Facility: Ginna		Date of Examination: Feb 11, 2002
Examination Level (circle one): (RO) / SRO		Operating Test Number: 02-01
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	JPM: J017.001 Determine RCS Core Exit Subcooling With the PPCS Out of Service K/A 2.1.7 Importance 3.7
		Not Applicable
	Conduct of Operations	JPM: J017.001 O-6.13 Daily Performance Logs K/A 2.1.18 Importance 2.9
		Not Applicable
A.2	Equipment Control	JPM: J343.004 A-52.12, Inoperability of Equipment K/A 2.2.24 Importance 2.6
		Not Applicable
A.3	Radiation Monitoring/ Control	Question: Knowledge of Work Stoppage Based on In-Progress ALARA Review K/A 2.3.10 Importance 2.9
		Question: Knowledge of Immediate Notification for Radiation Incidents K/A 2.3.1 Importance 2.6
A.4	Emergency Procedures/ Plan	JPM: J085.002 Complete NY State Radiological Emergency Data Form Part I (EPIP 1-5, Att 3A) K/A 2.4.39 Importance 3.3
		Not Applicable

Admin J017
~~SRO~~ + RO
A.1.1

Skill of Craft

JPM COVER SHEET

JPM NO: J017.001 REV # 02 REVIEW DATE 6/10/98

JPM TITLE: DETERMINE RCS CORE EXIT SUBCOOLING WITH THE PPCS OUT OF SERVICE

LOCATION: SIMULATOR

EST. TIME TO COMPLETE: 10 MIN

DATE:

CANDIDATE: SOC. SEC. # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL: (RO)/SRO/STA

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: J017.001

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

THE SIMULATOR WILL BE PLACED IN A SUITABLE CONDITION FOR GIVING A STATIC EXAMINATION. DO NOT USE PPCS INDICATIONS.

THIS JPM MAY ALSO BE PERFORMED IN THE CONTROL ROOM.

INITIATING CUE

THE SHIFT SUPERVISOR DIRECTS YOU TO DETERMINE CORE EXIT THERMOCOUPLE SUBCOOLING USING FIGURE MIN SUBCOOLING.

JPM PREP SHEET

JPM NO.: J017.001

TASK TO BE PERFORMED: USING THE LOCAL INCORE THERMOCOUPLE PANEL AND MCB PRESSURE INDICATORS DETERMINE ACTUAL SUBCOOLING USING FIGURE MIN SUBCOOLING.

REFERENCE PROCEDURE(S): NONE

INITIAL PLANT CONDITIONS: MODES 1, 2, OR 3

REQUIRED JPM PREP: PLACE SIMULATOR IN REQUIRED IC. IF CONTROL ROOM IS USED, ENSURE PLANT IS IN REQUIRED MODE.

REQUIRED HANDOUT MATERIAL: BLANK WRITING TABLET

AVAILABLE FOLLOW-UP QUESTIONS:

FOLLOW-UP QUESTION REFERENCES:

OTHER: NONE

CRITICAL STEP #	ELEMENT	STAND.	S/U	
		INITIATING CUE: THE SHIFT SUPERVISOR HAS DIRECTED YOU TO DETERMINE CORE EXIT THERMOCOUPLE SUBCOOLING USING FIGURE MIN SUBCOOLING. DO NOT USE PPCS. NOTE: STEP 1-4 MAY BE PERFORMED IN ANY ORDER.		
*1	OBTAIN CORE EXIT THERMOCOUPLE TEMPERATURE FROM THE THERMOCOUPLE DISPLAY PANEL (AVERAGE TEMPERATURE).	OBTAINS AVERAGE TEMPERATURE READING FROM BOTH CET TRAINS.		
*2	OBTAIN RCS PRESSURE FROM MCB INDICATORS.	OBTAINS RCS PRESSURE FROM RCS WIDE RANGES OR NARROW RANGES (IF > 1700 PSIG).		
*3	OBTAIN FIGURE MIN SUBCOOLING.	OBTAIN FIGURE MIN SUBCOOLING FROM EOP ATTACHMENT BOOK OR FROM AN EOP.		
*4	DETERMINE IF CNMT IS ADVERSE.	CHECK CNMT PRESS < 4 PSIG. CHECK CNMT RAD < 10^5 R/HR.		

*5	CALCULATE SUBCOOLING.	CALCULATES SUBCOOLING BY LOCATING MIN SUBCOOLING LINE FOR THE RCS PRESSURE AND SUBTRACTING THE TEMPERATURE FROM THE AVERAGE CORE EXIT TEMP.		
6	REPORT TO SHIFT SUPERVISOR THE ACTUAL SUBCOOLING.	CUE: NO FURTHER ACTION.		

Admin JPM
RO
A.1.2

JPM COVER SHEET

JPM NO: J341.001 REV # 01 REVIEW DATE 4/20/95

JPM TITLE: O-6.13, DAILY PERF LOGS ATTACHMENTS SECTION 1 4 CHANNEL CHECKS AND INSTRUMENT VERIFICATION

Do first section w/ Error

LOCATION: SIMULATOR

EST. TIME TO COMPLETE:

DATE:

CANDIDATE: SOC. SEC. # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: J341.001

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

PLANT AT 100% POWER. NORMAL MONITORING

INITIATING CUE

O-6.13 NEEDS TO BE PERFORMED. RCS TEMPERATURES IS $\geq$ 200°F.

"OR"

~~O-6.13 NEEDS TO BE PERFORMED. RCS TEMPERATURE IS < 200°F~~.

JPM PREP SHEET

JPM NO.: J341.001

TASK TO BE PERFORMED:

PERFORM O-6.13 "DAILY SURVEILLANCE LOG" SECTION 1 "CHANNEL CHECKS AND INSTRUMENT VERIFICATION"

REFERENCE PROCEDURE(S):

INITIAL PLANT CONDITIONS: 1) RCS IS $\geq$ 200°F
~~2) RCS IS < 200°F~~

REQUIRED JPM PREP:

REQUIRED HANDOUT MATERIAL: COPY OF O-6.13

AVAILABLE FOLLOW-UP QUESTIONS:

FOLLOW-UP QUESTION REFERENCES:

OTHER:

*CRITICAL STEP #	ELEMENT	STANDARD	SAT	UNSAT
	NOTE: PRIOR TO JPM PERFORMANCE INSTRUCTOR IS TO MISALIGN ONE METER, SWITCH OR LIGHT FOR RECOGNITION BY OPERATOR.	INITIATING CUE: BEGINNING OF SHIFT AND THE O-6.13 NEEDS TO BE PERFORMED. RCS TEMP ≥ 200°F		
1.0	OBTAIN PROPER CONTROLLED COPY ATTACHMENT OF O-6.13	OBTAIN O-6.13 ATTACHMENT 1		
2.0	PERFORM ATTACHMENT 1 PER BODY OF PROCEDURE : "CHANNEL CHECKS AND INSTRUMENT VERIFICATION"			
3.0	RECOGNIZE ONE MISALIGNED ITEM OF METER, SWITCH OR LIGHT	RWST LEVEL < 88%		
4.0	UPON COMPLETING ATTACHMENT 1, TERMINATE JPM SECTION 1	ERMINATING CUE: NO FURTHER ACTIONS REQUIRED. ATTACH COMPLETED O-6.13 ATTACHMENT 1 TO THIS JPM		
	NOTE: PRIOR TO JPM PERFORMANCE INSTRUCTOR IS TO MISALIGN ONE METER, SWITCH OR LIGHT FOR RECOGNITION BY OPERATOR.	INITIATING CUE: BEGINNING OF SHIFT AND THE O-6.13 NEEDS TO BE PERFORMED. RCS TEMP < 200°F		
1.0	OBTAIN PROPER CONTROLLED COPY ATTACHMENT OF O-6.13	OBTAIN O-6.13 ATTACHMENT II		
2.0	PERFORM ATTACHMENT II PER BODY OF PROCEDURE			
3.0	RECOGNIZE ONE MISALIGNED ITEM OF METER, SWITCH OR LIGHT			
4.0	UPON COMPLETING ATTACHMENT II, TERMINATE JPM	TERMINATING CUE: NO FURTHER ACTIONS REQUIRED. ATTACH COMPLETED O-6.13 ATTACHMENT II TO THIS JPM		

O-6.13

DAILY SURVEILLANCE LOG

1.0 **PURPOSE**:

1.1 To provide guidance to Control Room Operators for performing Technical Specification, Offsite Dose Calculation Manual (ODCM), and Technical Requirements Manual (TRM) Surveillance Requirements required every 24 hours or less.

1.2 To provide guidance to the Control Room Operators for performing management required daily checks.

1.3 To document completion of Technical Specification, ODCM, and TRM Surveillance Requirements.

1.4 To provide a checklist for review by oncoming and offgoing Control Room Operators and Shift Supervisors of critical Plant parameters to assure that they are within allowable limits.

2.0 **REFERENCES**:

2.1 NONE

2.2 A-52.4 CONTROL OF LIMITING CONDITIONS FOR OPERATING - EQUIPMENT

2.2.1 A-52.12 INOPERABILITY OF EQUIPMENT IMPORTANT TO SAFETY

2.2.2 CH-PRI-REPORT, DAILY CHEMISTRY ANALYSIS RESULTS

2.2.3 CHA-RETS-ODCM, OFFSITE DOES CALCULATION MANUAL

2.2.4 EPIP 1-0 GINNA STATION EVENT EVALUATION AND CLASSIFICATION

2.2.5 EPIP 2-2 OBTAINING METEOROLOGICAL DATA AND FORECASTS AND THEIR USE IN EMERGENCY DOSE ASSESSMENT

2.2.6 IP-CAP-1 ABNORMAL CONDITION TRACKING INITIATION OR NOTIFICATION (ACTION REPORT)

2.2.7	IP-PSH-2	INTEGRATED WORK SCHEDULE RISK MANAGEMENT
2.2.8	IP-SQA-2	SOFTWARE CHANGE PROCESS
2.2.9	O-3	HOT SHUTDOWN WITH XENON PRESENT
2.2.10	O-3.1	BORON CONCENTRATION FOR THE XENON FREE ALL RODS IN MOST REACTIVE ROD STUCK OUT SHUTDOWN MARGIN
2.2.11	O-6	OPERATIONS AND PROCESS MONITORING
2.2.12	O-6.3	MAXIMUM UNIT POWER
2.2.13	O-6.5	UNEXPLAINED REACTIVITY CHANGES
2.2.14	O-6.7	WEEKLY ALARM STATUS CHECK
2.2.15	O-6.11	SURVEILLANCE REQUIREMENTS/ROUTINE OPERATIONS CHECK SHEET
2.2.16	O-7	ALIGNMENT AND OPERATION OF THE REACTOR VESSEL OVERPRESSURE PROTECTION SYSTEM
2.2.17	OPS-OPERATIONS-LOGS, OPERATIONS LOGS	
2.2.18	P-9	RADIATION MONITORING SYSTEM
2.2.19	PT-37.10	SFP FILTER BANK MASS AIR FLOW CHECK
2.2.20	PT-47.10	SFP CHARCOAL FILTRATION SYSTEM EFFICIENCY TEST
2.2.21	RF-8.4	FUEL AND CORE COMPONENT MOVEMENT IN THE SPENT FUEL POOL
2.2.22	S-12.4	RCS LEAKAGE SURVEILLANCE RECORD INSTRUCTIONS
2.2.23	S-26.1	COMPUTER PROGRAM CHECK
2.2.24	S-26.2	COMPUTER OUT OF SERVICE
2.2.25	T-31.10	DAILY CHECK OF TOXIC GAS ANALYZER GA-80 AND RADIATION MONITOR R-36, R-37, R-38 CONTROL ROOM HVAC SYSTEM

2.3 NRC BULLETIN 88-02, SG FATIGUE CRACKS CAR 1850

2.3.1 TECHNICAL REQUIREMENT MANUAL (TRM)

2.3.2 TECHNICAL SPECIFICATIONS

3.0 **INITIAL CONDITIONS**:

3.1 Plant may be in any mode of operation.

4.0 **PRECAUTIONS**:

None

5.0 **INSTRUCTIONS**:

5.0.1 This procedure is organized into the following subsections:

5.1 Daily Surveillance Log Requirements

5.2 Channel Checks and Instrument Verification

5.3 Plant System Checks (Inside Control Room)

5.4 Plant System Checks (Outside Control Room)

5.1 Daily Surveillance Log Requirements

5.1.1 Daily Surveillance Log Schedule.

5.1.1.1 Attachment I is to be performed each shift anytime the plant is in MODE 1, 2, 3, or 4.

5.1.1.2 Attachment II is to be performed each shift anytime the plant is in MODE 5 or 6, or in defueled conditions.

5.1.2 During shift relief turnover a review of Attachment I or Attachment II will be performed with the oncoming shift.

5.1.2.1 The Daily Surveillance Log will be reviewed and signed by offgoing Control Room Operators, Control Room Foreman, Shift Supervisor, and Shift Technical Advisor, when applicable.

5.1.2.2 The Daily Surveillance Log will be reviewed and signed by the oncoming Control Room Operators, Control Room Foreman, Shift Supervisor, and Shift Technical Advisor, when applicable.

