

## **LaSALLE NRC EXAM 2006-301**

### **Job Performance Measure Admin a.**

**Candidate Name:** \_\_\_\_\_

**LASALLE COUNTY STATION**

**Admin JPM a.**

Facility: LaSalle County Station U1/U2

Date: November 13, 2006

Task Title: Determine Tags for OOS

Job Performance Measure No: Admin a

K/A Reference: 2.1.24

Method of testing:

Simulated Performance \_\_\_\_\_ Actual Performance ✖

Classroom ✖ Simulator ✖ Plant ✖

***Read to the examinee:***

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues.

Initial Conditions: You are an extra SRO on shift.

The Unit 1 is in Mode 4.

Maintenance has requested the Division 2 Water leg pump be taken Out Of Service to replace the pump.

RHR 'B' and RHR 'C' were previously taken OOS.

The plant computer for tagging is out of service.

**INITIATING CUE:**

The Unit Supervisor directs you to independently verify the **mechanical and electrical** outage requirements for the Out of Service.

Inform the Unit Supervisor of the components needed to be controlled and their controlled positions.

Task Standard: Correctly identify all valves and breakers that must be tagged and their positions.

Time Critical Task: Yes/No ☐

Validation Time: \_\_\_\_\_

**SIMULATOR SETUP INSTRUCTIONS**

Any rated power IC can be used for this JPM

**Materials:**

The following materials are required to be available to the examinee:

11X17 1E-1-4220AW  
P& ID M-96-3  
P& ID M-96-4

The following materials are required to be provided to examinee:

None

**LASALLE COUNTY STATION**

**Admin JPM a.**

JPM Start Time: \_\_\_\_\_

**CUE:** Provide a copy of the OOS request.

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1. \_\_\_\_\_ Performance step:

Standard: Examinee locates and refers to the following drawings:  
M-96-3  
M-96-4  
11X17 1E-1-4220AW

Comment:

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2. ✓ Performance step:

Standard: Determine isolation points for Division 2 Water leg Pump.  
Examinee determines the following valves must be taken OOS in the closed position:

1E12-F380 - min flow valve - closed  
1E12-F085C - water leg discharge to 1C RHR - closed  
1E12-F085B - water leg discharge to 1B RHR - closed  
1E12-F082 - water leg suction - closed

Comment:

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3. ✓ Performance step:

Standard: Determine electrical isolation points for Division 2 Water leg Pump.  
Examinee determines the following breakers/fuses must be taken OOS in the tripped/pulled position:

MCC 136Y-1 E1 (breaker open)

Comment:

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4. \_\_\_\_\_ Performance step:

Standard:     Examinee informs Unit Supervisor of valves and breakers identified and positions required.

Comment:

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Terminating Cue:     Unit Supervisor, acknowledge information.

This JPM is complete.

JPM Stop Time:     \_\_\_\_\_

## **LaSALLE NRC EXAM 2006-301**

### **Job Performance Measure Admin b.**

**Candidate Name:** \_\_\_\_\_

**LASALLE COUNTY STATION**

**Admin JPM b.**

Facility: LaSalle County Station U1/U2

Date: November 13, 2006

Task Title: Interpret Core Thermal Limits

Job Performance Measure No: Admin b

K/A Reference: 2.1.25

Method of testing:

Simulated Performance \_\_\_\_\_ Actual Performance ✖

Classroom \_\_\_\_\_ Simulator ✖ Plant \_\_\_\_\_

***Read to the examinee:***

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues.

Initial Conditions:     You are an extra SRO on shift.

                              Unit 1 is at rated conditions and stable.

**INITIATING CUE:**

Using the plant computer, print out the current core performance calculations.

Review the results and inform the Unit Supervisor of acceptability.

**Task Standard:**       Correctly identify all out of specification items on the current core performance calculations.

Time Critical Task:    Yes/No

Validation Time: \_\_\_\_\_

**SIMULATOR SETUP INSTRUCTIONS**

Any rated power IC can be used for this JPM.

