUMP
TECH SPEC CROSS REFERENCE FOR XVR16662-SF
OAP-102.1, CONDUCT OF OPERATIONS SCHEDULING UNIT
SAP-201 ATT. IV, DANGER TAGOUT REQUEST FORM
SSP-001 ATT. I, WORK PACKAGE ORGANIZER

EVALUATION TIME   20   *TIME CRITICAL*   NO   *10CFR55:*   45(a)8

CANDIDATE:

                                                          TIME START:

                                                          TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

                                      QUESTION GRADE: PERFORMANCE

EXAMINER:

COMMENTS: SIGNATURE   DATE

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS:

INITIAL CONDITION: The plant is operating at 100% power. A1 Maintenance Work Week. A Refurbishment and bench test of XVR-16662-SF is to be performed. A work package for this test has been completed.

INITIATING CUES: As the Shift Supervisor, you are to review this work package prior to allowing the tagout to be hung and the work to begin. Assume all Scheduling pre-reviews have been performed as required.

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

INITIAL CONDITION: The plant is operating at 100% power. A1 Maintenance Work Week. A Refurbishment and bench test of XVR-16662-SF is to be performed. A work package for this test has been completed.

INITIATING CUES: As the Shift Supervisor, you are to review this work package prior to allowing the tagout to be hung and the work to begin. Assume all Scheduling pre-reviews have been performed as required.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR SEQ   *STEP:*   1   *STEP STANDARD:*

Yes No   Checks tagout for accuracy.   Notes that valve XVD16656-SF is
                                                            incorrectly identified to be tagged on the
                                                            Component Log (vs. valve XVD16659-SF).

        CUES: *SAT*

                                                                        UNSAT

        COMMENTS:

CR SEQ   *STEP:*   2   *STEP STANDARD:*

Yes No   Checks Equipment Lineup Request Form   Reviews form and notes remarks on
                                                            Miscellaneous Waste Drain Tank and WHT

        CUES: *SAT*

                                                                        UNSAT

        COMMENTS:

CR SEQ   *STEP:*   3   *STEP STANDARD:*

Yes No   Checks level in Misc Waste Drain Tank and   Notes inadequate inventory in WHUT to
               Waste Holdup Tank.   accept full drainage from SFP HEX.
                                                            Indicates that work would not be allowed
                                                            to proceed until WHT was processed.

        CUES: *SAT*

        If examinee explains he/she would check the IPCS and/or the Liquid Waste System   *UNSAT*
        Status/Turnover Sheet, to ensure the Misc Drain Tank and the WHT have adequate
        inventory to accept drainage from the SFP HEX, Evaluator cues examinee that Misc
        Waste Drain Tank level is 10% and WHT level is 92%.

        COMMENTS:

CR SEQ   *STEP:*   4   *STEP STANDARD:*

Yes No   Checks Danger Tagout Request Form.   Notes that tagout requester incorrectly
                                                        asked for XVD16656 to be tagged open
                                                        (vs. XVD16659).

        CUES: *SAT*

                                                                                  UNSAT

        COMMENTS:

CR SEQ   *STEP:*   5   *STEP STANDARD:*

No No   Reviews the green Preventive Task Sheet. Notes that the "EOOS" Stamp is missing.

        CUES: *SAT*

        If asked, Evaluator, as the Ops Scheduling Supervisor, informs examinee that a   *UNSAT*
        new PM task sheet will be generated with an "EOOS" stamp. Examinee should
        assume that this task sheet DOES have an "EOOS" stamp and "N" is circled. The
        stamp is initialed and dated by the Ops Scheduling Supervisor.
        COMMENTS:

Examiner ends JPM at this point.

JPM SETUP SHEET

JPM NO: JPA-001

DESCRIPTION: REVIEW WORK PACKAGE FOR SFP HEX 'A'

IC SET:

INSTRUCTIONS:

COMMENTS:

DANGER TAGOUT REQUEST FORM

DATE: <u>12/2/05</u>   REQUESTED BY:<u>MECHANICAL PLANNER</u>

I. <u>WORK DOC</u>   <u>EQUIP ID</u>   <u>WORK DOC</u>   <u>EQUIP ID</u>

   <u>PMTS 0500001</u>   <u>XVR16662-SF</u>

II. Work Summary: <u>Refurb and Bench test according to MMP-445.005 requirements.</u>

III. Special Conditions/Safety Considerations: <u>Ensure isolated, vented and drained.</u>

IV. Instrumentation Affected (Include Instrumentation not directly identified by work summary): ___
<u>N/A</u>

V. Recommended Boundaries (Required):

COMPONENT	POSITION	COMPONENT	POSITION
XSW1DA1 06D	Racked down	XVD16660-SF	OPEN
XVG06654-SF	CLOSED	XVD16656-SF	OPEN
XVT06722-SF	CLOSED	XVD16661-SF	OPEN
XVT06658-SF	CLOSED		

VI. Equipment Restoration (List any equipment not covered in another program that may require restoration prior to clearing tags):

COMPONENT	POSITION	COMPONENT	POSITION

VII. Referenced Drawings: <u>D-302-651</u>

☐ CONTINUED ON PAGE 2.

DANGER TAGOUT REQUEST FORM (CONTINUATION)

DATE: _____

I.

WORK DOC	EQUIP ID	WORK DOC	EQUIP ID
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

V. Recommended Boundaries (Required):

COMPONENT	POSITION	COMPONENT	POSITION
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

VI. Equipment Restoration (List any equipment not covered in another program that may require restoration prior to clearing tags):

COMPONENT	POSITION	COMPONENT	POSITION
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

EQUIPMENT LINEUP REQUEST

Due to work scheduled for 12/16/05_____, the following system/equipment lineups are needed.

System(s) Affected: <u>Spent Fuel Cooling</u>

<u>Liquid Waste</u>

Reason/
Requirements

<u>Need to drain 'A' Spent Fuel Cooling Heat Exchanger</u>

<u>(XHE0007A) to the Waste Holdup Tank via the Miscellaneous</u>

<u>Waste Drain Tank. Ensure adequate volume exists for the</u>

<u>draining. Approximate volume of the Heat Exchanger is 1100</u>

<u>gallons.</u>

Contact Person(s)
If Problem is
Incurred

Needed By

<u>Mike Johnson/   12/7/05</u>
Signature   Date

REMOVAL AND RESTORATION CHECKSHEET

Section 1-Summary Data

TYPE: ☐Action ☒Tracking	SERVICE IMPACT: ☒Removed From Service ☐Restricted Service	TRAIN: ☒'A' Train ☐'X' Train ☐'B' Train ☐N/A	R&R NUMBER:
SYSTEM: SF	EQUIPMENT ID: XHE0007A-SF	EQUIPMENT NAME: SPENT FUEL HEAT EXCHANGER A	

REASON INOPERABLE:

Remove XVR16662-SF for Refurbishment and Testing

Section 2-Removal Requirements

COMPENSATORY REQUIREMENTS: ☒None	Required By Date/Time	Completed Date/Time	TECHNICAL SPECIFICATIONS: 4.0.5	
☐Trip/Bypass Bistables?	/	/		
☐Backup Fire Suppression?	/	/	TECH. SPEC. 3.0.4 APPLIES: ☐Yes ☒No Restraining Mode:N/A Mode Discovered:1	REDUNDANT EQUIPMENT OPERABLE: ☒Yes ☐No ☐N/A
☐Roving Fire Watch?	/	/		
☐Continuous Fire Watch?	/	/		
☐Alternate Radiation Monitoring?	/	/	SUPPORTING DOCUMENTATION: SAP-205	
☐Smoke Detectors Operable?	/	/		
☐GTP-702 Att. _____	/	/		
☐Other:	/	/		

REMOVAL COMMENTS:

Section 3-Restoration Req./Related Documents

RESTORATION REQUIREMENTS: RELATED DOCUMENTS:

Operable STP	STTS #	Completed Date/Time	Document Type*	Document #	Completed Initials/Date	Comments
		/	PMTS	0500001	/	
		/	RTO	05-0501	/	
		/			/	
		/			/	

| All compensatory requirements restored or terminated?
☐Yes
☐No
☐N/A | ECR Operability Form?
☐Yes
☐No
☐N/A | | / | | | |
| | | | / | | | |

☐Continued on Attachment VII.
*ECR, MWR, NCN, PMTS, RTO, STTS, WPO, etc.