5.1.2.3 IF the HCO is on shift for more than 8 hours (i.e., 12 hour day shift, overtime), THEN the CO shall perform the subsequent Attachment I or Attachment II. It is intended that no single individual perform consecutive Daily Surveillance Logs.

5.1.3 Performing Daily Surveillance Log.

NOTE: Items that are not applicable for current operational mode may be marked N/A. Note any deviations in the comments section of Attachment I & II.

5.1.3.1 Verification of each parameter shall be documented by initialing the appropriate space or recording of the required parameter. Verification shall include check that parameter is within the appropriate range specified.

5.1.3.2 For values not in normal range for current operating mode, initiate a MWR. Review requirements for submitting A-52.4 or A-52.12 as appropriate. The applicable Technical Specification, ODCM, or TRM Surveillance Requirement is provided under the parameter column in Attachments I and II for reference purposes.

5.1.3.3 Verify parameters as listed are operable, have been performed, AND are within Technical Specification limits once every 24 hours or 12 hours as required.

5.1.3.3.1 Instrument uncertainty limits, if applicable, are addressed under the "Parameter" column of Attachment I and II, in the form of a NOTE (e.g., maintain spray additive tank level > 92%, NOTE 3). These limits are more conservative than the value listed in the "TS/TRM/ODCM Limit" column of Attachment I and II. If the limit with uncertainty is reached (as noted in the parameter column), and is believed to be valid, enter the LCO as if the TS limit has been reached.

5.1.3.4 Submit an Action Report for any malfunctions or equipment problems per IP-CAP-1.

DATE: _____

Rvw'd by: _____

DAILY SURVEILLANCE LOG

ATTACHMENT I (MODES 1-4)

Refer to O-6.13

Category 3.3.16

PARAMETER CHECK LIST: Alarm Values and TS Limits given for information.

PARAMETER	ALARM VALUE	TS/TRM/ODCM LIMIT	0000-0800	0800-1600	1600-2400
CHANNEL CHECKS AND INSTRUMENT VERIFICATION					
Reactor Coolant System Subcooling Monitor (cc) (SR 3.3.3.1)					
(cc) Narrow Range, Sump A Containment Water Level (cc) Wide Range, Sump B (SR 3.3.3.1)					
Safety Valve Position Indicator (RTD)					
Reactor Coolant Flow Loops (cc) A (SR3.3.1.1, SR 4.4.1, SR 3.4.5.1, SR 3.4.6.1) B	LOW 91%	Reactor Trip ≥ 90%			
Verify Total RCP Seal Leakoff per Step 5.2.2					
RHR Flow Rate (cc) (SR 3.3.3.1)					
Boric Acid Tank Levels *1A1/1A2 (cc) per Step 5.2.3 (TSR 3.1.1.2) *1B1/1B2 (cc)	High 95% Low 83% (ea./2 Tanks) Lo-Lo 10%	Variable per Table TR-3.1.1-1	/	N/A	N/A
			/	N/A	N/A
SI Accumulator (cc) *1A/1B Level (SR 3.5.1.2) Maintain ≥60%	High 75% Low 60%	82% 50%	/	/	/
*1A/1B Press (SR 3.5.1.3) NOTE 3	High 760 psig Low 720 psig	790 psig 700 psig	/	/	/
SI Header Pressure *PI-923 per Step 5.2.4 *PI-922		≤ 1000 psig			
Containment Pressure * PI-944 Narrow Range SR 3.6.4.1	+ 0.5 psig - 0.2 psig.	≤ 1.0 psig ≥ - 2.0 psig			
Containment Pressure psig front (cc) (SR 3.3.2.1) psia back (cc) (SR 3.3.2.1, SR 3.3.3.1)		CS 28 psig MS Isol 18 psig SI 4 psig			
RWST * (cc) per step 5.2.5 Date of last visual check _____ (SR 3.5.4.1, SR 3.3.3.1) Indicated level of last visual check _____%	Low 28% Lo-Lo 15%	> 88% LI-921 300,000 gal. LI-920			
Spray Additive Tank Level * Maintain > 92% (SR 3.6.6.8) Note 3	LOW 90%	4500 gal.			
Reactor Vessel Level Indication System (cc) *1A (SR 3.3.3.1) *1B	100 ± 6%				
Source Range (cc) when energized (SR 3.3.1.1)	Trip High - (10^5 cps) Hi Flux at SD (2 x SD CR)	>5 cps (UFSAR) NOTE 4			

DATE: _____

Rvw'd by: _____

DAILY SURVEILLANCE LOG

ATTACHMENT I (MODES 1-4)

Refer to O-6.13

Category 3.3.16

PARAMETER CHECK LIST: Alarm Values and TS Limits given for information.

PARAMETER		ALARM VALUE	TS/TRM/ODCM LIMIT	0000-0800	0800-1600	1600-2400
Intermediate Range (cc)	(SR 3.3.1.1)	Trip High - 25% equiv. Rod Stop - 20% equiv.				
Power Range (cc) 2% Deviation Highest to Lowest PR	(SR 3.3.1.1)	Trip High - 108% Rod Stop - 103% Trip Low - 24%	≤ 109% ≤ 25%			
OTΔT (cc) (Delta T SP1)	(SR 3.3.1.1)	Rod Stop at 67°F Trip at 68°F				
OPΔT (cc) (Delta T SP2)	(SR 3.3.1.1)	Rod Stop at 60°F Trip at 62°F				
PORV Tailpipe Indication (RTD)	per Step 5.2.6					
PRZR Pressure (cc)	(SR 3.3.1.1, SR 3.3.2.1, SR 3.3.3.1)	High 2310 psig Low 2205 psig SAF Vlv 2485 psig Rx Trip 2377 psig PORV 2335 psig Rx Trip 1873 psig	SAF Limit 2735 psig SI 1750 psig			
PRZR Pressure	(SR 3.4.1.1)		COLR DNB ≥ 2205 psig			
PRZR Level (cc)	(SR 3.3.1.1, SR 3.3.3.1, SR 3.4.9.1)	Rx Trip 87% HI 70% Dev. ± 5% (From Program) Low 13%	≤ 87%			
Reactor Coolant Tavg Loop (cc)	(SR 3.3.2.1, SR 3.3.3.1)	Hi 566°F Low 545°F Tavg - $\bar{T}_{avg}$ -Rod Stop ± 4°F with SI for MS Isol 545°F with RX Trip for FW Isol 554				
RCS Tavg	(SR 3.4.1.2)		COLR DNB ≤ 577.5°F			
RCS Wide Range Pressure (cc)	(SR 3.3.3.1)					
Steam Generator A Pressure (cc) Steam Generator B Pressure (cc)	(SR 3.3.2.1, SR 3.3.3.1)	Low 600 psig	SI 514 psig			
Steam Flow A (cc) Steam Flow B (cc)	(SR 3.3.2.1)		≤ 3.6E6 lbm/hr			
Steam Generator Water Level A (cc) Steam Generator Water Level B (cc)	(SR3.3.1.1, SR 3.3.2.1, SR 3.3.3.1 SR 3.4.5.2, SR 3.4.6.2)	Deviation ± 7% from program Rx Trip Lo-Lo 17%	High level Isol 85% > 17%			
Steam Generator Water Level A Wide Range (cc) Steam Generator Water Level B Wide Range (cc)	(SR 3.3.3.1)					
Auxiliary Feedwater Flow Rate (cc)	(SR 3.3.3.1)					

DATE: _____ **DAILY SURVEILLANCE LOG** Refer to O-6.13

Rvw'd by: _____ **ATTACHMENT I (MODES 1-4)** Category 3.3.16

PARAMETER CHECK LIST: Alarm Values and TS Limits given for information.

PARAMETER	ALARM VALUE	TS/TRM/ODCM LIMIT	0000-0800	0800-1600	1600-2400
Condensate Storage Tank Level (cc) (SR 3.3.3.1, SR 3.7.6.1)		1 Tank ≥ 21.5 Feet 2 Tanks ≥ 12.5 Feet			
Turbine 1st Stage Pressure (cc) PI-485 & PI-486					
Screehhouse Bay Level Maintain ≥ 16 ft. per Step 5.3.11 (SR 3.7.8.1) **NOTE 3**		≥ 14 Feet			
Core Exit Thermocouple (cc) (SR 3.3.3.1) Verify "Channel Failure" indicator not lit **NOTE 1**		2/Core Quadrant per Train			
PPCS RMS; All Operable Channels Enabled (cc) per Step 5.2.7 (SR 3.3.5.1, SR 3.4.15.1, SR 3.3.3.1, ODCM Table III-3 & III-4)					
PLANT SYSTEM CHECKS (INSIDE CONTROL ROOM)					
Nuclear Power 8 hr Shift Predicted Avg ≤ 100% (O-6)			00 / 04	08 / 12	16 / 20
Computer Program/Alarm Checks (S-26.1) per Step 5.3.2 (SR 3.2.3.1, SR 3.2.4.1)		Rod Dev AFD QPTR LTOP			
RMS Status Verified per Step 5.3.3 (ODCM)					
Reactor Coolant Loops Operable per Step 5.3.4					
Control Rod Alignment MRPI, PPCS and Step Counters (SR 3.1.4.1)	± 12 Steps of group	≤ 12 ± steps of group			
Verify SD Bank Insertion Limits (SR 3.1.5.1)		≥ 221 steps			
Verify Control Bank Insertion Limits (SR 3.1.6.2)		COLR Fig 2			
Verify each Control Bank not fully withdrawn is within sequence and overlap limits in the COLR (SR 3.1.6.4)					
ATWS Mitigation Status Verified per Step 5.3.5 (TSR 3.4.3.1)					
Containment Temperature per Step 5.3.6 (SR 3.6.5.1)		≤ 120°F			
O-6.7 Attachment I Updated					
LTOP Attachment Updated when LTOP in Service per Attachment VII (SR 3.4.12.1 thru 8)					
PORV Position Indicator					
PORV Block Valve Position Indicator					
RHR Valve Position Status When in Service per Step 5.3.7					
Verify Dummy Tie (Bus 14/Pos 19C) Open and in "Test" Postion				N/A	N/A
Verify Bus 17 - Bus 18 Tie Breaker Open and In "Test" Position				N/A	N/A

DATE: _____ **DAILY SURVEILLANCE LOG** Refer to O-6.13

Rvw'd by: _____ **ATTACHMENT I (MODES 1-4)** Category 3.3.16

PARAMETER CHECK LIST: Alarm Values and TS Limits given for information.

PARAMETER		ALARM VALUE	TS/TRM/ODCM LIMIT	0000-0800	0800-1600	1600-2400
Diesel Generator Status Verified	per Step 5.3.8					
Breaker Switch Position Verified	per Step 5.3.9					
Valve Position Status Verified	per Attachment IV					
SSB Verified	per Step 5.3.10					
Auxiliary Benchboard Equipment Verified	per Step 5.3.10					
SAS CRT Top Level Display Operable			1 / 2			
Screehhouse Bay Temperature * (IF > 82°F, increase monitoring) Maintain ≤83.3°F	per Step 5.3.11 (SR 3.7.8.1) NOTE 3		≤ 85°F			
Update EOOS Risk Monitor	per Step 5.3.13					
PLANT SYSTEM CHECKS (OUTSIDE CONTROL ROOM)						
Boric Acid Tank Temps	per Step 5.2.3 (TSR 3.1.1.2)	High 175°F Low 155°F	Variable per Table TR-3.1.1-1		N/A	N/A
BAST Boron > 8750 ppm** A/B _____ / _____ ppm	per Step 5.2.3 (TSR 3.1.2.1)		Variable			
Boron Follow Time 0 Set **	per Step 5.4.5					
Boron Follow Samples Entered **	per Step 5.4.6					
RCS Boron Change < 30 ppm (OPS-REACTIVITY) ** Δ _____ ppm change						
Verify RCS Chemistry Parameters Within Limits** (TSR 3.4.2.1, TSR 3.4.2.2)			Chloride ≤ 0.15 ppm			
			Fluoride ≤ 0.15			
			Oxygen ≤ 0.10 ppm			
Verify SDM	per Step 5.4.2 (SR 3.1.1.1)		COLR		N/A	N/A
Spent Fuel Pool Temperature	(ITS 3.7.13) (TSR 3.7.7.1)		≥ 55°F ≤ 150°F		N/A	N/A
Meteorlogical Data Available	per Step 5.4.3					
Screehhouse Selector Switches for Service Water Pumps	per Step 5.3.9.5					
Service Water Δps D/G A Lube Oil / Jacket Water Hxs	per Step 5.4.4			/	/	/
D/G B Lube Oil / Jacket Water Hxs				/	/	/
Diesel Fuel Supply (Electric Level Indication) (A/B_____ / _____)	NOTE 2		≥ 5000 gal per Tank	N/A		N/A

DATE: _____ DAILY SURVEILLANCE LOG Refer to O-6.13

Rvw'd by: _____ ATTACHMENT I (MODES 1-4) Category 3.3.16

PARAMETER CHECK LIST: Alarm Values and TS Limits given for information.