In Actions Lists, for Powerplex, select R3306 PPLXFLCPR MALF 33-06 value to 1.4.

**Materials:**

The following materials are required to be provided to examinee:

One copy of CMSS Core Performance Log printout when directed by CUE.  
The printout should have MFLPD value greater than 1 (outside thermal limits)

The following material may be located and utilized by the examinee:

LOP-CX-01, Core Power Distribution Calculation (OD20)  
LOS-AA-S101, Unit 1 Shiftly Surveillance  
U-1 Technical Specifications



JPM Start Time: \_\_\_\_\_

Note:

The examinee may obtain LOP-CX-01 to perform the next step.

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1.   ✓   Performance step:

Standard: Demands core performance calculations.  
Examinee:

Select "Operator Demandable" from the PPC "Main Menu."  
Select "OD Function" from the "Operator Demandable" menu.  
Select "OD 20" from the PowerPlex "OD Functions" display.  
CHECK that the OD 20 data has printed on the PowerPlex printer.

Comment: After examinee has completed step 1, give him/her the preprinted core performance printout.

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2.   ✓   Performance step:

Standard: (The examinee may obtain LOS-AA-S101 to perform this step).  
Reviews the Core Performance data.  
Examinee reviews data and determines MFLPD has a value greater than 1 (outside thermal limits).

Comment:

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3.        Performance step:

Standard: Inform Unit Supervisor MFLPD has been exceeded.  
Examinee recommends entry into applicable technical specification.

Comment:

**Terminating Cue**

As Unit Supervisor, acknowledge information.

**LASALLE COUNTY STATION**

**Admin JPM b.**

This JPM is complete.

# LASALLE COUNTY STATION

Admin JPM b.

LaSalle-1 WK-0415 04APR07-07.55.12 1373 MWD/MTU TRIGR=2HR REV=UFEB03

## CORE PERFORMANCE LOG --- LONG EDIT

CALCULATION TYPE: MON CALCULATION -  
RESTART FILE: RST-04APR07-074912  
THERMAL LIMIT SET: Set01 OPTION B DLO Base Limits

CTP CALCULATION : HEAT BALANCE SYMMETRY : FULL

STATE CONDITIONS	FLOW RATES / CORE PARAMETERS	NUCLEAR LIMITS	LOCATION
GMWE 1195.24	WT 97.6 (90.0%)	MLB/HR MPF 2.969	45-40-04
GMWT 3487.8 (100.0%)	WTSUB 98.46	MLB/HR MCPR 1.638	45-40
EFF 34.27 %	WTFLAG 2	MFLCPR 0.873	45-40
PR 1018.0 PSIA	WFW 15.00	MLB/HR MAPRAT 0.737	47-40-04
DHS 20.88 BTU/LB	TFW 421.83	DEG. F MFDLRX 0.768	47-40-04
KEFF 1.0028	WD 30.77	MLB/HR MFLPD 1.002	45-40-04
CRD 0.0721	CRD FLOW 0.033	MLB/HR MAX(P-PCS) 0.03	41-32-04
	AVG POW DEN 51.59 KW/L	FCL 107.2%	
	AVG VOID FRAC 0.4788		
	PRESS DROP (MEAS) 17.35 PSIA	XE (EQ) -0.04%	
	PRESS DROP (CALC) 20.76 PSIA	XE (NONEQ) -0.08%	