RESTORATION COMMENTS:

Section 4-Removal/Restoration Status

REMOVAL/RESTORATION STATUS:		SS Authorization	OATC Concurrence	Date/Time	Updated		
					MCB	BISI	EOOS
Declared Inoperable				/	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Time Limit to Declare Operable							
Restoration Required By				/			
Downgraded to:	☐Tracking			/			
	☐Restricted Service			/			☐Yes ☐No
Declared Operable				/	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Total Time:	Inoperable						
	Non-Functional						

COMMENTS:

V. C. SUMMER NUCLEAR STATION -- PREVENTATIVE TASK SHEET
SAP-143 ATT. I REV. 10 PAGE 1 OF 3
PMTS: 0500001   DUE DATE: 12/16/05 SCH DATE: 12/16/05   END DATE: 12/31/05
OLD TASK SHEET NUMBER: 0500001
  EQUIP ID: XVR16662-SF   PROCEDURE: MMP-445.005   DEPT: Mechanical
   TSK DSC: Testing and Repair/Refurbishment of Relief Valves PM CAT: 3
TASK TYPE: Refurbish and test as applicable   FREQ: 1A1
TASK NOTES OR REQUIREMENTS:

REMOVE XVR16662-SF FROM A SPENT FUEL HEAT EXCHANGER, REFURB AND BENCH TEST ACCORDING
TO ABOVE MMP REQUIREMENT.

EQUIP NAME: SPENT FUEL HX A SF SIDE RELIEF VALVE PMTS ORIG DATE: 9/21/05
SYS: SF   TRAIN: A   LOCATION: AB-388

MECH CLASS: SR   ELEC CLASS: NA   CC: C3   SEIS: S1
EQ: REG 1.97:   TECH MANUAL:
SIZE: 1 INCH   SERIAL NO:
FLOW DIAGRAM: D-302-651   CKT
DRAWINGS:

EQUIPMENT REMARKS:

FEEDER: ACCURACY:
 INPUT: OUTPUT:
                             MANDATORY:
Safety Requirements: ENSURE ISOLATED,VENTED,DRAINED   TRANS COMBUSTIBLE:
RF REQ: NA   OUTAGE TASK CODE: NA
RED TAGS: Y   RED TAG STD-ID: RED TAG INDEX: 05-0501
RWP REQ: Y   RWP NO: 05-0121   LAST RED TAG INDEX: 04-0303
EQUIP AFFECTED:
LAST REVIEW COMMENTS:
NONE.

RETEST INFORMATION: EXTERNAL LEAK CHECK /   /

EQUIPMENT DOWN TIME HOURS: 30 HOURS
ACCT NMBR:
R&R: NO.: 05-0011   OPS APPROVAL   _____ DATE __/__/__

*********************** PM CURRENT WORK SECTION ************************
TEST EQ USED _____   _____ _____ _____ _____
   _____ _____   _____ _____ _____ _____
                            _____ _____ _____ _____
MATERIAL REQUISITION   _____ _____ _____ _____
   _____ _____   _____ _____ _____ _____

"AS FOUND" COND ____

V. C. SUMMER NUCLEAR STATION -- PREVENTATIVE TASK SHEET
~~~~~~~~~~~~~~~~
                                    SAP-143 ATT. I REV. 10 PAGE 2 OF 3

PMTS: ~~~~~~~~   EQUIP ID: ~~~~~~~~~~~~~~~~~~~   PROCEDURE: ~~~~~~~~~~~~~~~

SEQ   STEP   DESCRIPTION   TRADE   QC
~~~~   ~~~~   ~~~~~~   ~~~~~   ~

    SCHEDULE START: ~~~~~~~~ ~~~~~   SCHEDULE COMPLETE: ~~~~~~~~ ~~~~~

                                          QC INSP NUM: ~~~~~~~~~~

NEED DATE: ~~~~~~~   STEP INSTRUCTIONS

        ~~~~~~
        ~~~~~~
        ~~~~~~

ADDITIONAL TEXT: ~   TOTAL STEPS: ~~~

 MR EXISTS: ~   PR EXISTS: ~   PO EXISTS: ~

SAFETY REQ: ~~~~~~~~~~~~ ~~~~~~~~~~~ ~~~~~~~~~~~~ ~~~~~~~~~~~~ ~~~~~~~~~~~~

 EQUIP REF: ~~~~~~~~~~~~~~~~~~~   ~~~~~~~~~~~~~~~~~~~   ~~~~~~~~~~~~~~~~~~~

PLANNED BY: ~~~~~~~~~~~~~~~~~~~~~~~~~ ~~~~~~~~

        CALLBACK REQUIRED: __   REP-TAG REMOVED: __

DATE STARTED: __/__/__ TIME: __:__   DATE COMPLETED: __/__/__ TIME: __:__

                COMPLETION REMARKS

_____

_____

_____

    STEP   BADGE   DATE   REG HRS   OT HRS   OT CODE   DIFF CODE

   ____   _____   __/__/__   __:__   __:__   ____   ____

   ____   _____   __/__/__   __:__   __:__   ____   ____

   ____   _____   __/__/__   __:__   __:__   ____   ____

   ____   _____   __/__/__   __:__   __:__   ____   ____

COMPLETED BY:_____   DATE COMPLETED:__/__/__

```
1
2
3  Area Reserved For Barcode
4
5
```

V. C. SUMMER NUCLEAR STATION -- PREVENTATIVE TASK SHEET
~~~~~~~~~~~~~~~~~   SAP-143 ATT. I REV. 10 PAGE 3 OF 3

PMTS: ~~~~~~~~   EQUIP ID: ~~~~~~~~~~~~~~~~~~~   PROCEDURE: ~~~~~~~~~~~~~~~

PRE REVIEWS:

~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~
~~~~~~~~~~   ~~~~~~~~~~~~~~~~~ ~~~~~~~~

POST REVIEWS:

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

~~~~~~~~~~   _____ __/__/__

SCHEDULING PACKAGE CHECKLIST

SYSTEM/COMPONENT XVR16662-SF_____

Date Scheduled: 12/16/05 _____   Tagout #: 05-0001 _____

YES	N/A	
X		Correct train work week: Work Week (circle) A1 A2 B1 B2
X		Is tagout as requested?
X		All work within tagout boundary?
	X	Instruments affected by tagout evaluated for impact on system?
X		Power secured?
	X	DC Control Power breakers in REALIGNMENT Section or tagged as required?
X		Install sequence correct?
X		Work document numbers on WPO and tagout?
X		WPO Index number?
X		Restoration lineup verified per SOP?
	X	Component worked in REALIGNMENT Section?
	X	Switch and/or Fuse Hold tags included in package, if necessary?
X		Each Discipline is assigned to the correct requested tags on the tagout. (X in Box)
X		Tagout has index number (and # is on all work documents)?
X		System/Electrical drawings are verified to be: Current revision, marked with tagout index #, reviewed, and included? If the latest drawing revision, CHAMPS, or equipment ID are not available, generate a CER and get Ops Management approval prior to proceeding.
	X	Electrical feeder list reviewed and included, if necessary?
	X	Vent and drain information sheet included, if necessary?
X		Tech Spec Cross Reference List included, if necessary?
X		R&R written, if necessary?
X		**Equipment Lineup Request,** Included if needed:
X		Special conditions/equipment lineup changes (including welding boundary purge path)?
X		SOP, EMP, MMP, or other procedure used to coordinate work?
	X	Tagout requires coordination between groups (including contact)?
	X	Shift Test Specialist notified of any work that may require Fire Protection related compensatory actions.
		Emergent or FIN Team Work Review Requirements
	X	This work reviewed for impact on the integrity of the Control Room Pressure Boundary. If the Control Room boundary is impacted: • Are compensatory measures provided by Engineering Services? or • Already provided by the applicable procedure?
	X	Tagout involves risk (include management approval)?
X		Reviewed for Reactivity Management and stamped, if necessary?
X		Reviewed for Maintenance Rule and stamped, if necessary?
X		**EOOS Assessment:** Moderate ☐ Elevated ☐ High ☐ (Att. II, Ops signoff)
	X	Retest reviewed?
	X	GTP-214 reviewed?
	X	GTP-702 reviewed?
	X	Shop sign-on sheet included in package?
☐ Remarks (if checked see attached)		

C03 →
C01 →

CHG G

CHG G

CHG C

CHG G

CHG G

CHG G

SAP-201
ATTACHMENT IC
PAGE 1 OF 1
REVISION 9
INDEX NO. 05-0501
SHEET 1 OF 1

COMPONENT LOG

TAG	ISSUED TO	E	M	I&C	OTHER	HOLD TAG INST	COMPONENT ID	PLANT LOC	REQ'D TAG POSIT	INST SEQ	INST BY	VER BY	HOLD TAG REM	REM SEQ	TAG REM BY	REQ'D OPER POSIT	COMP REST – REST BY	COMP REST – VER BY
1	GROUP		X			X	XSW1DA2 06D A SF CLG PP	IB-463	OPEN/ RACKED OUT	1						RACKED IN		
	CLEAR																	
2	GROUP		X				XVG06654-SF SPENT FUEL COOLING PUMP A DISCHARGE VALVE	AB-412	CLOSED	2						OPEN		
	CLEAR																	
3	GROUP		X				XVG06722-SF SF COOLING HDR A RAD MONITOR OUTLET VALVE	AB-412	CLOSED	3						OPEN		
	CLEAR																	
4	GROUP		X				XVT06658-SF SPENT FUEL HEAT EXCHANGER A OUTLET VALVE	AB-388	CLOSED	3						9 TURNS OPEN		
	CLEAR																	
5	GROUP		X				XVD16660-SF SF HX A SPENT FUEL SIDE DRAIN VALVE	AB-388	OPEN	4						CLOSED		
	CLEAR																	
6	GROUP		X				XVD16656-SF SF HX B SPENT FUEL SIDE DRAIN VALVE	AB-388	OPEN	4						CLOSED		
	CLEAR																	
7	GROUP		X				XVD16661-SF SF HX A SPENT FUEL SIDE VENT VALVE	AB-388	OPEN	5						CLOSED / CAPPED		
	CLEAR																	

WORK PACKAGE ORGANIZER

NOTE: If there is an R&R associated with this WPO - attach a copy of completed WPO to R&R.
This WPO impacts EOOS Risk Assessment Calculation   **YES / NO**

MRF/ECR OPERABILITY REQUIRED <u>YES / NO</u>   MRF/ECR NUMBER ASSOCIATION CODE/FEG____N/A_____   PAGE 1 OF <u>1</u>

SCHEDULED DATE <u>12/16/05</u>_____   SCHEDULED COMPLETION DATE <u>12/16/05</u>_____   TRAIN <u>A</u>_____   WPO # <u>05-0212</u>

R&R # _____   TAGOUT # ___05-0501_____   FBRPSN # ___N/A_____   EQUIPMENT # __XVR16662-SF__   SYS <u>SF</u>

Equipment ID	TASK #	RESP. GROUP	R & R REQ.		RED TAGS REQ		OPS RETEST REQ.		MAINT. RETEST		PROC. NO.	WORK COMPLETE OR READY FOR RETEST (signature)	RETEST * COMPLETE (signature)	OPS RETEST		SS, SE OR CRS REVIEW COMPLETE (signature)
			Y	N	Y	N	Y	N	Y	N				PROC	STTS	
XVR16662	0500001	Mech	X		X			X	X		External leakage					
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																

* PERFORMER SIGNATURE INDICATES TASK IS COMPLETE OR READY FOR RETEST. WHEN RETEST IS COMPLETE, THE PERFORMER WILL SIGN THE RETEST COMPLETE COLUMN.

2.   SPECIAL INSTRUCTIONS _____

_____

3.   RESPONSIBLE SUPERVISOR FOR WORK: ELECT _____   MECH _____   I&C _____   CIVIL _____

4.   LEAD GROUP _____

WORK PACKAGE ORGANIZER

CONTINUATION SHEET

PAGE _____ OF _____

ASSOCIATION CODE/FEG _____

WPO # _____

Equipment ID	TASK #	RESP. GROUP	R & R REQ.		RED TAGS REQ		OPS RETEST REQ.		MAINT. RETEST		PROC. NO.	WORK COMPLETE OR READY FOR RETEST (signature)	RETEST * COMPLETE (signature)	OPS RETEST		SS, SE OR CRS REVIEW COMPLETE (signature)
			Y	N	Y	N	Y	N	Y	N				PROC	STTS	
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																
Comments: /Retest:																
Comments/Retest:																
Comments/Retest:																
Comments/Retest:																

SCHEDULING GROUP SECTION — PERFORMER SECTION * — OPERATIONS REVIEW

The purpose of the WPO is to inform the Control Room of all work that is taking place on a piece of equipment, an association code/FEG or other grouping of work related items. This includes all work tagged or untagged that is associated.

The Scheduling Coordinator shall complete the following:

1.   Fill in the scheduled date when known (start date) and the scheduled complete date.

2.   Fill in train block, system, equipment number, and association code.

3.   Fill in WO task number in the Scheduling Group Section.

4.   Fill in responsible group for each task performed.

5.   Fill in if the item requires red tags or not.

6.   Fill in any special instructions if known.

The Scheduling Operations representative shall complete the following:

1.   Fill in the R&R required.

2.   Fill in operations retest required Yes or No. If yes, fill in Proc # in Operations Review Section.

3.   Fill in the WPO #.

4.   Determine if an MRF/ECR operability is required. Circle Yes and denote the MRF/ECR Number.

The Control Room shall fill in the R&R # (if applicable), the tag out # (if applicable) and the STTS # (if applicable) in Operations Review Section.

The Fire Protection Officer shall fill in the FBRPSN # (if applicable).

The rest of the WPO is filled in at the completion of work as discussed in Sections 4.4.5 and 4.4.6.

_____/_____
    Month   Year

WORK PACKAGE ORGANIZER INDEX

Work Package Organizer	Equipment ID Number	Comments:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   **JPA-027**

TAGOUT 'A' SPENT FUEL HEAT EXHANGER