PARAMETER	ALARM VALUE	TS/TRM/ODCM LIMIT	0000-0800	0800-1600	1600-2400
(Trouble Report from AO) Aux Bldg Heat Tracing System 150°F		Variable per Table TR 3.1.1-1			
Primary System Leakage Evaluation per S-12.4 (SR 3.4.13.1)					
Power Range Heat Balance (O-6.3) (SR 3.3.1.2)					

(cc) **Channel Check**

* **Record parameter value each shift**

** **Only on shift applicable - N/A rest of time**

NOTE 1: **TC Operability is ± 35°F from the average of all operable TCs except for peripheral TCs A7, B5, C3, C11 , D2, D12, H13, I2, K3, K11, L10, M6 where operability is ± 43°F from the average of all operable TCs.**

NOTE 2: **Due to instrument inaccuracy, Diesel Fuel Oil electric level indication cannot be utilized to satisfy ITS (SR 3.8.3.1). The gages can be used to assess diesel fuel consumption and the need to replenish fuel oil. Surveillance SR 3.8.3.1 is satisfied via dip stick level verification per O-6.11.**

NOTE 3: **Maintain more conservative admin limits due to instrument uncertainty (LI-931, LI-3006, T-3001, T-3002, SI Accum Levels). IF the admin limit is not met and the indication is believed to be valid, THEN the LCO must be entered.**

NOTE 4: **Contact Reactor Engineering for input into operability determination**

COMMENTS FOR SHIFT TURNOVER:

DAILY SURVEILLANCE LOG

ATTACHMENT I (MODES 1-4)

OFFGOING SHIFT	FIRST SHIFT	SECOND SHIFT	THIRD SHIFT
OFFGOING SHIFT SUPERVISOR			
OFFGOING CONTROL RM FOREMAN			
OFFGOING HEAD CONTROL OPERATOR			
OFFGOING CONTROL OPERATOR			
OFFGOING SHIFT TECHNICAL ADVISOR			

ONCOMING SHIFT	SECOND SHIFT	THIRD SHIFT	FIRST SHIFT
ONCOMING SHIFT SUPERVISOR			
ONCOMING CONTROL ROOM FOREMAN			
ONCOMING HEAD CONTROL OPERATOR			
ONCOMING CONTROL OPERATOR			
ONCOMING SHIFT TECHNICAL ADVISOR			

Admin JPM
RO A.2

JPM COVER SHEET

JPM NO: J343.004 REV # 01 REVIEW DATE 4/20/95

JPM TITLE: A-52.12, INOPERABILITY OF EQUIPMENT

LOCATION: CONTROL ROOM

Core; Risk assess. is green

EST. TIME TO COMPLETE:

DATE:

CANDIDATE: SOC. SEC. # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: J343.004

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

PLANT IS AT 100% POWER. THE MECHANICS REQUEST THAT THE CONDENSATE TRANSFER PUMP BE HELD FOR PACKING REPLACEMENT.

INITIATING CUE

MECHANICS REQUEST HOLDING CONDENSATE TRANSFER PUMP TO REPLACE PACKING. SHIFT SUPERVISOR APPROVES JOB AND REQUESTS THAT AN A-52.12 BE SUBMITTED.

JPM PREP SHEET

JPM NO.: J343.004

TASK TO BE PERFORMED:

COMPLETE AN A-52.12 "INOPERABILITY OF EQUIPMENT IMPORTANT TO SAFETY"

REFERENCE PROCEDURE(S):

INITIAL PLANT CONDITIONS: 100% POWER

REQUIRED JPM PREP:

REQUIRED HANDOUT MATERIAL:

AVAILABLE FOLLOW-UP QUESTIONS:

FOLLOW-UP QUESTION REFERENCES:

OTHER:

*CRITICAL STEP #	ELEMENT	STANDARD	S/U	BEGIN FOR JPM
		INITIATING CUE: MECHANICS REQUEST HOLDING CONDENSATE TRANSFER PUMP TO REPLACE PACKING. SHIFT SUPERVISOR APPROVES JOB AND REQUESTS THAT AN A-52.12 BE SUBMITTED.	RISK ASSESSMENT HAS BEEN DETERMINED TO BE "GREEN"	
1.0	OBTAIN CONTROLLED COPY OF A-52.12	SAME AS ELEMENT		
2.0	REVIEW PROCEDURE AND VERIFY APPLICABILITY	SAME AS ELEMENT		
3.0	PROPERLY FILL IN APPROPRIATE BLANKS	SAME AS ELEMENT		
4.0	LOG IN OFFICIAL RECORD NOTES: USED TO TRANSFER WATER FROM HOTWELL TO CSTs (ER-AFW.1, ALTERNATE WATER SUPPLY TO AFW PUMPS)	SAME AS ELEMENT TERMINATING CUE: NO FURTHER ACTIONS REQUIRED. ATTACH COMPLETED A-52.12 TO THIS JPM		

RO A.3 Radiation Monitoring/Control

QUESTION #1:

During an initial ALARA review, Radiation Protection personnel analyzed a mechanical maintenance item as requiring six (6) Person-Rem for the planned work duration. An ALARA review of the work in-progress has revealed that the accumulated dose to date is 10 Person-Rem. What, if anything, must be done in response to this situation according to station administrative procedures?

ANSWER:

Procedure A-1.6.1, "ALARA Job Reviews," Step 5.7.2, states that if actual exposure for a job originally estimated for > 5 Person-Rem will exceed 125% of the original estimate, then 1) Consider a temporary suspension of work, and 2) Convene a Station ALARA Committee meeting.

QUESTION #2:

During radiography of RCS welds, a contractor was inadvertently exposed to the radioactive source for an extended period, resulting in a Total Effective Dose Equivalent (TEDE) of 28 Rem. What, if any, are the notification requirements for this occurrence according to station procedures?

ANSWER:

Procedure O-9.3, "NRC Immediate Notification," Attachment 4 (10 CFR 20 One-Hour Notifications) states that for any event involving byproduct, source, or special nuclear material possessed by the licensee that may have caused or threatens to cause a Total Effective Dose Equivalent (TEDE) of 25 Rem or more, the licensee will notify the NRC within one hour.

Admin JPM
RO
A.4

JPM COVER SHEET

JPM NO: J085.002 REV # 01 REVIEW DATE 10/02/95

JPM TITLE: COMPLETE NEW YORK STATE RADIOLOGICAL EMERGENCY DATA FORM PART I INFORMATION (EPIP 1-5, ATT. 3A)

LOCATION: SIMULATOR

MAX. TIME TO COMPLETE: 15 MINUTES

DATE:

CANDIDATE: SOC. SEC. # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL: AO

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: J085.002

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

THE PLANT WAS OPERATING AT 100% POWER AND EXPERIENCED A LOCA. THE SHIFT SUPERVISOR/EMERGENCY COORDINATOR DECLARED AN ALERT.

INITIATING CUE

THE PLANT WAS OPERATING AT 100% POWER AND EXPERIENCED A LOCA. THE SHIFT SUPERVISOR/EMERGENCY COORDINATOR HAS JUST DECLARED AN ALERT. YOU ARE ASSIGNED TO "R" SHIFT AND THE NORMAL COMMUNICATOR IS UNAVAILABLE. YOU WERE DISPATCHED IN HIS PLACE TO COMPLETE THE NEW YORK STATE RADIOLOGICAL EMERGENCY DATA FORM PART 1 (EPIP 1-5 ATT. 3A). THIS IS A TIME CRITICAL JPM. YOU HAVE 15 MINUTES TO COMPLETE THIS TASK. START TIME _____. START WHEN EXAMINEE ACKNOWLEDGES.

JPM PREP SHEET

JPM NO.: J085.002

TASK TO BE PERFORMED:

COMPLETE INFORMATION FOR TRANSMITTAL OF NEW YORK STATE RADIOLOGICAL EMERGENCY DATA FORM PART I

REFERENCE PROCEDURE(S):

EPIP 1-5
EPIP 2-1

INITIAL PLANT CONDITIONS:

100% POWER LOCA
ALERT DECLARED

REQUIRED JPM PREP:

MALF RCS2A, B, C, OR D 1,000 GPM RUN 200 SECONDS, ACKNOWLEDGE ALARMS, AND FREEZE

REQUIRED HANDOUT MATERIAL:

EPIP 1-5
EPIP 2-1

AVAILABLE FOLLOW-UP QUESTIONS:

J085.002 A, B

FOLLOW-UP QUESTION REFERENCES:

NUREG 0654

OTHER:

*CRITICAL STEP #	ELEMENT	STANDARD	S/U	
		INITIATING CUE: THE PLANT WAS OPERATING AT 100% POWER AND EXPERIENCED A LOCA. THE SHIFT SUPERVISOR/EMERGENCY COORDINATOR HAS JUST DECLARED AN ALERT. THE AO COMMUNICATOR WAS INJURED AND YOU WERE DISPATCHED IN HIS PLACE. THIS IS A TIME CRITICAL JPM. YOU HAVE 15 MINUTES TO COMPLETE THE JPM. START TIME ____. START WHEN EXAMINEE ACKNOWLEDGES.		
1.0	OBTAIN A CONTROLLED COPY OF EPIP 1-5.	SAME AS ELEMENT NOTE: STEP 1 DOES NOT NEED TO BE FILLED OUT UNTIL MESSAGE SENT.		
2.0	CIRCLE A OF STEP 2.	SAME AS ELEMENT		
3.0	CIRCLE C OF STEP 3.	SAME AS ELEMENT NOTE: NOT REQUIRED IF FORM IS SPECIFIC TO GINNA		
*4.0	CIRCLE B OF STEP 4.	SAME AS ELEMENT		
5.0	ENTER DATE AND TIME STEP 5.	CUE: EVALUATOR SHOULD PROVIDE THIS INFORMATION.		
6.0	CIRCLE A OF STEP 6	SAME AS ELEMENT		
7.0	CIRCLE A OF STEP 7	SAME AS ELEMENT		
8.0	ENTER EVENT DESCRIPTION FOR STEP 8.	SAME AS ELEMENT CUE: THE EVENT WAS LOCA IDENTIFIED INSIDE CONTAINMENT AND PRIMARY LEAKAGE GREATER THAN 46 GPM. EAL #3.1.2		
9.0	CIRCLE A OF STEP 9.	SAME AS ELEMENT - CUE A		
10.0	FILL IN DATE AND TIME. STEP 10.	CUE: USE TODAYS DATE AND ~20 MINUTES AGO.		
11.0	FILL IN WIND SPEED ON STEP 11.	SAME AS ELEMENT - CUE: PROVIDE OR HAVE STUDENT LOOK AT PANEL OR PPCS		

*CRIT ST	EL	ST	S/U	
12.0	FILL IN WIND DIRECTION, STEP 12.	SHOULD REFERENCE EPIP 2-1 OR CUE. PROVIDE OR HAVE STUDENT LOOK AT PANEL OR PPCS.		
13.0	CIRCLE STABILITY CLASS OF STEP 13.	PROVIDE OR HAVE STUDENT DETERMINE.		
14.0	FILL IN STEP 14.	SAME AS ELEMENT		
15.0	SS REVIEW.	CUE: FORM IS APPROVED BY THE SS		
*16.0	START TO USE RECS LINE.	CUE: NO FURTHER ACTION TIME COMPLETED ___		

NEW YORK STATE RADIOLOGICAL EMERGENCY DATA FORM (PART I)

RECS message number _____

"This is Ginna Station. Please stand by for roll call." "New York State" ☐ "Monroe County" ☐ "Wayne County" ☐

1. Message transmitted at:
Date _____ Time _____ Via: A. RECS B. Other _____

2. This is:
(A) NOT an exercise B. An exercise

3. Facility providing information: (C) Ginna

4. Classification:
☐ check box if information has changed
A. UNUSUAL EVENT
B. ALERT
C. SITE AREA EMERGENCY
D. GENERAL EMERGENCY
E. EMERGENCY TERMINATED
F. RECOVERY

5 Classification Time:
☐ check box if information has changed
This Emergency Classification declared at: Date _____ Time _____
Time JPM started.