CYCLE EXPOSURE 1373.5 MWD/MTU CAVEX 16204. MWD/MTU

LOCATION	1	2	3	4	5	6	7	8
RING REL POWER	0.91	1.31	1.29	1.24	1.22	1.18	0.93	0.52

***** NUCLEAR LIMITS *****				*AXIAL REL POWER*		
FLCPR	LOC	APRAT	LOC	FDLRX	LOC	REL-POW
0.873	45-40	0.737	47-40-04	0.768	47-40-04	0.059
0.873	19-18	0.735	43-40-04	0.755	37-30-04	0.173
0.871	17-20	0.730	23-32-04	0.753	37-34-04	0.343
0.868	39-32	0.727	45-42-04	0.752	43-40-04	0.484
0.867	31-22	0.726	41-46-04	0.752	45-38-04	0.628
FLPD	LOC	TPF	LOC			
1.002	45-40-04	2.969	45-40-04			0.984
0.831	39-16-04	2.900	39-16-04			1.035
0.831	25-32-04	2.897	25-32-04			1.088
0.830	43-38-04	2.894	43-38-04			1.205
0.830	39-32-04	2.893	39-32-04			1.273
***** MLHGR BY FUEL TYPE *****						
TYPE	LHGR	LOCATION	TYPE	LHGR	LOCATION	REL-POW
6	3.86	07-12-12	31	10.00	37-40-05	1.367
7	3.90	29-60-10	32	9.01	13-32-05	1.386
8	5.29	49-52-10	33	7.64	37-54-06	1.375
9	5.78	09-48-11	34	11.11	39-32-04	1.381
10	9.50	47-40-04	35	11.41	45-40-04	1.403
11	8.94	35-14-04	36	8.41	05-30-05	1.435
12	11.13	25-32-04	37	10.77	35-34-04	1.459
13	8.80	07-26-05	38	11.03	17-20-04	1.443
23	10.12	31-30-05	39	10.00	35-12-04	1.323
24	10.61	47-46-04	40	10.66	41-36-04	1.016

## APRM CALIBRATION

	A	B	C	D	E	F
APRM READINGS	99.7%	99.5%	99.0%	99.2%	98.9%	98.8%
APRM GAFS	1.003	1.005	1.010	1.008	1.011	1.012

# LASALLE COUNTY STATION

Admin JPM b.

LaSalle-1 WK-0415 04APR07-07.55.12 1373 MWD/MTU TRIGR=2HR REV=UFEB03

## \*\*\*\*\* CONTROL ROD DATA \*\*\*\*\*

02	06	10	14	18	22	26	30	34	38	42	46	50	54	58	
59				--	--	--	--	--	--	--					59
55			--	--	16	--	--	--	16	--	--				55
51		--	--	--	--	--	--	--	--	--	--				51
47	--	--	--	--	--	--	00	--	--	--	--	--	--		47
43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43
39	--	16	--	--	12	--	--	--	12	--	*--*	--	16	--	39
35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35
31	--	--	--	00	--	--	--	00	--	P--	00	--	--	--	31
27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27
23	--	16	--	--	12	--	--	--	12	--	--	--	16	--	23
19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19
15	--	--	--	--	--	--	00	--	--	--	--	--	--	--	15
11		--	--	--	--	--	--	--	--	--	--	--			11
07			--	--	16	--	--	--	16	--	--				07
03				--	--	--	--	--	--	--					03
02	06	10	14	18	22	26	30	34	38	42	46	50	54	58	

CONTROL RODS SYMMETRIC, C.R. SEQUENCE:A-2, C.R. DENSITY: 0.072  
SUBST. RODS:

***** CALIBRATED LPRM READINGS *****								*LPRM FAILED SENSORS*	
								LOCATION	STATUS
57		15.5	20.4	20.0	20.9			-----	-----
		29.2	37.7	37.9	36.1				
		30.1	46.4	49.0	39.9			40-49-C	MAN
		21.8	42.1	44.1	33.7			40-49-A	DNOSC
								56-25-B	DNOSC
49	19.3	20.5	22.5	20.8	21.7	21.3		48-17-C	DNOSC
	31.8	45.4	48.5	43.7	46.0	40.1		40-09-A	DNOSC
	36.0	62.5	64.9	60.3	65.1	54.8			
	29.2	68.7	68.3	63.7	69.0	59.8			
41	19.7	24.3	27.8	28.7	26.9	25.6	24.8		
	38.3	49.9	47.6	51.7	46.1	50.4	36.6		
	48.2	68.4	63.8	69.9	64.2	66.9	39.9		
	47.5	75.1	64.9	73.9	70.2	72.6	33.3		
33	19.6	21.3	25.7	29.2	25.3	19.7	20.0		
	42.5	45.3	49.6	49.9	49.8	43.7	38.4		
	58.6	62.0	67.8	69.2	69.6	59.2	48.6		
	65.3	65.1	79.9	78.2	81.9	62.8	43.5		
25	19.0	24.0	28.1	29.1	29.6	24.5	21.2		
	39.8	50.4	47.9	52.3	49.0	49.8	38.1		
	50.5	68.1	63.7	68.6	64.4	65.5	44.3		
	51.3	74.4	67.2	73.8	63.6	65.4	40.5		
17	20.3	24.0	25.8	21.7	23.6	23.3	17.6	*OTHER FAILED SENSORS*	
	39.5	50.4	51.7	45.9	49.4	46.3	30.0	SENSOR	STATUS
	51.0	68.8	69.6	63.0	69.0	62.7	30.8	-----	-----
	47.5	78.8	73.7	66.5	79.4	64.8	23.3		
09		18.9	21.2	22.0	21.9	19.7			
		38.9	40.5	44.3	39.8	33.9			
		51.5	52.1	59.5	51.1	41.2			
		52.2	48.7	60.6	50.2	35.9			
08	16	24	32	40	48	56			

## **LaSALLE NRC EXAM 2006-301**

### **Job Performance Measure Admin c.**

**Candidate Name:** \_\_\_\_\_

**LASALLE COUNTY STATION**

**Admin JPM c.**

Facility: LaSalle County Station U1/U2

Date: November 13, 2006

Task Title: Execute LOA GRID-001 (U1)

Job Performance Measure No: Admin c

K/A Reference: 295003 AA1.01

Method of testing:

Simulated Performance \_\_\_\_\_ Actual Performance ✖

Classroom \_\_\_\_\_ Simulator ✖ Plant ✖

***Read to the examinee:***

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues.

Initial Conditions:     You are an extra SRO in the Control Room.

Unit 1 is at rated conditions.

Unit 2 has scrammed 3 hours ago.

It is a cool spring day.

Due to unusual number of generating stations offline, the Grid is red and LOP-AP-43, Emergency Load Conservation, has been completed.

No surveillances are in progress due to Grid conditions.

The C VP Chiller is secured. 1A and 1B Service Water Pumps are running and 3 CW pumps are running.

The Load Dispatcher has just informed you that Predicted Switchyard Voltage with the loss of Unit 1 at LaSalle is 350.5 KV.

**INITIATING CUE**

The Unit Supervisor has assigned you to perform LOA-GRID-001 for Unit 1. Notify US when Attachment A of LOA-GRID-001 is complete.

Task Standard:       Correctly complete LOA-GRID-001 and determine Off-Site power is OPERABLE.

Time Critical Task:   Yes/No ☐

Validation Time: \_\_\_\_\_

**SIMULATOR SETUP**

Reset Simulator to IC 130 or other power IC that will support LOA-GRID-001.

Ensure C VT Supply and exhaust are running. A shutdown.

Ensure C VR Supply and exhaust are running, A shutdown.

**Materials:**

The following materials are required to be available to the examinee:

LOA GRID-001

The following materials are required to be provided to examinee:

None

**LASALLE COUNTY STATION****Admin JPM c.**

JPM Start Time: \_\_\_\_\_

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1. \_\_\_\_\_ Performance step:

Standard: START a Special Log per LAP-200-5, Conduct of Operations – Special Logs, and Attachment C to MONITOR predicted and minimum switchyard voltages.

Comment: Applicant should start Special Log (Attachment C). Examinee writes Predicted and Minimum Switchyard voltage on Attachment C. Values are 350.5 KV and 353 KV.

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2. \_\_\_\_\_ Performance step:

Standard: As directed by Transmission Operations, raise VARS to increase switchyard voltage.

Comment: Raising VARS will not increase switchyard voltage (CUE IF NECESSARY).

---

3. \_\_\_\_\_ Performance step:

Standard: Verify LOP-AP-43, Emergency Load Conservation measures are in place.