APPROVAL: DOW   *APPROVAL DATE:*   12/7/2005

REV NO:

CANDIDATE

EXAMINER:

RO – ONLY

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

The 'A' Spent Fuel Cooling Heat Exchanger is tagged out IAW SAP-201. The Heat Exchanger inlet and outlet valves are tagged closed, RML-4 is isolated from SF Cooling A Train, the feeder breaker for A SF Cooling pump is open/racked out, the vent and drain valves for the HX are tagged open, and the correct sequence is identified for tagging. The Req'd Operable Position should also be filled out, however RO's are not required to complete the CLEARING SEQUENCE since this IAW SAP-201, is the responsibility of the Shift Supervisor and is normally completed during the clearing process.

The following two (2) valves are not required for the tagout, but may be tagged at the RO's discretion:
1. XVG06650-SF, SPENT FUEL COOLING PUMP A SUCTION VALVE
2. XVT06720-SF, SF COOLING HDR A RAD MONITOR OUTLET VALVE

PREFERRED EVALUATION LOCATION

      CLASSROOM

PREFERRED EVALUATION METHOD

REFERENCES: SAP-201   DANGER TAGGING

TOOLS: SAP-201
          D-302-651, SPENT FUEL COOLING SYSTEM
          D-302-736, LIQUID WASTE PROCESSING
          E-911-103, BS FLOOR AND EQUIPMENT DRAINS STATION DRAINAGE
          FLOW DIAGRAM - AUXILIARY BUILDING
          ELECTRICAL FEEDER LIST FOR XPP00032A-SF
          SOP-123, SPENT FUEL COOLING, ATTACHMENTS 1A - IVA
          OAP-100.5, GUIDELINES FOR CONFIGURATION CONTROL AND
          OPERATION OF PLANT EQUIPMENT

EVALUATION TIME   30   *TIME CRITICAL*   *10CFR55:*

CANDIDATE: TIME START:

                                              TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

                             QUESTION GRADE: PERFORMANCE

EXAMINER:

One of the following two (2) valves should be tagged open to provide a vent path for draining (either

COMMENTS: one or both are acceptable):
1. XVD16661-SF, SF HX A SPENT FUEL SIDE VENT VALVE
2. XVD16665-SF, SPENT FUEL HX A OUTLET HDR VENT VALVE

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS:

INITIAL CONDITION: The plant is in Mode 1. Mechancal Maintenance has requested a tagout to repair relief valve XVR16662-SF, per MWR 0505050. Randy Ruff has requested the tagout.

INITIATING CUES: The SS directs you to prepare a tagout for the 'A' Spent Fuel Cooling Heat Exchanger to cover the replacement of XVR16662-SF. Mechanical Maintenance has requested the tagout. 'B' Train of SF Cooling has been placed in service per SOP-123, SPENT FUEL COOLING. You DO NOT have to fill out the individual Danger Tags, nor do you have to complete any Locked Valve Tracking Sheets.

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

INITIAL CONDITION: The plant is in Mode 1. Mechancal Maintenance has requested a tagout to repair relief valve XVR16662-SF, per MWR 0505050. Randy Ruff has requested the tagout.

INITIATING CUES: The SS directs you to prepare a tagout for the 'A' Spent Fuel Cooling Heat Exchanger to cover the replacement of XVR16662-SF. Mechanical Maintenance has requested the tagout. 'B' Train of SF Cooling has been placed in service per SOP-123, SPENT FUEL COOLING. You DO NOT have to fill out the individual Danger Tags, nor do you have to complete any Locked Valve Tracking Sheets.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR   SEQ   STEP: 1   *STEP STANDARD:*

  No Yes   TAG - Enter the sequential tag number.   See completed Att. 1C.

    CUES: *SAT*

    Tag number is not critical, only the sequence is.   *UNSAT*

    COMMENTS:

CR   SEQ   STEP: 2   *STEP STANDARD:*

  Ye Yes   ISSUED TO - Check blocks for which discipline   See completed Att. 1C.
             each component is tagged.

    CUES: *SAT*

                                                                             UNSAT

    COMMENTS:

CR   SEQ   STEP: 3   *STEP STANDARD:*

  No Yes   HOLD TAG INSTALLED - Enter a check mark if   See completed Att. 1C.
             a Hold Tag is to be placed on a control panel
             component.

    CUES: *SAT*

                                                                              UNSAT

    COMMENTS:

CR SEQ   *STEP:*   4   *STEP STANDARD:*

  Ye Yes   COMPONENT I.D. - Enter the complete   See completed Att. 1C
                CHAMPS identification number of the
                component being tagged.

    CUES: *SAT*

                                                                           UNSAT

    COMMENTS:

CR SEQ   *STEP:*   5   *STEP STANDARD:*

  Ye Yes   PLANT LOC - Enter the specific plant location   See completed Att. 1C.
                of the component being tagged.

    CUES: *SAT*

                                                                           UNSAT

    COMMENTS:

CR SEQ   *STEP:*   6   *STEP STANDARD:*

  Ye Yes   REQ'D TAG POSIT - Enter the position in which   See completed Att. 1C.
                the component is to be tagged.

    CUES: *SAT*

    Note: For the two possible vent valves to be tagged open, XVD16661-SF and   *UNSAT*
    XVD16665-SF, the REQ'D TAG POSIT is OPEN, versus UNCAPPED/OPEN. This is a
    "skill of the craft" expectation for Operations.

    COMMENTS:

CR   SEQ   STEP: 7   *STEP STANDARD:*

  Ye Yes   INST SEQ - Enter sequence that tags are to be See completed Att. 1C.
               installed. If no sequence is neede, place a 1
               in each INST SEQ block. If only some tags
               require a sequence, number these tags in
               sequence starting with 1 and ending with all
               tags not requiring sequence having the same
               number, for example 1,2,3,4,4,4.

CUES: *SAT*

                                                                         UNSAT

COMMENTS:

CR   SEQ   STEP: 8   *STEP STANDARD:*

  No Yes   REQUIRED OPERABLE POSITION - Enter the See completed Att. 1C.
               normal operable position of the component as
               specified in the applicable SOP.

CUES: *SAT*

                                                                         UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM SETUP SHEET

JPM NO: JPA-027

DESCRIPTION: TAGOUT 'A' SPENT FUEL HEAT EXHANGER

IC SET:

INSTRUCTIONS:

COMMENTS:

SAP-201
ATTACHMENT IC
PAGE 1 OF 1
REVISION 9
INDEX NO. _____
SHEET _____ OF _____

COMPONENT LOG

TAG		ISSUED TO				HOLD TAG INST	COMPONENT ID	PLANT LOC	REQ'D TAG POSIT	INST SEQ	INST BY	VER BY	HOLD TAG REM	REM SEQ	TAG REM BY	REQ'D OPER POSIT	COMP REST	
		E	M	I&C	OTHER												REST BY	VER BY
1	GROUP		X			X	XSW1DA2 06D A SF CLG PP	IB-463	OPEN/ RACK ED OUT	1						RACK ED IN		
	CLEAR																	
2	GROUP		X				XVG06654-SF SPENT FUEL COOLING PUMP A DISCHARGE VALVE	AB-412	CLOS ED	2						OPEN		
	CLEAR																	
3	GROUP		X				XVG06650-SF SPENT FUEL COOLING PUMP A SUCTION VALVE	AB-412	CLOS ED	3						OPEN		
	CLEAR																	
4	GROUP		X				XVT06720-SF SF COOLING HDR A RAD MONITOR OUTLET VALVE	AB-412	CLOS ED	3						OPEN		
	CLEAR																	
5	GROUP		X				XVT06722-SF SF COOLING HDR A RAD MONITOR INLET VALVE	AB-412	CLOS ED	3						OPEN		