6 Release of Radioactive Materials due to the Classified Event:
☐ check box if information has changed
A. No Release
B. Release BELOW federally approved operating limits (technical specifications)
☐ to atmosphere ☐ to water
C. Release ABOVE federally approved operating limits (technical specifications)
☐ to atmosphere ☐ to water
D. Unmonitored release requiring evaluation

7. Protective Action RECOMMENDATIONS: (Refer to EPIP 2-1)
☐ check box if information has changed
(A) No need for Protective Actions outside the site boundary
B. Evacuate the following ERPAs
W1 W2 W3 W4 W5 W6 W7 M1 M2 M3 M4 M5 M6 M7 M8 M9
C. Shelter all remaining ERPAs

8. Brief Event Description:
☐ check box if information has changed
EAL # _____ From Classification

9 Plant Status:
☐ check box if information has changed
(A) Stable
B. Improving
C. Degrading
D. Hot Shutdown
E. Cold Shutdown

10. Reactor Shutdown: (subcritical)
☐ check box if information has changed
A. Not Applicable B. Date _____ Time _____

11. Wind Speed:
☐ check box if information has changed
A. _____ Miles/hour at elevation _____ feet

12. Wind Direction:
☐ check box if information has changed
From: _____ degrees at elevation _____ feet

13. Stability Class:
☐ check box if information has changed
Unstable, Neutral, Stable

DO NOT REPORT
Stability Class Work Sheet
Temperature at 250 feet _____ °F
Temperature at 33 feet _____ °F
Temperature Difference _____ °F
-1.74 -0.65
Unstable | Neutral | Stable
-3 -2 -1 0 1
Temperature Difference

14. Reported By:
Name _____
Area Code _____ Number _____

"New York State copy?" ☐"Monroe County copy?" ☐"Wayne County copy?" ☐

FOR RG&E USE ONLY:
Time Prepared: _____ Time Approved: _____ **Completed form sent**
Prepared By: _____ Approved By: _____ **to EP – Ginna Training**

Facility: Ginna		Date of Examination: Feb 11, 2002
Examination Level (circle one): RO / (SRO)		Operating Test Number: 02-01
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	JPM: J001.010 Estimated Critical Rod Position Determination K/A 2.1.23 Importance 4.0
		Not Applicable
	Conduct of Operations	JPM: J017.001 Determine RCS Core Exit Subcooling With the PPCS Out of Service K/A 2.1.7 Importance 4.4
		Not Applicable
A.2	Equipment Control	JPM: Verify Equipment Tagout Boundary K/A 2.2.13 Importance 3.8
		Not Applicable
A.3	Radiation Monitoring/ Control	JPM: Approve Liquid Waste Release Form (Inoperable Effluent Monitor) K/A 2.3.6 Importance 3.1
		Not Applicable
A.4	Emergency Procedures/ Plan	JPM: Perform Event Classification K/A 2.4.41 Importance 4.1
		Not Applicable

Admin JPM
SRO
A.1

Ken send new info

JPM COVER SHEET

JPM NO: J001.010 REV # 01 REVIEW DATE 9/9/99

JPM TITLE: ESTIMATED CRITICAL ROD POSITION DETERMINATION

LOCATION: CLASSROOM

EST. TIME TO COMPLETE: 15 MIN.

DATE:

CANDIDATE: SOC. SEC. #:_____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL: STA

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL: _____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: J001.010

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EVALUATOR MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

THE PLANT IS IN MODE 2 (STARTUP).

INITIATING CUE

THE SHIFT SUPERVISOR HAS ASKED YOU TO INDEPENDENTLY VERIFY THE ESTIMATED CRITICAL POSITION USING O-1.2.2 UP TO STEP 5.7.1.

JPM PREP SHEET

JPM NO.: J001.010

TASK TO BE PERFORMED: ESTIMATED CRITICAL POSITION DETERMINATION

REFERENCE PROCEDURE(S): O-1.2.2 CRITICAL ROD POSITION CALCULATION

INITIAL PLANT CONDITIONS:

THE INSTRUCTOR IS TO PROVIDE THE STUDENT WITH A CREDIBLE PLANT STATUS FOR PERFORMING AN ESTIMATED CRITICAL ROD POSITION. THE INSTRUCTOR WILL PROVIDE THE STUDENT WITH THE NECESSARY DATA TO COMPLETE THE JPM.

REQUIRED JPM PREP: OBTAIN A BLANK COPY OF O-1.2.2. COPY DATA FROM PLANT STATUS FOR ESTIMATED CRITICAL ROD POSITION FORM SHEET 1 OR 2 TO BLANK FORM.

REQUIRED HANDOUT MATERIAL: BLANK COPY OF O-1.2.2. ENSURE AVAILABILITY OF CYCLE BOOK AND BORATION/DILUTION TABLES. PLANT STATUS FOR ESTIMATED CRITICAL ROD POSITION FORM.

AVAILABLE FOLLOW-UP QUESTIONS:

FOLLOW-UP QUESTION REFERENCES:

OTHER:

Plant Status for Estimated Critical Rod Position
Cycle 28

Reactor power prior to beginning of shutdown (Assume steady state power for > 50 hours)	%	100%
Burnup	Mwd/mtu	16515
Rate of reactor shutdown	% time	TRIP
Time reactor subcritical	Date	1/23/02
	Time	0800
Last Boron sample before shutdown	Date	1/23/02
	Time	0600
	ppm	114
Boron/RMW added between last sample and start of shutdown	BAST ppm	N/A
	gal boric acid	
	gal RMW	V
Rod position prior to shutdown	Bank	D
	Steps	215
Time of estimated criticality	Date	1/23/02
	Time	2300
Current boron concentration	ppm	114

STEP # *CRITICAL	ELEMENT	STANDARD	S/U	COMMENTS REQ'D FOR UNSAT
		INITIATING CUE: THE PLANT IS IN MODE 2 (STARTUP) AND THE SHIFT SUPERVISOR HAS REQUESTED YOU TO INDEPENDENTLY VERIFY THE CRITICAL ROD POSITION USING O-1.2.2 UP TO STEP 5.7.1 CUE: PROVIDE THE STUDENT WITH CRITICAL ROD POSITION DATA.		
1	CALCULATE THE REACTIVITY DUE TO POWER DEFECT.	USING THE CORRECT CURVES FOR TIME IN LIFE DETERMINE POWER DEFECT WITHIN ±25 PCM. ACTUAL _____ PCM		
2	CALCULATE THE REACTIVITY DUE TO ROD WORTH.	USING CORRECT INTEGRAL ROD WORTH TABLE FOR TIME IN LIFE DETERMINE INTEGRAL ROD WORTH WITHIN ±50 PCM. ACTUAL _____ PCM		
3	CALCULATE THE REACTIVITY DUE TO XENON.	USING CORRECT XENON WORTH CURVE DETERMINE REACTIVITY DUE TO THE CHANGE IN XENON WITHIN ±250 PCM. ACTUAL _____ PCM		

STEP # *CRITICAL	ELEMENT	STANDARD	S/U	COMMENTS REQ'D FOR UNSAT
4	CALCULATE THE REACTIVITY DUE TO DIFFERENTIAL BORON CONCENTRATION.	DIFFERENTIAL BORON CONCENTRATION SHOULD BE MADE WITHOUT ERROR. USING CORRECT BORON WORTH CURVE DETERMINE DIFFERENTIAL BORON WORTH TO WITHIN ±0.1 PCM/PPM. ACTUAL _____ PCM/PPM REACTIVITY ADDED DUE TO BORON CONCENTRATION CHANGE SHOULD BE MADE WITHOUT ERROR. DISCREPANCIES DUE TO ERROR CARRIED FORWARD ARE NOT CONSIDERED AN ERROR IN CALCULATION. ACTUAL _____ PCM		
5	CALCULATE THE REACTIVITY DUE TO THE CHANGE IN "EFFECTIVE SAMARIUM".	USING THE CORRECT CURVE DETERMINE THE REACTIVITY ADDED DUE TO EFFECTIVE SAMARIUM WITHIN ±12.5 PCM. ACTUAL _____ PCM		
6	CALCULATE TOTAL REACTIVITY CHANGE SINCE LAST SHUTDOWN.	TOTAL REACTIVITY CHANGE SHOULD BE WITHIN ±500 PCM. ACTUAL _____ PCM		

STEP # *CRITICAL	ELEMENT	STANDARD	S/U	COMMENTS REQ'D FOR UNSAT
*7	ESTIMATE CRITICAL ROD POSITION.	ESTIMATED CRITICAL ROD POSITION MUST BE WITHIN ±500 PCM OF ACTUAL CRITICAL ROD POSITION. MAXIMUM ROD WITHDRAWAL BANK _____ STEP ____ MAXIMUM ROD WITHDRAWAL BANK _____ STEP ____		
8.0	NOTIFY SS OF RESULTS.	NO FURTHER ACTIONS.		

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 4

PROCEDURE NO. O-1.2.2 REV. NO. 58

CRITICAL ROD POSITION CALCULATION

Roy V. Gillow
RESPONSIBLE MANAGER

9/12/01
EFFECTIVE DATE

GINNA STATION	
START	
DATE:	
TIME:	
COMPLETED:	
DATE:	
TIME:	

CATEGORY 1.0

REVIEWED BY: _____

THIS PROCEDURE CONTAINS 23 PAGES

O-1.2.2

CRITICAL ROD POSITION CALCULATION

1.0 **PURPOSE**:

1.1 This procedure provides the method for calculating critical rod position.

2.0 **REFERENCES**:

2.1 CORE OPERATING LIMITS REPORT (COLR)

2.2 DESIGN DATA, CURRENT CYCLE

2.3 IMPROVED TECHNICAL SPECIFICATIONS, SECTION 3.1

2.4 O-1.2 PLANT STARTUP FROM HOT SHUTDOWN TO FULL LOAD

2.5 O-1.2.1 1/M CURVES

3.0 **INITIAL CONDITIONS**:

3.1 Approximate time Reactor is to be made critical is known.

4.0 **PRECAUTIONS**:

4.1 Criticality must occur within one hour of expected criticality time during the first 80 hours after shutdown. If not, a new critical rod position must be calculated.

4.2 The Personal Computer Nuclear Design Report (PCNDR) should be used whenever possible to reduce errors from reading the graphs and interpolation.

4.3 Criticality must occur within four hours of determining the estimated critical position and the performance of ITS, SR 3.1.6.1. This surveillance is documented in Reference 2.4 (O-1.2, Plant Startup from Hot Shutdown to Full Load).

5.0 **INSTRUCTIONS:**

NOTE: **The core is critical (K eff = 1), prior to shutdown, at a given % of Power, Xenon concentration, Boron concentration, and rod position. The algebraic sum of all changes in reactivity, after shutdown, will determine the amount of positive or negative reactivity that has been added to the core due to the shutdown. The algebraic sum is time dependent due to Xenon, therefore, the time shutdown must be considered to determine the Xenon worth. The algebraic sum is used to determine the critical rod position. A positive algebraic sum is the amount of excess reactivity in the core that must be compensated for by leaving Control Rods in the core. The bank and height of Control Rods left in the core is the critical rod position. A negative algebraic sum indicates the core would not become critical with all rods out.**

5.1 POWER DEFECT:

5.1.1 Record Reactor power just prior to trip OR beginning of shutdown.

100 % Power

5.1.2 Record the cycle burnup (PPCS point ID BURNUP).

1/23/02 DATE

16515 MWD/MTU

5.1.3 Boron concentration (Bc) prior to shutdown.

5.1.3.1 Record last Boron sample prior to shutdown.

DATE: 1/23/02 TIME: 0600 114 ppm Boron

5.1.3.2 Using the amount of Boron added since the last sample and the nomograph tables, determine the Boron concentration at the time of trip or beginning of the shutdown if no trip occurred.

0 gal. Boron added

0 gal. RMW added

change in Bc 0 ppm Boron

pre-trip/shutdown Bc 114 ppm Boron

NOTE: **When determining values based on burnup, use the curves indicated for the following burnup ranges:**

BOL - 6000 MWD/MTU	Use BOL curves	(0 or 150 MWD/MTU)
6001 - 12,000 MWD/MTU	Use MOL curves	(8000 MWD/MTU)
12,000 - EOL MWD/MTU	Use EOL curves	(18,000 MWD/MTU)

5.1.4 Using Power (5.1.1), Burnup (5.1.2), AND Boron (5.1.3.2) values above, determine reactivity increase from Power Defect (Figure 5.15, 5.16, or 5.17 attached, or the PCNDR). This will always be a positive value.

+ 1925 pcm

5.2 ROD WORTH

5.2.1 Determine rod position at the power level (value 5.1.1) PRIOR to shutdown or trip.

BANK D

STEPS 215

5.2.2 Determine Control Rod worth from the position in 5.2.1 to the full out position by using the HFP Integral Rod Worth Table A-1, A-2, or A-3, or the PCNDR). This will always be a positive value.

+ 18 pcm

5.3 Reactivity Change Due To Xenon

5.3.1 Record time and date of estimated criticality

DATE: 1/23/02

TIME: 2300

5.3.2 To determine the equivalent reactivity change due to Xenon, alternative methods can be used. Use of "XENON PREDICT" on the PPCS is the preferred method. If the attached curves or the PCNDR is to be used, an equivalent steady state power level must be determined. A steady state power level is defined as at least 40 hours at one power level. If the power PRIOR to trip OR shutdown was not steady state, it will be necessary to obtain the equivalent power level from the Reactor Engineer. If an equivalent steady state power level is not to be used to determine reactivity changes due to Xenon, N/A this step.

Equivalent Steady State Power Level for Xenon 100

5.3.3 Using the time of the shutdown from the Official Log and the time in step 5.3.1, determine the hours shutdown. Elapsed time determination for Xe and Sm reactivity calculations should use the time of trip or the time of the midpoint of the ramp reduction if no trip occurred. N/A this step if Xenon predict is to be used.

15 hours

5.3.4 Determine the initial Xenon reactivity worth by obtaining the pre-trip value from the PPCS hourly logs (Point ID XFXEK, XENON PREDICT), or by using the equivalent power level in step 5.3. 2 and time zero of Figure A.6, A.7, or A.8, or the PCNDR. Alternatively obtain the Xenon worth from the Reactor Engineer.