Comment: Per initial conditions, LOP-AP-43 actions are being executed.

---

4. \_\_\_\_\_ Performance step:

Standard: Checks predicted switchyard voltage greater than minimum allowed voltage for current plant configuration by executing Attachment A Tables 1, 2, &amp; 3.

Comment: (Attachment B tables are for Unit 2.) Applicant should obtain and execute Attachment A Tables 1, 2, &amp; 3.

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5. ✓ Performance step:

Standard: Examinee completes Unit 1 Table 1. Notes the Minimum Allowable Switchyard Voltage. - 351.7kV

Comment: Observe the completion of Table 1 for accuracy.



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6.   ✓   Performance step:

Standard: Applicant completes Unit 1 Table 3. Applicant recognizes:

Three circ water pumps running - no credit.

Station Air Compressor running is U0 Air Compressor - 0.4kV allowed adjustment.

Two service water pumps running - no credit.

Three heater drain pumps running - no credit.

C VP Chiller not running (from initial conditions) - 0.4kV decrease in Minimum Allowable Switchyard Voltage.

Comment:

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7.   ✓   Performance step:

Standard: Applicant determines 0.8 may be subtracted from minimum Allowable Switchyard voltage found in Table 2. Minimum allowable switchyard voltage then becomes 349.9 which is below the value provided in the initial conditions (350.5 kV)

Comment:

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8.   ✓   Performance step:

Standard: Applicant determines that Offsite Power is OPERABLE.

Comment: Informs Unit Supervisor Offsite Power is OPERABLE

JPM Stop Time: \_\_\_\_\_

**LASALLE COUNTY STATION**

**Admin JPM d.**

## **LaSALLE NRC EXAM 2006-301**

**Job Performance Measure Admin d.**

**Candidate Name:** \_\_\_\_\_

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**Job Performance Measure  
Cover Sheet**

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Facility: LaSalle County Station U1/U2Date: November 13, 2006Task Title: Authorize an Emergency Dose  
for a Life Saving OperationJob Performance Measure No: Admin d.K/A Reference: 2.3.4Method of testing:Simulated Performance \_\_\_\_\_ Actual Performance ✗Classroom ✗ Simulator ✗ Plant \_\_\_\_\_***Read to the examinee:***

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues.

Initial Conditions: A General Emergency has been declared. Fuel failure has occurred together with a failure of the RCS. Containment is currently being challenged. The TSC has not been activated, but the appropriate EAL has been declared. An emergency life saving operation must be performed. The operation will take between 12 and 15 minutes in a 200 R/hr field with an unknown fission product gas concentration in the room. The operation requires two people to enter the field. Phred Burphle, SS# 012-34-5678; Harvey Owanowitz, SS# 123-45-6789; and George Bush, SS# 987-65-4321 have volunteered. Phred and Harvey have never received an emergency exposure, but George received a 27 R dose at a reactor in South Africa when he volunteered to assist in a similar life-saving operation. He is familiar with the procedures for rescuing the victim.

Task Standard: The life saving operation is authorized, George is not allowed to receive the emergency dose.

Required Materials: EP-AA-113

General References: EP-AA-113

Initiating Cue: As the Shift Emergency Director, perform the actions needed to allow the life-saving operation.

Time Critical Task: Yes/No ☐

Validation Time:

**LASALLE COUNTY STATION**

**Admin JPM d.**

## Performance Information

***Critical steps denoted with a check mark***

_____	Performance step:
Standard:	Applicant retrieves a copy of EP-AA-113, Personnel Protective Actions.
Comment:	
_____	Performance step:
Standard:	Applicant determines need for emergency action.
Comment:	Emergency action is needed per initiating cue.
✓	Performance step:
Standard:	Determines emergency exposure limits in excess of 5 rem TEDE (EPA-400 lower limits) are required for Exelon emergency workers.
Comment:	Rad workers will receive approximately 40 - 50 REM performing the rescue operation.
_____	Performance step:
Standard:	Determines emergency exposure is not less than 5 REM TEDE. Step 4.3.1.3 is marked N/A.
Comment:	Step is marked N/A
✓	Performance step:
Standard:	Determines exposure will be above 5 REM, completes an Authorization for Emergency Exposure (EP-AA-113-F-02) for Phred and Harvey. Applicant must exclude George for his previous exposure.
Comment:	EP-AA-113-F-02 is completed for Phred and Harvey.