	CLEAR																	
6	GROUP		X				XVT06658-SF SPENT FUEL HEAT EXCHANGER A OUTLET VALVE	AB-388	CLOS ED	3						9 TURN S OPEN		

SAP-201
ATTACHMENT IC
PAGE 1 OF 1
REVISION 9
INDEX NO. _____
SHEET _____ OF _____

COMPONENT LOG

TAG	ISSUED TO				HOLD TAG INST	COMPONENT ID	PLANT LOC	REQ'D TAG POSIT	INST SEQ	INST BY	VER BY	HOLD TAG REM	REM SEQ	TAG REM BY	REQ'D OPER POSIT	COMP REST	
		E	M	I&C	OTHER												REST BY	VER BY
7	GROUP		X				XVD16660-SF SF HX A SPENT FUEL SIDE DRAIN VALVE	AB-388	OPEN	4							CLOSED		
	CLEAR																	
8	GROUP		X				XVD16659-SF SF HX A SPENT FUEL SIDE DRAIN VALVE	AB-388	OPEN	4							CLOSED		
	CLEAR																	
9	GROUP		X				XVD16661-SF SF HX A SPENT FUEL SIDE VENT VALVE	AB-388	OPEN	5							CAPPED /CLOSED		
	CLEAR																	
10	GROUP		X				XVD16665-SF SPENT FUEL HX A OUTLET HDR VENT VALVE	AB-388	OPEN	5							CAPPED/ CLOSED		
	CLEAR																	

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   **JPA-028**

Gamma Radiation Shielding Calculations

APPROVAL: *APPROVAL DATE:*

REV NO: 0

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

The exact minimum number of half value layers (6) and tenth value layers (3) are calculated. See attached answer key.

PREFERRED EVALUATION LOCATION	*PREFERRED EVALUATION METHOD*
CLASSROOM	PERFORM

REFERENCES:

TOOLS: Calculator

EVALUATION TIME   15   *TIME CRITICAL*   NO   *10CFR55:*

<u>*CANDIDATE:*</u>   TIME START:

                                                                      TIME FINISH:

<u>*PERFORMANCE RATING:*</u>   SAT: UNSAT:

                                         QUESTION GRADE: PERFORMANCE

<u>*EXAMINER:*</u>

                                                               SIGNATURE   DATE
COMMENTS:

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS: None

INITIAL CONDITION: The "no shielding" gamma radiation levels are given for an area and the desired "shielded" area gamma radaiation levels are given.

INITIATING CUES: You have been directed to work in an area where the Gamma Radiation intensity is 10,000 Rad/Hr with NO shielding. You cannot work in the area unless the field is reduced to LESS THAN or EQUAL to 200 Rad/Hr. You have been directed to calculate the following two scenarios.

1. Calculate the minimum number of HALF-VALUE layers (HVLs) required to reduce the Gamma level of 10,000 Rad/Hr to LESS THAN to 200 Rad/Hr.

2. Calculate the minimum number of TENTH-VALUE layers (TVLs) required to reduce the Gamma level of 10,000 Rad/Hr to LESS THAN 100 Rad/Hr.

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None

INITIAL CONDITION: The "no shielding" gamma radiation levels are given for an area and the desired "shielded" area gamma radaiation levels are given.

INITIATING CUES: You have been directed to work in an area where the Gamma Radiation intensity is 10,000 Rad/Hr with NO shielding. You cannot work in the area unless the field is reduced to LESS THAN or EQUAL to 200 Rad/Hr. You have been directed to calculate the following two scenarios.

1. Calculate the minimum number of HALF-VALUE layers (HVLs) required to reduce the Gamma level of 10,000 Rad/Hr to LESS THAN to 200 Rad/Hr.

2. Calculate the minimum number of TENTH-VALUE layers (TVLs) required to reduce the Gamma level of 10,000 Rad/Hr to LESS THAN 100 Rad/Hr.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR SEQ   STEP: 1   *STEP STANDARD:*

Yes No   Calculate the minimum number of HALF-   6 half value layers calculated
               VALUE layers (HVLs) required to reduce the
               Gamma level of 10,000 Rad/Hr to LESS THAN
               to 200 Rad/Hr.

        CUES: *SAT*

        IF I = Ioe-ux (formula) is used, CUE examinee that u = .772 cm-1   *UNSAT*
        COMMENTS:

CR SEQ   STEP: 2   *STEP STANDARD:*

Yes No   Calculate the minimum number of TENTH-   3 tenth value layers calculated
               VALUE layers (TVLs) required to reduce the
               Gamma level of 10,000 Rad/Hr to LESS THAN
               100 Rad/Hr.

        CUES: *SAT*

                                                                  UNSAT

        COMMENTS:

Examiner ends JPM at this point.

JPM SETUP SHEET

JPM NO: JPA-028

DESCRIPTION: Gamma Radiation Shielding Calculations

IC SET:

INSTRUCTIONS:

COMMENTS:

Answer Key

*1.   Calculate the number of HVLs   **6 HVLs calculated**.   S / U

Examinee may use one of the following methods:
1. $10,000/2 = 5000$
2. $5000/2 = 2500$
3. $2500/2 = 1250$
4. $1250/2 = 625$
5. $625/2 = 312.5$

_6. 312.5/2 = 156.25_

OR

$I_{shielded} = I_{unshielded} (1/2)^{\#HVL}$ where $\#HVL = \dfrac{\text{shield thickness (cm)}}{\text{HVL (cm)}}$

$I_{shielded} = 10,000 (1/2)^{\#HVL}$
$\qquad = 10,000 (1/2)^4 = 625$
$\qquad = 10,000 (1/2)^5 = 312.5$

$$= 10,000 \ (1/2)^6 = 156.25$$

OR

Shielding equation $I = I_o e^{-\mu x}$ where I = exposure rate with the shield (Rad/ Hr)
$\qquad\qquad\qquad\qquad\qquad\qquad$ I_o = unshielded exposure rate (Rad/ Hr)
$\qquad\qquad\qquad\qquad\qquad\qquad$ X = shield thickness
$\qquad\qquad\qquad\qquad\qquad\qquad$ μ = total linear attenuation coefficient (cm^{-1})

CUE: IF shielding equation is used, the total linear attenuation coefficient (μ) is 0.772 cm^{-1}

$I = I_o e^{-\mu x}$ solving for X with (μ) = 0.772 cm^{-1} gives one half thickness = .9 cm (rounded)
5 half thicknesses = 4.5 cm
$I = I_o e^{-\mu x}$; $I = 10,000 \ e^{-(.772)(4.5)}$; $I = 390$

6 half thicknesses = 5.4 cm

$$I = I_o e^{-\mu x} \ ; \ I = 10,000 \ e^{-(.772)(5.4)} \ ; \ I = 154$$

*2.   Calculate the number of TVLs   **3 TVLs calculated.**   S / U

Examinee may use one of the following methods:
1. 10,000/10 = 1000
2. 1000/10 = 100
3. *100/10 = 10*

<u>OR</u>

$I_{shielded} = I_{unshielded} (1/10)^{\#TVL}$ where $\#TVL = \dfrac{\text{shield thickness (cm)}}{\text{TVL (cm)}}$

$I_{shielded} = 10,000 (1/10)^{\#TVL}$
     $= 10,000 (1/10)^2 = 100$
     $\underline{\mathbf{= 10,000 (1/10)^3 = 10}}$

<u>OR</u>

Shielding equation $I = I_o e^{-\mu x}$ where I = exposure rate with the shield (Rad/ Hr)
                                   I_o = unshielded exposure rate (Rad/ Hr)
                                   X = shield thickness
                                   μ = total linear attenuation coefficient (cm^{-1})
CUE: IF shielding equation is used, the total linear attenuation coefficient (μ) is 0.772 cm^{-1}

$I = I_o e^{-\mu x}$ solving for X with (μ) = 0.772 cm^{-1} gives one tenth thickness = 2.3 cm (rounded)
2 tenth thicknesses = 4.6 cm
$I = I_o e^{-\mu x}$; $I = 10,000 e^{-(.772)(4.6)}$; $I = 287$
3 tenth thicknesses = 6.9 cm
$\mathbf{\underline{I = I_o e^{-\mu x} \; ; I = 10,000 \, e^{-(.772)(6.9)} \; ; I = 48}}$

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM   **JPA-018**

CLASSIFY EMERGENCY PLAN EVENT

APPROVAL: *APPROVAL DATE:*

REV NO: 6

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TIME CRITICAL JPM

TASK:

    344-023-03-02   DIRECT EMERGENCY RESPONSE AS INTERIM EMERGENCY DIRECTOR

TASK STANDARD:

    Plant conditions classified as a SITE AREA EMERGENCY, due to loss of offsite and loss of onsite AC

PREFERRED EVALUATION LOCATION   *PREFERRED EVALUATION METHOD*

        CLASSROOM   PERFORM

REFERENCES: EPP-002   COMMUNICATION AND NOTIFICATION

              EPP-001   ACTIVATION AND IMPLEMENTATION OF THE EMERGENCY
PLAN

TOOLS: EPP-001
            EPP-1.3
            EPP-002 (Including Notification Forms)

EVALUATION TIME   30   *TIME CRITICAL*   YES   *10CFR55:* 45(a)11

CANDIDATE: TIME START:
                                   TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

                           QUESTION GRADE: PERFORMANCE

EXAMINER:

                              SIGNATURE   DATE
COMMENTS:

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

SAFETY CONSIDERATIONS:

INITIAL CONDITION: The plant was at 100% when the initiating plant event occurred. 15 minutes has elapsed since the plant event was fully initiated.
The following conditions exist:
A D/G was tagged out for scheduled maintenance and will not be available for 36 hours.
B D/G slipped an electrical pole when started and is unavailable for loading.
A tornado touched down at the PARR plant; the resultant damage to the VC SUMMER feeder lines rendered them unavailable.
A second tornado breached the VCS switchyard, resulting in loss of power to all BOP bus feeder circuits.
XTF-31 and XTF-32 were impacted by debris and are unavailable for supplying their respective busses.

INITIATING CUES: Classify the event per EPP-001 and perform notification responsibilities of IED

THIS IS A TIME CRITICAL JPM!

HAND JPM BRIEFING SHEET TO OPERATOR AT THIS TIME!

JPM BRIEFING SHEET

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

INITIAL CONDITION: The plant was at 100% when the initiating plant event occurred. 15 minutes has elapsed since the plant event was fully initiated.
The following conditions exist:
A D/G was tagged out for scheduled maintenance and will not be available for 36 hours.
B D/G slipped an electrical pole when started and is unavailable for loading.
A tornado touched down at the PARR plant; the resultant damage to the VC SUMMER feeder lines rendered them unavailable.
A second tornado breached the VCS switchyard, resulting in loss of power to all BOP bus feeder circuits.
XTF-31 and XTF-32 were impacted by debris and are unavailable for supplying their respective busses.

INITIATING CUES: Classify the event per EPP-001 and perform notification responsibilities of IED

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR SEQ   STEP: 1   *STEP STANDARD:*

Ye Yes   Evaluates plant based on the given data and   Classifies event as a SITE AREA
           classifies event.   EMERGENCY; based on a LOSS OF
                                                               OFFSITE POWER AND LOSS OF ONSITE
                                                               AC POWER FOR MORE THAN 15
                                                               MINUTES. Initiating Condition - 341
                                                               Detection Method:
                                                               ALL of the following (1 AND 2 AND 3)
                                                               Lost for a period greater than 15 minutes
                                                               1. BOTH Diesel Generators unavailable,
                                                                       AND
                                                               2. Loss of 115KV Potential Lights
                                                                       AND
                                                               3. Loss of 230KV ESF Potential Lights

CUES: *SAT*

NOTE: If student does not explain basis for the classification, the evaluator must   *UNSAT*
ask him to describe the basis.   If the basis is not justified, this constitutes failure,
even if the classification is correct. Time Critical - declaration must be made within
15 minutes after the condition existed.

COMMENTS:

CR SEQ   STEP: 2   *STEP STANDARD:*

No Yes   For an Alert or higher emergency   Shift Communicator informed
           classification, inform the Shift
           Communicator to activate the Pager System
           Statewide and Local
           group calls for the utility's Emergency
           Response Organization
           (ERO), designating whether the Emergency
           Operations Facility
           (EOF) or Backup EOF is to be used.

CUES: *SAT*

CUE: If requested cue the examinee that the EOF will be activated. The examinee   *UNSAT*
may correctly make the argument that the pager system would have been activated
when the alert was declared about 10 minutes ago

COMMENTS:

CR *SEQ*   *STEP:*   3   *STEP STANDARD:*

  Ye Yes   Complete lines 4 through 13 on Attachment I,   Attachment I lines 4 through 13 completed.
            Page 1,
            Nuclear Power Plant Emergency Notification
            Form, with all the
            available information.

CUES: *SAT*

  CUE: Upon request, provide the following information and nothing else: 1) No   *UNSAT*
release is occurring. 2) meteorological data not yet available. 3) Shutdown
occurred about 20 minutes ago.

COMMENTS:

CR *SEQ*   *STEP:*   4   *STEP STANDARD:*

  No No   Direct the Shift Communicator to make the   shift communicator directed
            initial notification to the State and local
            governments.

CUES: *SAT*

  NOTE: Time critical - shift communicator directed within 15 minutes of declaration *UNSAT*

COMMENTS:

Examiner ends JPM at this point.

JPM SETUP SHEET

JPM NO: JPA-018

DESCRIPTION: CLASSIFY EMERGENCY PLAN EVENT

IC SET: 10

INSTRUCTIONS:

1. Activate

MAL-EPS006A	SELECT=FAIL	D/G 'A' Failure
MAL-EPS006B	SELECT=FAIL	D/G 'B' Failure
MAL-EPS003		XTF-32 Lockout
MAL-EPS018A		XTF-4 Trip

3. RUN

4. Insert manual reactor trip and trip RCPs.

5. Perform steps 1-9 of EOP-6.0.

6. FREEZE

This setup is N/A for this license exam since this is an ADMIN JPM and the simulator will not be used for setup

COMMENTS:

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

1. [A] DRILL   [B] ACTUAL EVENT

MESSAGE # _____

2. [A] INITIAL   [B] FOLLOW-UP   NOTIFICATION: TIME_____ DATE____/____/____ AUTHENTICATION # _____

3. SITE: __V. C. Summer_____

Confirmation Phone # (____)_____

---

4. EMERGENCY CLASSIFICATION: [A] UNUSUAL EVENT   [B] ALERT   [X] SITE AREA EMERGENCY   [D] GENERAL EMERGENCY

BASED ON EAL __#341__   EAL DESCRIPTION: ____**LOSS OF OFFSITE POWER AND LOSS OF ONSITE AC POWER FOR MORE THAN 15 MINUTES**____

5. PROTECTIVE ACTION RECOMMENDATIONS: [X] NONE

   [B] EVACUATE _____

   [C] SHELTER _____

   [D] CONSIDER THE USE OF KI (POTASSIUM IODIDE) IN ACCORDANCE WITH STATE PLANS AND POLICY.

   [E] OTHER_____

6. **EMERGENCY RELEASE:**   [X] None   [B] Is Occurring   [C] Has Occurred

---

7. RELEASE SIGNIFICANCE: [X] Not applicable   [B] Within normal operating limits   [C] Above normal operating limits   [D] Under evaluation