Initial Xe worth - 2920 pcm

5.3.5 Determine the current Xenon reactivity worth from XENON PREDICT, or by using the time since shutdown (step 5.3.3) and the equivalent power level in step 5.3.2 from Figure A.6, A.7, or A.8. Alternatively obtain Xenon worth from the Reactor Engineer.

Current Xe worth - 4500 pcm

5.3.6 Determine the change in reactivity due to Xenon by subtracting the reactivity worth PRIOR to shutdown (5.3.4) from the current reactivity worth (5.3.5).

(5.3.5) - 4500 - (5.3.4) - 2920 = -1580 pcm

5.4 BOREON

5.4.1 Record Boron PRIOR to shutdown,(Step 5.1.3.2).

114 Boron ppm

5.4.2 Record Boron in core now:

SAMPLE:

DATE: 1/23/02 TIME: 2000 114 Boron

5.4.3 Calculate the change in Boron concentration.

ΔCB = (5.4.2) 114 0 ppm - (5.4.1) 114 ppm = 0 Boron ppm

5.4.4 Differential Boron worth determined from HZP differential Boron worth curves (attached Figure A.3 or the PC NDR) using the burnup from step 5.1.2 and the average of the Boron prior to shutdown (5.4.1) and the boron in the core now (5.4.2). This number will always be negative.

$\frac{-11.4 \text{ pcm}}{\text{ppm}}$

NOTE: **If Boron has been added to the system the resultant reactivity will carry a negative value. If Boron has been decreased in the system the resultant reactivity will carry a positive value.**

5.4.5 Determine the reactivity worth due to the change in Boron between the time of Shutdown and the current Boron concentration by multiplying the change in Boron concentration (5.4.3) by the differential Boron worth (5.4.4).

(5.4.3) 0 ppm x (5.4.4) - $\frac{11.4 \text{ pcm}}{\text{ppm}}$ 0 pcm

5.5 SAMARIUM

5.5.1 Determine the current "effective" reactivity worth due to Samarium by using XENON PREDICT, or the Power level prior to shutdown (5.1.1) and the hours shutdown (5.3.3) and Figure A.12 (or the PCNDR).

940 pcm

5.5.2 Determine the "effective" Samarium worth prior to shutdown by using XENON PREDICT, the time zero value of Figure A-12 (or the PCNDR).

910 pcm

5.5.3 Determine the reactivity worth due to the change in "Effective" Samarium concentration by subtracting the current reactivity worth (5.5.1) from the "Effective" Samarium reactivity worth prior to shutdown. This value will always be negative.

(5.5.2) 910 - (5.5.1) 940 = -30 pcm

5.6 TOTAL REACTIVITY CHANGE (carry sign for each value)

5.6.1 Record Power Defect from shutdown (5.1.4) +1925 pcm

5.6.2 Record Control Rod worth to full out position (5.2.2)

+19 pcm

5.6.3 Record Reactivity due to change in Xenon Concentration (5.3.6)

-1580 pcm

5.6.4 Record Reactivity due to change in Boron Concentration (5.4.5)

0 pcm

5.6.5 Record Reactivity due to change in "Effective" Samarium concentration (5.5.3)

-30 pcm

5.6.6 Add 5.6.1 through 5.6.5 to obtain total reactivity change.

333 pcm

5.7 ESTIMATED CRITICAL ROD POSITION

The algebraic sum of the reactivity changes determines the rod position that will cause the Reactor to attain criticality. When the sum is positive, the Reactor will go critical with the rods still inserted some number of steps. When the sum is zero, the Reactor will go critical with all rods withdrawn. When the sum is negative, the Reactor will not go critical, and some further action must be taken to increase the sum > 0. The rod position at which the Reactor goes critical is the Critical Rod Position.

5.7.1 Use the total reactivity change (5.6.6) and the HZP integral rod worth Table A-4, A-5, or A-6, or the PC NDR) to find the Critical Rod Position. If the total reactivity change is negative, mark this step N/A.

BANK D

STEPS 175

5.7.2 Refer to COLR, Figure 2, Control Bank Insertion Limit for 0% Power:

BANK B

STEPS 184

5.7.3 Compare the estimated critical rod position (Step 5.7.1) with the Insertion Limit (Step 5.7.2). IF the estimated Critical Rod Position indicates the Reactor will go critical with all rods out, OR the Reactor will go critical below the Control Bank Insertion Limits, OR a different critical rod position is desired, THEN a change in the critical rod position (i.e. charge in Boron concentration) shall be necessary. If not, N/A section 5.8.

OK

5.8 Changing the Critical Rod Position

5.8.1 Record the desired critical rod position.

BANK N/A

STEPS ↓

5.8.2 Determine the reactivity from the desired critical rod position in step 5.8.1 and the ARO position by using Table A-4, A-5, or A-6, or the PCNDR.

N/A pcm

5.8.3 Determine the change in reactivity needed to achieve the desired critical rod position by subtracting the total reactivity change (5.6.6) from the desired critical rod position to ARO reactivity worth (5.8.2).

(5.8.2) _____ - (5.6.6) _____ = _____ pcm

5.8.4 Determine the change in boron required to achieve the desired Critical Rod position by dividing the change in reactivity needed (5.8.3) by the current differential Boron worth determined using Figure A.3 or the PC NDR.

(5.8.3) _____ pcm/_____ $\frac{\text{pcm}}{\text{ppm}}$ = _____ ppm

5.8.5 Determine the desired boron concentration by adding the change in boron concentration (5.8.4) to the current Boron concentration (5.4.2).

(5.4.2) _____ ppm + (5.8.4) _____ ppm = _____ ppm

5.8.6 Dilute OR Borate to attain the desired Boron concentration, as determined in step 5.8.5.

_____

5.9 Using the estimated critical rod position from 5.7.1 (or step 5.8.1, if applicable) and Table A-4, A-5, or A-6, calculate the control rod bank position corresponding to ± 500 pcm from the estimated critical rod position.

+ 500 pcm bank position 88

- 500 pcm bank position >230

OK

5.9.1 Mark the above control rod bank positions on the 1/M of procedure O-1.2.1, 1/M Curves.

OK

5.10 Independent verification of the calculations in this procedure have been performed by the Reactor Engineer or alternate. If the calculations were performed by the Reactor Engineer, a licensed individual shall perform the independent verification.