## LASALLE COUNTY STATION

Admin JPM d.

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✓ Performance step:

Standard: Informs workers before the fact of possible health effects at the anticipated exposure level using Attachment 1, Emergency Worker Exposure Limits and Associated Risks.

Comment: Applicant provides brief per Attachment 1.

---

✓ Performance step:

Standard: Applicant obtains emergency worker's acknowledgment that they have volunteered and understand the associated risks. (In writing on Authorization for Emergency Exposure Form or verbally for teams in the fields.)

Comment: Sign for the two authorized workers.

---

✓ Performance step:

Standard: Applicant signs the Authorization for Emergency Exposure Form as Shift Emergency Director.

Comment: Applicant completes authorization of Emergency Exposure.

---

✓ Performance step:

Standard: Applicant recognizes per the initiating cue that authorization to take KI must also be completed prior to the emergency workers entering the space with an unknown concentration of fission product gasses.

Comment: Proceed to Admin JPM e., Authorization to Take KI.

Terminating cue: Cue the applicant that this JPM is complete.

**LASALLE COUNTY STATION**

**Admin JPM e.**

## **LaSALLE NRC EXAM 2006-301**

**Job Performance Measure Admin e.**

**Candidate Name:** \_\_\_\_\_

**LASALLE COUNTY STATION**

**Admin JPM e.**

Facility: LaSalle County Station U1/U2

Date: November 13, 2006

Task Title: Authorize Use of KI

Job Performance Measure No: Admin e

K/A Reference: 2.4.40

Method of testing:

Simulated Performance \_\_\_\_\_ Actual Performance ✗

Classroom ✗ Simulator ✗ Plant ✗

***Read to the examinee:***

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues.

Initial Conditions: See the initial conditions from Admin JPM d.

Task Standard: Correctly completed EP-AA-113-F-03

Initiating Cue: Execute Step 2.5 of EP-AA-112-100-F-01.

Time Critical Task: Yes/No ☐

Validation Time:



**Materials:**

The following materials are required to be available to examinee:

EP-AA-112-100-F-01, Shift Emergency Director Checklist  
EP-AA-113,  
EP-AA-113-F-03

The following material is required to be provided to examinee:

None

**Performance Information*****Critical steps denoted with a check mark***

The applicant should have a copy of EP-AA-112-100-F-01, Shift Emergency Director Checklist from completion of Admin JPM d.

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\_\_\_\_\_ Performance step:

Standard: Reviews provided procedure, retrieves procedure: EP-AA-113, "Personnel Protective Actions." Goes to Section 4.4, "KI Assessment."

Comment:

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✓ Performance step:

Standard: Determines from step 4.4.1.A there is or has been a potential loss of fuel clad. (Based on initial cue of General Emergency.) Determines from step 4.4.1.B that workers will be entering an unknown radiological atmosphere that is suspected to have a high iodine concentration. (Based on initial cue.) Determines KI must be issued.

Comment:

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✓ Performance step:

Standard: Documents the decision to issue KI using Thyroid Blocking Agent Authorization Form (EP-AA-113-F-03). Both individuals entering the space must be listed with correct social security numbers.

Comment: Phred Burphle, SS# 012-34-5678; Harvey Owanowitz, SS# 123-45-6789. George Bush, SS# 987-65-4321 should not be allowed entry.

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\_\_\_\_\_ Performance step:

Standard: Notifies Occupational Health (Medical) Services Department promptly that KI is to be issued to Exelon Nuclear personnel or contractors.

**LASALLE COUNTY STATION**

**Admin JPM e.**

Comment:

Terminating cue: JPM is complete when applicant notifies OHS of KI use.