8. EVENT PROGNOSIS: [A] Improving   [X] Stable   [C] Degrading

9. METEOROLOGICAL DATA: Wind Direction* from _____ degrees   Wind Speed* _____ mph

(*May not be available for Initial Notifications)   Precipitation* _____   Stability Class* [A] [B] [C] [D] [E] [F] [G]

10. [X] **DECLARATION**   [B] TERMINATION   Time ___**NOW**___ Date **Today**

11. AFFECTED UNIT(S):   [X] 1   [2]   [3]   [All]

12. UNIT STATUS:
(Unaffected Unit(s) Status Not Required for Initial Notifications)

   [X] U1 _0_ % Power   Shutdown at Time **15 minutes ago** Date **Today**

   [B] U2 _____% Power   Shutdown at Time _____ Date ___/____/____

   [C] U3 _____% Power   Shutdown at Time _____ Date ___/____/____

13. REMARKS: __**NONE**__

FOLLOW-UP INFORMATION (Lines 14 through 16 Not Required for Initial Notifications)
EMERGENCY RELEASE DATA. NOT REQUIRED IF LINE 6 A IS SELECTED.

14. RELEASE CHARACTERIZATION: TYPE: [A] Elevated [B] Mixed [C] Ground   UNITS: [A] Ci [B] Ci/sec [C] µCi/sec

   MAGNITUDE: Noble Gases:_____ Iodines:_____ Particulates:_____ Other: _____

   FORM: [A] Airborne   Start Time _____ Date ___/____/____ Stop Time _____ Date ___/____/____

       [B] Liquid   Start Time _____ Date ___/____/____ Stop Time _____ Date ___/____/____

15. PROJECTION PARAMETERS: Projection period: _____Hours   Estimated Release Duration _____Hours

   Projection performed: Time _____ Date ___/____/____

16. PROJECTED DOSE:

DISTANCE	TEDE (mrem)	Adult Thyroid CDE (mrem)
Site boundary		
2 Miles		
5 Miles		
10 Miles		

17. APPROVED
BY: _____ Title _____   Time _____ Date___/____/____
NOTIFIED
BY:_____ RECEIVED BY: _____   Time _____ Date ___/____/____

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

1.0 Complete the Emergency Notification Form as follows:

Line #	Action	Source of Information
1.	Check the appropriate blocks. **Note:** Message numbers are sequentially numbered throughout the emergency/drill.	
2.	Check the appropriate block. Initial Notification is for the declaration of any of the Emergency Action Levels, escalating from one EAL to the next and for the Termination message. Follow-up is for all other messages. The Notification Time is the time that the first agency answers the telephone. See Section 2.5 of this attachment. Authentication # is the number from page 9 of this attachment. See Section 2.8 of this attachment.	
3.	Write in the Confirmation Phone #. The phone number at the V. C. Summer location that a Communicator will be for call back from the State for message confirmation.	
4.	Check the appropriate classification. Write in the EAL number and the exact wording of the Initiating Condition. Do not abbreviate or use acronyms.	EPP-001
5.	For NUE, Alert and Site Area Emergency, check NONE. For General Emergency, write in the appropriate zones. If the release meets the following conditions, recommend sheltering in the affected zones: 1. Controlled so that the release cannot exceed initial expectations of duration and magnitude 　　**AND** 2. Short Duration 　　**AND** 3. The area near the plant **CANNOT** be evacuated in time. If the release does **NOT** meet the requirements for sheltering, **THEN** the minimum plant based PAR is: Evacuate A-0 and the 5-mile Zone(s) downwind. Shelter all other zones. If a release is in progress, perform a dose assessment and adjust PARs **outward** if required. PARs that have been recommended to the State and counties cannot be rescinded or downgraded, only expanded.	EPP-001.4 EPP-005

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

Line #	Action	Source of Information

6.	Check the appropriate block.
	  • **A.** **NONE**: Clearly **NO** emergency release associated with the emergency event is occurring or has occurred.
	  • **B.** **IS OCCURRING**: Meets the below condition.
	  • **C** **HAS OCCURRED**: Previously met the below condition.
	1. **An emergency release is any unplanned, quantifiable release to the environment associated with a declared emergency event.**
	Base the determination of the emergency release on:
	* RMS readings,
	* Containment pressure and other readings,
	* Field monitoring results,
	* Knowledge of the event and its impact on systems operation and resultant release paths.
	2. **An emergency release is occurring if any one or more of the following bulleted conditions are met associated with the declared emergency:**
	* Containment monitors (RM-G7 and 18) readings indicate greater than 1.5 R/hr,
	 AND An actual containment breech is known to exist.
	
	* Plant vent particulate, gaseous or iodine monitor (RM-A3 or RM-A13) readings indicate an increase in activity,
	
	* Confirmed activity in the environment reported by Field Monitoring Team(s),
	
	* Knowledge of the event and its impact on systems operation and resultant release paths (IED/ED discretion).	

7.	Check the appropriate block. If there is no release in progress, check **A. Not Applicable**. If there is a release in progress and it has not been quantified, check **D. Under Evaluation**.	

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

Item #	Action	Source of Information
8.	Check the appropriate Plant Prognosis. **Improving**: Plant conditions involve at least one of the following: • Plant parameters (ex. temperature, pressure, level, voltage, frequency) are trending favorably toward expected or desired values **AND** plant conditions could result in a lower classification or emergency termination. • Site environmental conditions (EX. wind, ice/snow, ground tremors, hazardous/toxic/radioactive material leak, fire) have become less of a threat to plant operations or personnel safety **AND** plant conditions could result in a lower classification (can not downgrade classifications) or emergency termination. **Stable**: Plant conditions are neither **degrading** nor **improving**. **Degrading**: Plant conditions involve at least one of the following: • Plant parameters (ex. temperature, pressure, level, voltage, frequency) are trending unfavorably away from expected or desired values **AND** plant conditions could result in a higher classification or Protective Action Recommendation. • Site environmental conditions (EX. wind, ice/snow, ground tremors, hazardous/toxic/radioactive material leak, fire) impacting plant operations or personnel safety are worsening **AND** plant conditions could result in a higher classification or Protective Action Recommendation.	

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

Line #	Action	Source of Information
9.	Write in the appropriate data and check the appropriate block: 1. Obtain the 15-minute interval data marked preferred on the EARMET screen in SPDS. **OR** 2. If met tower information is not available on the SPDS, dispatch I&C personnel to gather data via radio link or directly from the met tower in accordance with STP-393.005, Met Tower Instrumentation Calibration. **OR** 3. Obtain the information from the National Weather Service. Refer to the EP Telephone Directory for the number.	EPP-005