_____

COMPLETED BY: _____

DATE COMPLETED: _____

CONTROL ROOM FOREMAN: _____

SHIFT SUPERVISOR: _____

REACTOR ENGINEER: _____

Figure 5.15 Total Power Defect vs. Power Level at BOL

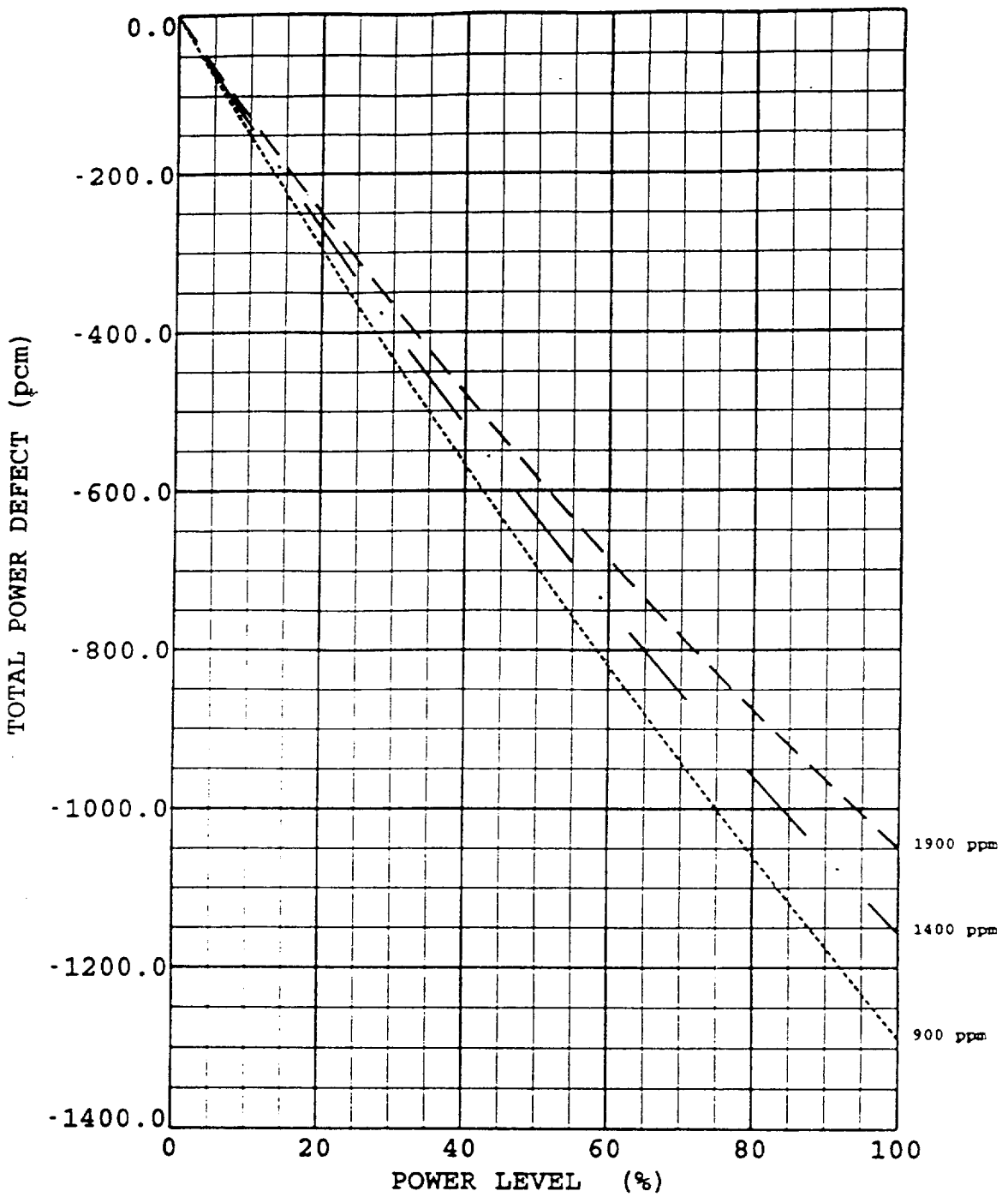


Figure 5.16 Total Power Defect vs. Power Level at MOL

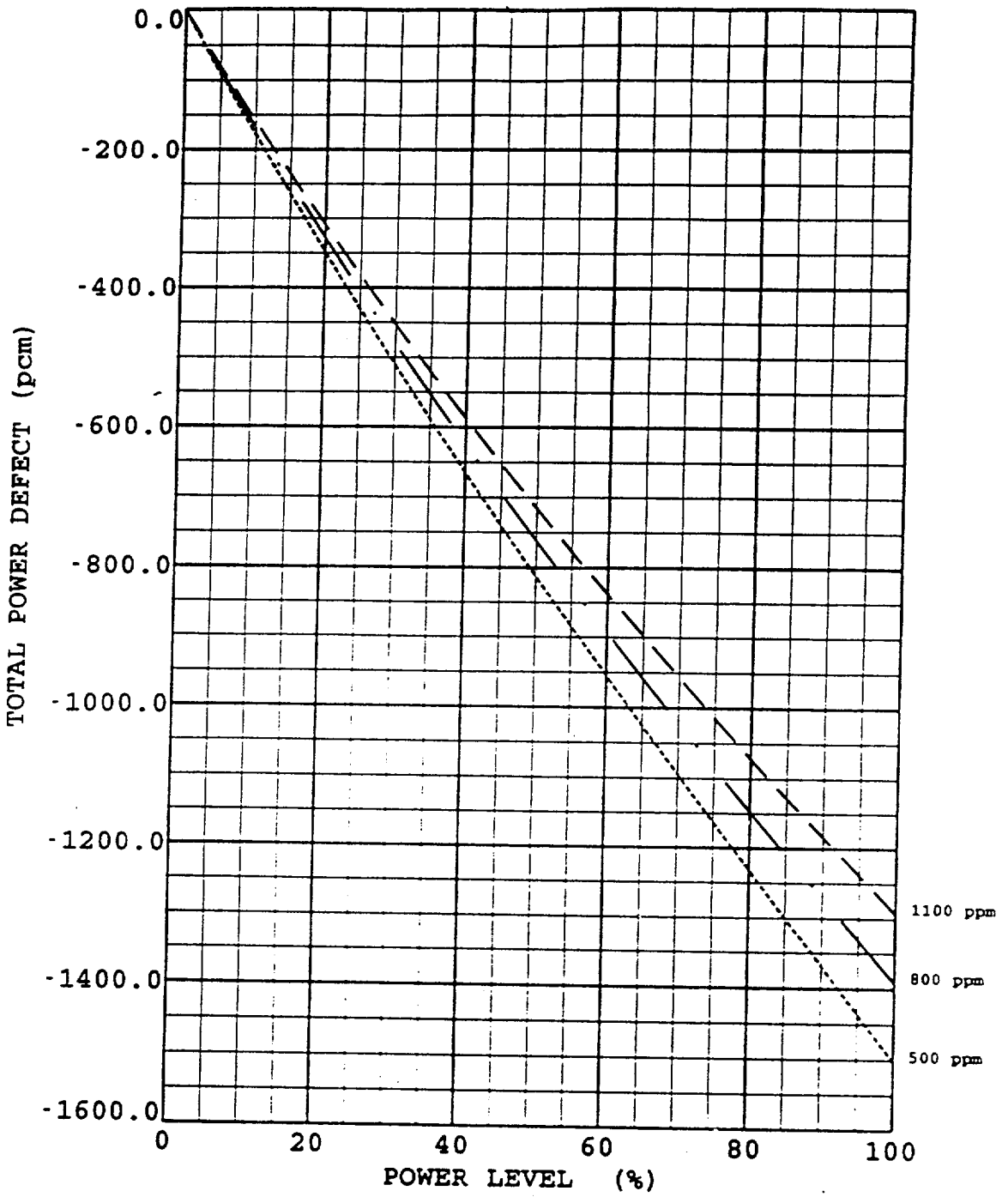
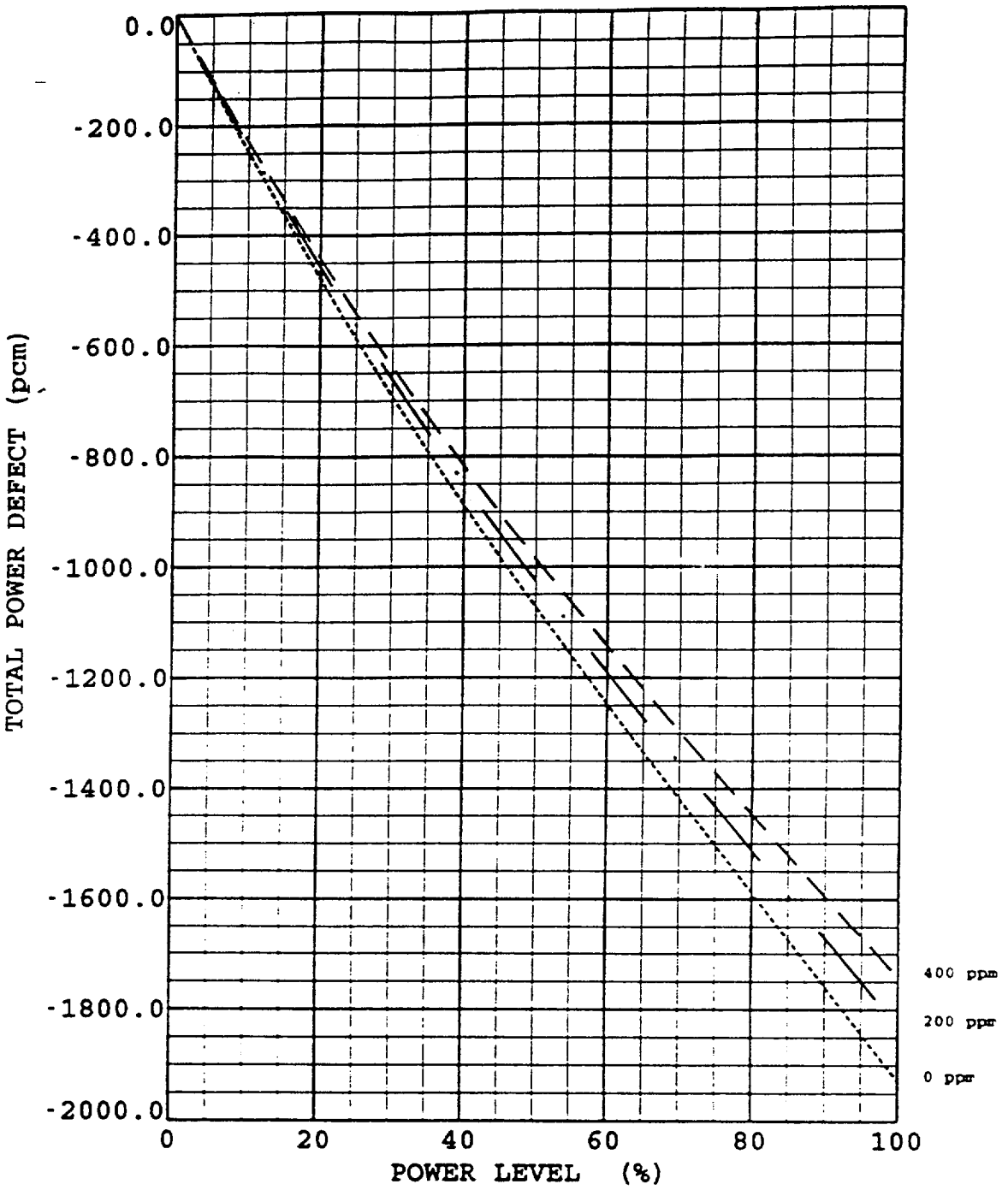


Figure 5.17 Total Power Defect vs. Power Level at EOL



HFP IRW - D,C,B IRW w/Overlap HFP, EOXE, EOL

Control Banks Steps Withdrawn			Integral Worth (pcm)
Bank D	Bank C	Bank B	
230	230	230	0.0000
215	230	230	18.2255
200	230	230	76.2403
185	230	230	156.9139
170	230	230	235.0760
155	230	230	307.5095
140	230	230	376.9670
125	230	230	445.2080
110	230	230	512.6182
95	225	230	580.2897
80	210	230	676.0087
65	195	230	812.3835
50	180	230	965.6621
35	165	230	1128.3127
20	150	230	1298.5075
5	135	230	1451.2482
0	130	230	1493.1012
0	125	230	1528.0570
0	110	230	1621.5501
0	95	225	1718.2244
0	80	210	1836.2982
0	65	195	1987.7337
0	50	180	2162.1342
0	35	165	2356.0492
0	20	150	2560.5364
0	5	135	2732.4528
0	0	130	2774.5333

Table A-1

HFP IRW - D,C,B IRW w/Overlap HFP, EOXE, MOL

Control Banks Steps Withdrawn			Integral Worth
Bank D	Bank C	Bank B	(pcm)
230	230	230	0.0000
215	230	230	8.2451
200	230	230	40.9607
185	230	230	94.5396
170	230	230	152.6582
155	230	230	210.3602
140	230	230	267.8604
125	230	230	326.0915
110	230	230	385.9288
95	225	230	448.6313
80	210	230	529.7897
65	195	230	642.4611
50	180	230	778.4082
35	165	230	928.6118
20	150	230	1081.8905
5	135	230	1211.1314
0	130	230	1244.9794
0	125	230	1274.1040
0	110	230	1356.4661
0	95	225	1445.1439
0	80	210	1552.4935
0	65	195	1691.0387
0	50	180	1858.6703
0	35	165	2048.9874
0	20	150	2242.8784
0	5	135	2395.5196
0	0	130	2431.4145

HFP IRW - D,C,B IRW w/Overlap HFP, EOXE, BOL

Control Banks Steps Withdrawn			Integral Worth
Bank D	Bank C	Bank B	(pcm)
230	230	230	0.0000
215	230	230	6.8481
200	230	230	35.2583
185	230	230	83.3383
170	230	230	138.7251
155	230	230	198.6338
140	230	230	263.1718
125	230	230	332.7898
110	230	230	407.6044
95	225	230	487.6968
80	210	230	583.7865
65	195	230	704.7604
50	180	230	845.1481
35	165	230	997.8916
20	150	230	1151.6089
5	135	230	1282.0964
0	130	230	1316.9270
0	125	230	1347.6253
0	110	230	1437.5044
0	95	225	1535.2908
0	80	210	1649.5954
0	65	195	1788.6859
0	50	180	1949.5886
0	35	165	2125.1161
0	20	150	2299.0443
0	5	135	2438.8657
0	0	130	2473.6089

Figure A.6 **Xenon Worth vs. Time Following Plant Trip After Steady State Operation at BOL**

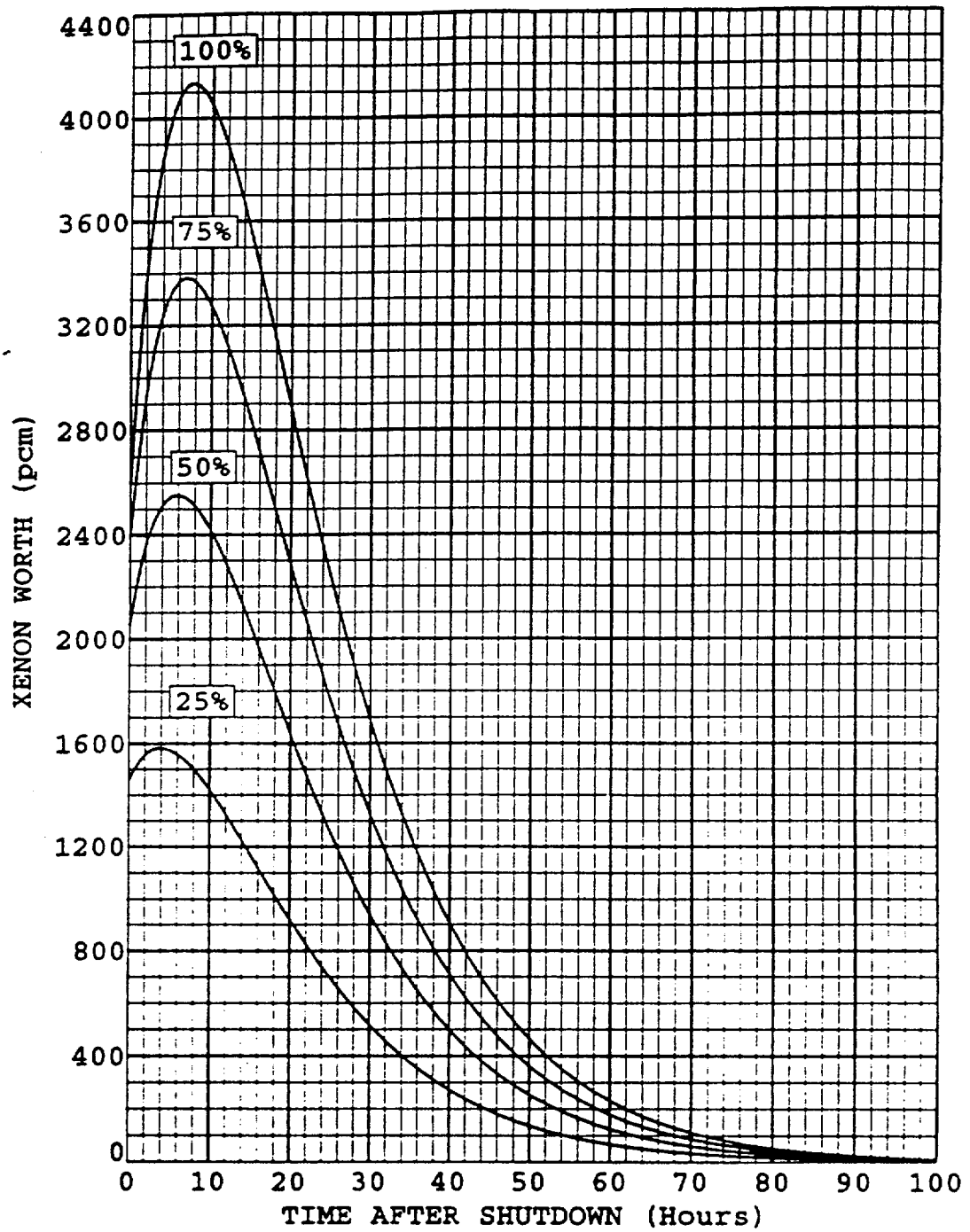


Figure A.7 **Xenon Worth vs. Time Following Plant Trip After Steady State Operation at MOL**

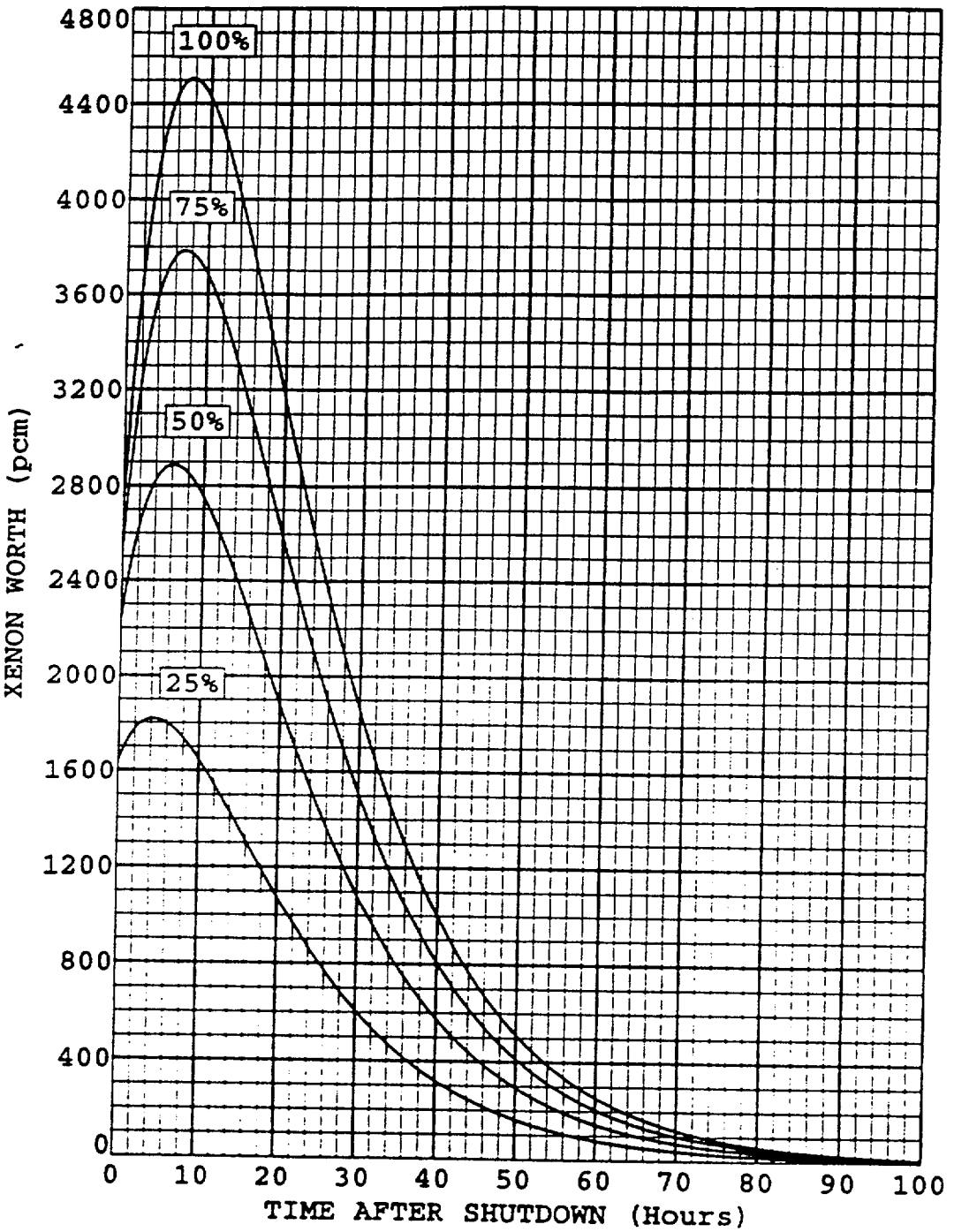


Figure A.8 Xenon Worth vs. Time Following Plant Trip After Steady State Operation at EOL

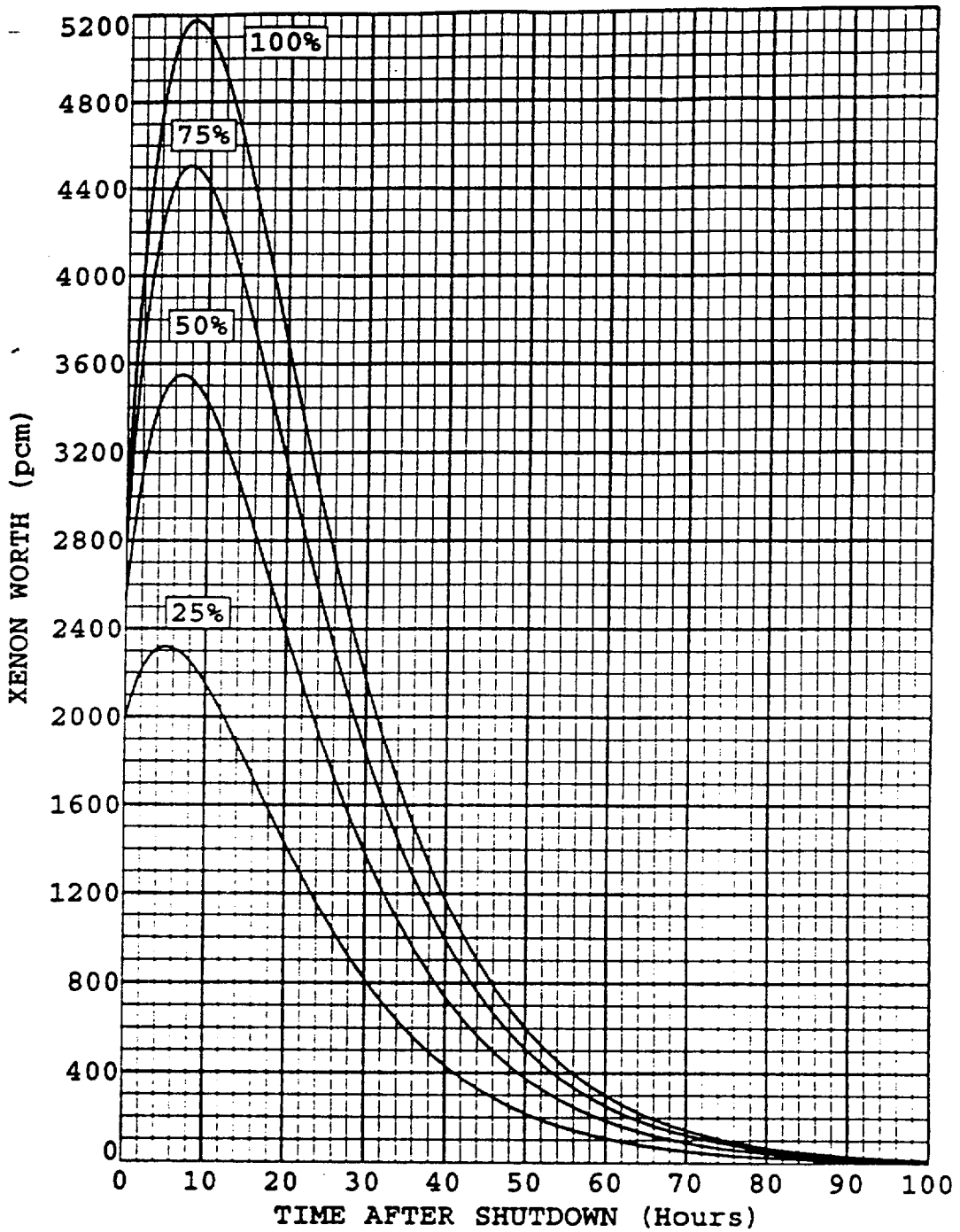


Figure A.3 Differential Boron Worth vs. Boron Concentration at BOL, MOL and EOL, HZP

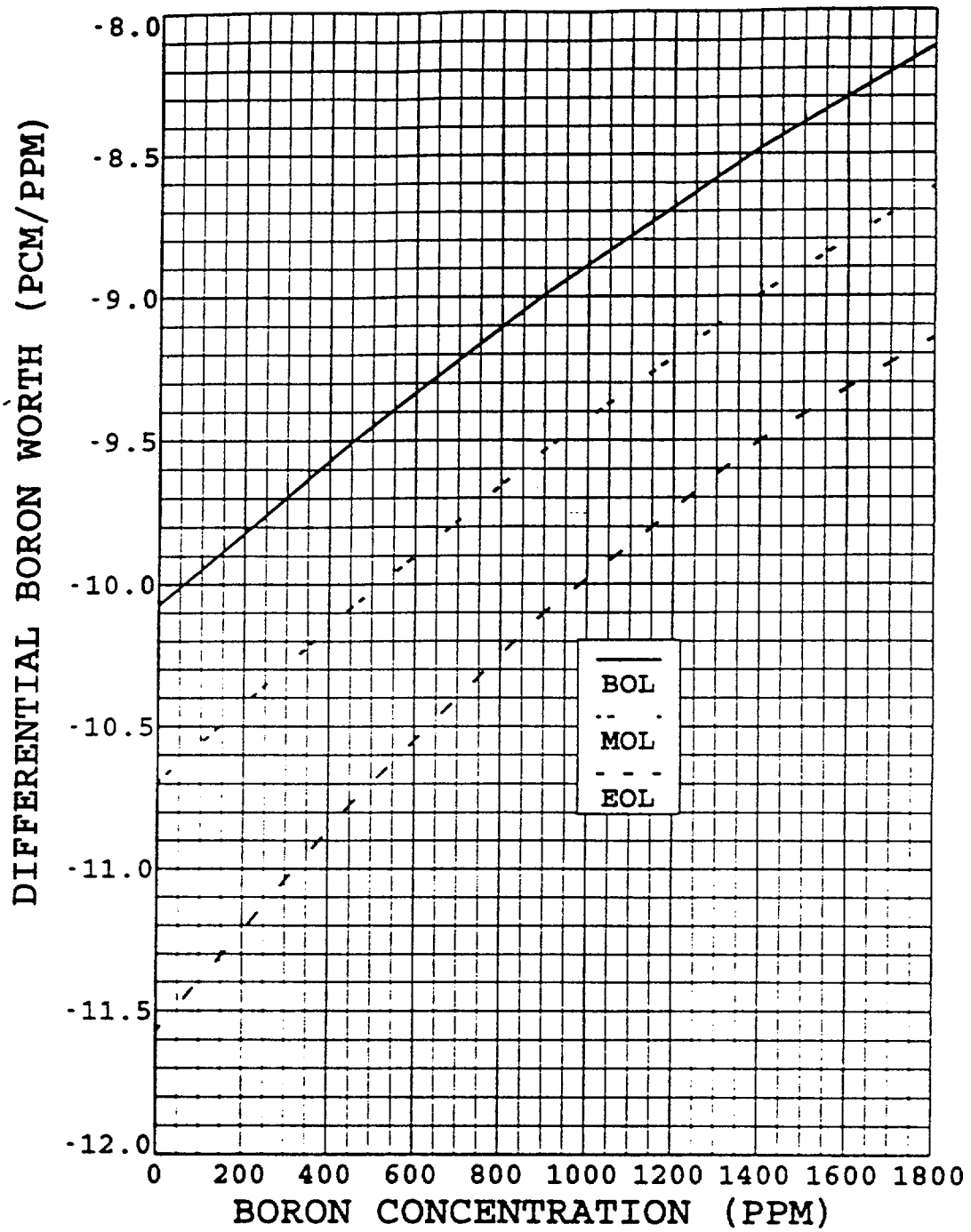


Figure A.12 Effective Samarium Worth vs. Time Following Plant Shutdown at MOL

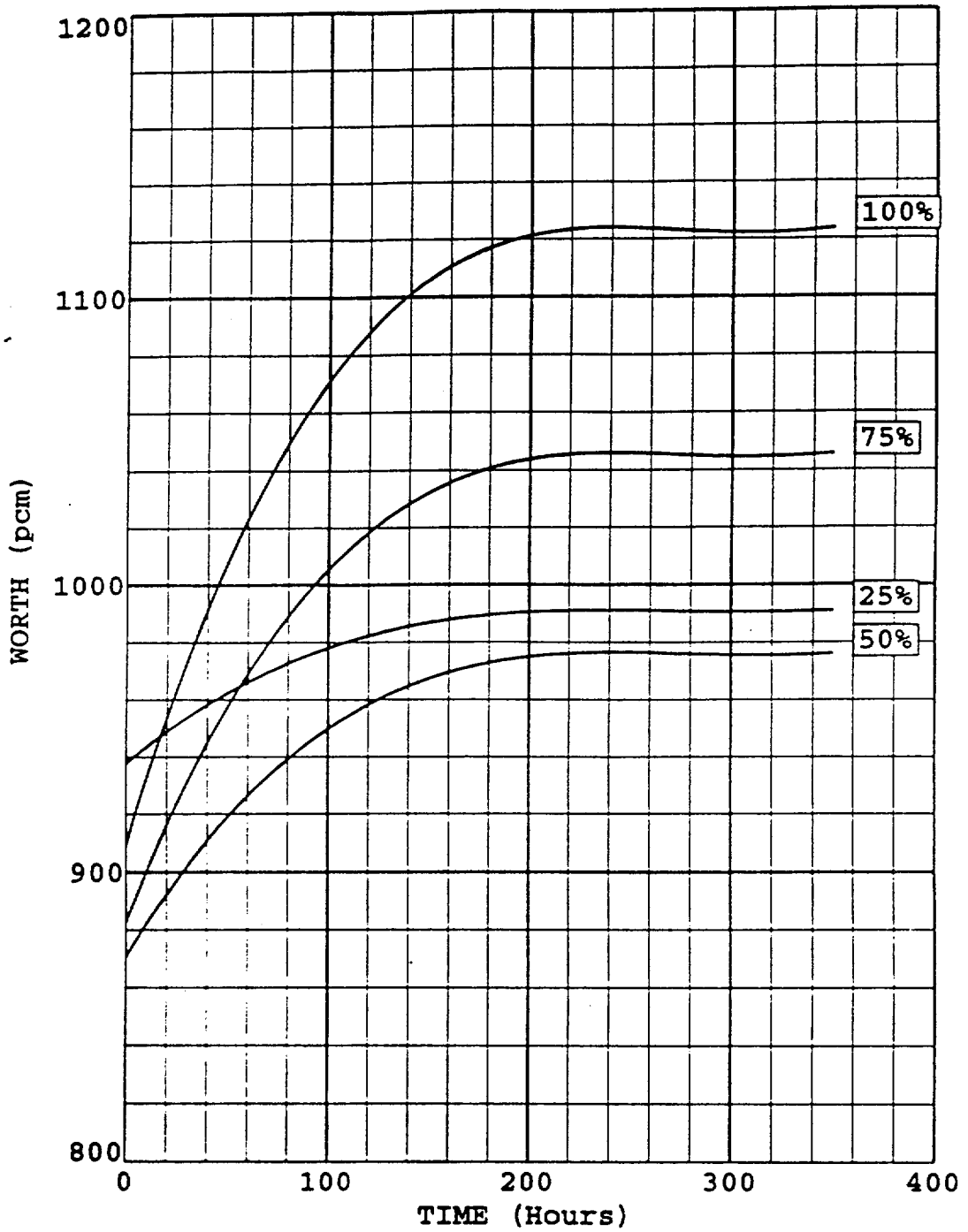


Table A-4 Integral Rod Worth as a Function of Steps Withdrawn at BOL, HZP, No Xenon, Banks D, C, and B Moving with 100 Step Overlap