10.	Check the appropriate block and write in the appropriate data.	
11.	Check block **1**.	
12.	Enter the appropriate information in Block **1**.	
13.	Write in information that would be of interest to the offsite agencies (EX. non-radioactive steam discharges, injured personnel, non-essentials evacuated to an Offsite Holding Area). Be sensitive to the fact that certain descriptive technical terms may elicit unanticipated reactions from offsite agencies.	

Chg
C

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

(FOLLOW-UP INFORMATION)

Line #	Action	Source of Information
14.	Check **C. GROUND** for TYPE of release. The information in the remainder of this section comes from the dose assessment results.	EPP-005
15.	The information in this section comes from the dose assessment results.	EPP-005
16.	The information in this section comes from the dose assessment results.	EPP-005
17.	APPROVED BY: Write in the name of the individual (IED, ED or OEC) that approves this ENF, his/her ERO title and time and date of approval. NOTIFIED BY: Write in the name of the Communicator that verbally provides this information to the offsite agencies. Record the time that the first agency answers the telephone during the notification call.	

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

2.0   Transmission of the Emergency Notification Form

NOTE 2.1

a.   All initial notifications are verbal. Avoid using abbreviations, acronyms or jargon likely to be unfamiliar to the State and counties.

b.   The backup means of communications are the direct incoming Bell lines in each facility. See the EP Telephone Directory, Facilities Section, for locations. Additional backup means are the county radio channels and the SC EMD Radio in the EOF.

Chg
B

_____2.1   If an upgrade in classification occurs prior to transmitting the initial message, discontinue process for old classification and immediately begin process for new classification.

2.2   If an upgrade in classification occurs while transmitting any message,

_____2.2.1   Notify the agencies that an upgrade has occurred and that new information will be supplied within 15 minutes.

_____2.2.2   Suspend any further transmission of the message that was being transmitted.

_____2.3   Use the ESSX telephone by depressing *11 for the group call function.

_____2.4   As the State and counties answer, check them off on Attachment II. If one or more parties fail to answer, proceed with the transmission and contact the missing parties individually after the initial call using ESSX codes posted near the ESSX phone.

NOTE 2.5

The time when the first party answers is the official notification time and should be recorded in Line 2 of the current Emergency Notification Form.

_____2.5   Verify all available State and counties are on the line and document the time that the first party answered in Line 2 of the Emergency Notification Form. This time should not exceed 15 minutes from the declaration time in Line 10 of the current Emergency Notification Form.

_____2.6   Tell them that you have an emergency notification from the V. C. Summer Nuclear Station and to get out the Emergency Notification Form.

_____2.7   Read the complete Emergency Notification Form line by line, beginning with Line 1 allowing time to copy. Use the phonetic alphabet for all block designators.

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

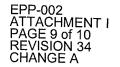_____2.8   When the end of Line 2 is reached, ask the State or a county if authentication is needed. If so, the agency should provide a number to which you will provide the corresponding code word from Page 10 of this attachment. Write in the authentication number on the form.

_____2.9   After communicating the message, ask if there are any questions. If so, provide the answers. Record individuals' names on Attachment II. The time is the same time as Line 2.

NOTE 2.10

If the classification is either Site Area Emergency or General Emergency, EPP-021 shall be implemented. Retain the State Emergency Operations Center (EOC) on the line. If the State EOC is not activated, retain Fairfield County on the line.

_____2.10   Tell the agencies that this is the end of this message and that they may hang up.

_____2.11   Fax the Emergency Notification Form to the State and counties using the dedicated Fax machine in the facility.

_____2.11.1   Place the copy face down on the Fax machine.

_____2.11.2   Press the "Initial Notific." button.

_____2.11.3   Press the START button.

_____2.11.4   Verify that the form was sent to each location by an "OK" in the Status Column of the Fax report issued by the Fax machine.

_____2.12   Continuous attempts must be made to contact the missing agencies. Document the time that these agencies are notified on Attachment II.

AUTHENTICATION PROCEDURE

1. This Authentication Code List is for use with Warning Messages of nuclear incidents/accidents.

2. To use the code, the person receiving the message randomly selects a number and instructs the person sending the message to: "Authenticate number (and states the number selected from the attached code list)." For instance, from the sample code list below, a message could be authenticated as follows:

    A. Person receiving the message: "Authentication number 100".

    B. Person sending the message: "I authenticate number 100 as Ranger". | Chg.
                                                                                      A

Authentication Code List

1. Accord	47. Explorer	93. Odyssey
2. Aerostar	48. Fairlane	94. Oldsmobile
3. Alero	49. Ferrari	95. Pathfinder
4. Altima	50. Firebird	96. Plymouth
5. Armada	51. Focus	97. Pontiac
6. Astro	52. Ford	98. Porsche
7. Audi	53. Forrester	99. Ram
8. Automatic	54. Fury	100. Ranger
9. Avalanche	55. Galaxy	101. Regal
10. Axiom	56. Gasoline	102. Renegade
11. Barracuda	57. Gremlin	103. Sable
12. Beetle	58. Hatchback	104. Saturn
13. Blazer	59. Highlander	105. Sebring
14. Bonneville	60. Hummer	106. Sedan
15. Buick	61. Impala	107. Sedona
16. Cadillac	62. Infinity	108. Sentra
17. Camaro	63. Intrepid	109. Skylark
18. Camry	64. Ion	110. Stratus
19. Caprice	65. Isuzu	111. Subaru
20. Caravan	66. Jaguar	112. Suburban
21. Cavalier	67. Jeep	113. Suzuki
22. Cherokee	68. Jetta	114. Tahoe
23. Chevelle	69. Jimmy	115. Taurus
24. Chevy	70. Kia	116. Thunderbird
25. Chrysler	71. Laredo	117. Titan
26. Civic	72. Lebaron	118. Toyota
27. Cobra	73. Lesabre	119. Tracker
28. Compact	74. Lexus	120. Trooper
29. Contour	75. Lincoln	121. Tundra
30. Corvette	76. Lumina	122. Valiant
31. Cougar	77. Luxury	123. Viper
32. Coupe	78. Malibu	124. Volkswagon
33. Cruiser	79. Maverick	125. Volvo
34. Daimler	80. Mazda	126. Wagon
35. Dakota	81. Mercedes	127. Windstar
36. Dart	82. Mercury	128. Wrangler
37. Diesel	83. Metro	129. Xterra
38. Dodge	84. Millennia	130. Yukon
39. Echo	85. Mirage	
40. Eclipse	86. Mitsubishi	
41. Edsel	87. Montero	
42. Escape	88. Mustang	
43. Escort	89. Navigator	
44. Esteem	90. Neon	
45. Excursion	91. Nissan	
46. Expedition	92. Nova	

Chg.
A