Control Banks Steps Withdrawn			Integral Worth
Bank D	Bank C	Bank B	(pcm)
230	230	230	0.000
215	230	230	6.8695
200	230	230	40.3491
185	230	230	98.2868
170	230	230	162.1432
155	230	230	228.7623
140	230	230	299.5191
125	230	230	376.4185
110	230	230	461.2663
95	225	230	555.0914
80	210	230	662.3586
65	195	230	787.1065
50	180	230	924.1275
35	165	230	1062.5644
20	150	230	1191.7529
5	135	230	1301.8799
0	130	230	1333.5206
0	125	230	1363.4414
0	110	230	1457.1365
0	95	225	1564.0057
0	80	210	1688.5406
0	65	195	1834.1710
0	50	180	1995.3412
0	35	165	2155.6215
0	20	150	2296.8102
0	5	135	2408.1101
0	0	130	2438.4179

Table A-5 Integral Rod Worth as a Function of Steps Withdrawn at MOL, HZP, No Xenon, Banks D, C, and B Moving with 100 Step Overlap

Control Banks Steps Withdrawn			Integral Worth
Bank D	Bank C	Bank B	(pcm)
230	230	230	0.0000
215	230	230	10.2707
200	230	230	58.4038
185	230	230	137.6506
170	230	230	214.5479
155	230	230	280.4886
140	230	230	338.6110
125	230	230	393.4047
110	230	230	448.7301
95	225	230	507.6306
80	210	230	582.6383
65	195	230	685.5810
50	180	230	812.0005
35	165	230	952.1777
20	150	230	1088.9580
5	135	230	1195.6381
0	130	230	1221.9319
0	125	230	1244.5273
0	110	230	1310.9366
0	95	225	1388.8755
0	80	210	1488.2872
0	65	195	1621.3421
0	50	180	1795.8206
0	35	165	2003.3204
0	20	150	2201.2014
0	5	135	2337.8405
0	0	130	2366.9193

Table A-6 Integral Rod Worth as a Function of Steps Withdrawn at EOL, HZP, No Xenon, Banks D, C, and B Moving with 100 Step Overlap

Control Banks Steps Withdrawn			Integral Worth (pcm)
Bank D	Bank C	Bank B	
230	230	230	0.0000
215	230	230	27.7294
200	230	230	132.5193
185	230	230	285.4736
170	230	230	422.3971
155	230	230	532.3431
140	230	230	620.7541
125	230	230	691.7266
110	230	230	746.6965
95	225	230	788.2597
80	210	230	882.5989
65	195	230	1057.4293
50	180	230	1241.6104
35	165	230	1408.1324
20	150	230	1565.1741
5	135	230	1700.9095
0	130	230	1738.6889
0	125	230	1771.8557
0	110	230	1860.5976
0	95	225	1945.1104
0	80	210	2052.9788
0	65	195	2203.5094
0	50	180	2382.0963
0	35	165	2577.5833
0	20	150	2763.2783
0	5	135	2903.9249
0	0	130	2938.9081

Admin JPM
SRO + ~~RO~~
A.1

Skill of Craft

JPM COVER SHEET

JPM NO: J017.001 REV # 02 REVIEW DATE 6/10/98

JPM TITLE: DETERMINE RCS CORE EXIT SUBCOOLING WITH THE PPCS OUT OF SERVICE

LOCATION: SIMULATOR

EST. TIME TO COMPLETE: 10 MIN

DATE:

CANDIDATE: SOC. SEC. # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL: RO/SRO/STA

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: J017.001

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

THE SIMULATOR WILL BE PLACED IN A SUITABLE CONDITION FOR GIVING A STATIC EXAMINATION. DO NOT USE PPCS INDICATIONS.

THIS JPM MAY ALSO BE PERFORMED IN THE CONTROL ROOM.

INITIATING CUE

THE SHIFT SUPERVISOR DIRECTS YOU TO DETERMINE CORE EXIT THERMOCOUPLE SUBCOOLING USING FIGURE MIN SUBCOOLING.

JPM PREP SHEET

JPM NO.: J017.001

TASK TO BE PERFORMED: USING THE LOCAL INCORE THERMOCOUPLE PANEL AND MCB PRESSURE INDICATORS DETERMINE ACTUAL SUBCOOLING USING FIGURE MIN SUBCOOLING.

REFERENCE PROCEDURE(S): NONE

INITIAL PLANT CONDITIONS: MODES 1, 2, OR 3

REQUIRED JPM PREP: PLACE SIMULATOR IN REQUIRED IC. IF CONTROL ROOM IS USED, ENSURE PLANT IS IN REQUIRED MODE.

REQUIRED HANDOUT MATERIAL: BLANK WRITING TABLET

AVAILABLE FOLLOW-UP QUESTIONS:

FOLLOW-UP QUESTION REFERENCES:

OTHER: NONE

*CRITICAL STEP #	ELEMENT	STANDARD	S/U	
		INITIATING CUE: THE SHIFT SUPERVISOR HAS DIRECTED YOU TO DETERMINE CORE EXIT THERMOCOUPLE SUBCOOLING USING FIGURE MIN SUBCOOLING. DO NOT USE PPCS. NOTE: STEP 1-4 MAY BE PERFORMED IN ANY ORDER.		
*1	OBTAIN CORE EXIT THERMOCOUPLE TEMPERATURE FROM THE THERMOCOUPLE DISPLAY PANEL (AVERAGE TEMPERATURE).	OBTAINS AVERAGE TEMPERATURE READING FROM BOTH CET TRAINS.		
*2	OBTAIN RCS PRESSURE FROM MCB INDICATORS.	OBTAINS RCS PRESSURE FROM RCS WIDE RANGES OR NARROW RANGES (IF $>$ 1700 PSIG).		
*3	OBTAIN FIGURE MIN SUBCOOLING.	OBTAIN FIGURE MIN SUBCOOLING FROM EOP ATTACHMENT BOOK OR FROM AN EOP.		
*4	DETERMINE IF CNMT IS ADVERSE.	CHECK CNMT PRESS $<$ 4 PSIG. CHECK CNMT RAD $< 10^5$ R/HR.		

*5	CALCULATE SUBCOOLING.	CALCULATES SUBCOOLING BY LOCATING MIN SUBCOOLING LINE FOR THE RCS PRESSURE AND SUBTRACTING THE TEMPERATURE FROM THE AVERAGE CORE EXIT TEMP.		
6	REPORT TO SHIFT SUPERVISOR THE ACTUAL SUBCOOLING.	CUE: NO FURTHER ACTION.		

JPM COVER SHEET

JPM NO: SRO A.2 REV # ___ REVIEW DATE _____

JPM TITLE: Verify Equipment Tagout Boundary (SRO A.2)

OPTIONS:

LOCATION: Various

EST. TIME TO COMPLETE: 15 Minutes

DATE:

CANDIDATE: SOC. SEC # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: SRO A.2

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

N/A

INITIATING CUE

Given the completed Isolated Work Area Request (A-1401, Figure 1) for isolating the Condensate Transfer Pump (PCD04), the Shift Supervisor has requested that you verify the work area boundaries before commencement of work.

JPM PREP SHEET

JPM NO.: SRO A.2

TASK TO BE PERFORMED:

Verify work boundary for Condensate Transfer Pump

REFERENCE PROCEDURE(S):

A-1401, "Station Holding Rules"

INITIAL PLANT CONDITIONS:

N/A

REQUIRED JPM PREP:

REQUIRED HANDOUT MATERIAL:

Completed A-1401, Figure 1, for Condensate Transfer Pump isolation. P&ID for Condensate System

AVAILABLE FOLLOW-UP QUESTIONS:

OTHER:

FIGURE 1

Refer to A-1401 for Instructions

ISOLATED WORK AREA REQUEST

PART 1: MARK-UP REQUEST

ISOLATED WORK AREA: Condensate Transfer Pump (PCD64)

VENT/DRAIN PATH REQUIRED PER SECTION 3.4: (Y) / N (CIRCLE ONE)

REASON FOR WORK: Replace Pump Seal

WORK ORDER NUMBER: 2002 NRC 001

PREPARED BY: Bills

AUTHORIZED PERSON: Weeks

REQUESTED MARK-UP DATE: _____ MARK-UP TIME: _____

STANDARD TAGOUT NO. _____ SCHEDULING APPROVAL: _____

ART 3: MARK-OFF REQUEST TAGOUT ID NO. _____

igh Voltage Test Clearance:

Authorized Person(s)	Date	Time	Marked Up

artial Release/Mechanical Clearance:

Authorized Person(s)	Date	Time	Marked Up

ull Release:

Authorized Person(s)	Date	Time

Figure 1

Refer to A-1401 for Instructions

A. 2: ISOLATED WORK AREA

TAGOUT ID No. _____

EQUIPMENT EIN FOR ISOLATED WORK AREA	SAFE POSITION	MARK UP	MARK OFF	MARK UP	MARK OFF
MCB/07D	B00				
4047	Closed				
4049A	Closed				
9509C	closed				
4049C	open ~~Closed~~ BA				
4046	Closed				

ANSWER KEY

Figure 1

Refer to A-1401 for Instructions

PART 2: ISOLATED WORK AREA

TAGOUT ID No. _____

EQUIPMENT EIN FOR ISOLATED WORK AREA	SAFE POSITION	MARK UP	MARK OFF	MARK UP	MARK OFF
BKR					
Switch					
4047	Closed				
4049A	Closed				
9509C	Closed				
4049C	~~Closed~~ open				
4046	Closed				
4050	Closed				
9509D	Closed				
11348	Closed				
46A	Open	(Optional)			

☒ - Correct ANSWER

☒ - Provide as Tagout request

JPM COVER SHEET

JPM NO: SRO A.3 REV # ___ REVIEW DATE _____

JPM TITLE: Approve Liquid Release Form (CH-RETS-LIQ-REL, Figure V)

OPTIONS:

LOCATION: SIMULATOR

EST. TIME TO COMPLETE: 10 Minutes

DATE:

CANDIDATE: SOC. SEC # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: SRO A.3

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

N/A

INITIATING CUE

You are the Shift Supervisor and are required to review and approve a completed liquid release form (CH-RETS-LIQ-REL, "Liquid Waste Release," Figure V).

JPM PREP SHEET

JPM NO.: SRO A.3

TASK TO BE PERFORMED:

Review and approve Liquid Waste Release form (CH-RETS-LIQ-REL, Figure V)

REFERENCE PROCEDURE(S):

CH-RETS-LIQ-REL, "Liquid Waste Release"

INITIAL PLANT CONDITIONS:

N/A

REQUIRED JPM PREP:

REQUIRED HANDOUT MATERIAL:

Completed Liquid Waste Release form (CH-RETS-LIQ-REL, Figure 1)

AVAILABLE FOLLOW-UP QUESTIONS:

OTHER:

GINNA STATION
UNIT #1
COMPLETED
DATE:
TIME:

ROCHESTER GAS & ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER _____

Procedure No. CH-RETS-LIQ-REL Revision No. 7

Liquid Waste Release

TECHNICAL REVIEW

_____
Responsible Manager

_____
Effective Date

CATEGORY 1.0

REVIEWED BY:_____

This procedure contains 36 pages

JPM COVER SHEET

JPM NO: SRO A.4 REV # ___ REVIEW DATE _____

JPM TITLE: Perform Event Classification

OPTIONS:

LOCATION: SIMULATOR

EST. TIME TO COMPLETE: 5 Minutes

DATE:

CANDIDATE: SOC. SEC # _____

EVALUATOR:

ACTUAL TIME REQUIRED:

EVALUATION:
(SAT/UNSAT)

JOB LEVEL:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

FOLLOW-UP QUESTION NO.:

EVALUATION:

COMMENTS: CANDIDATE'S INITIAL:_____

SUBMITTED _____ DATE _____

APPROVED _____ DATE _____

JPM INFORMATION SHEET

JPM NO.: SRO A.4

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES, ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING OF JPM PERFORMANCE.

INITIAL PLANT CONDITIONS

At conclusion of graded scenario

INITIATING CUE

As Shift Supervisor, use EPIP 1.0 to classify the event which just concluded

JPM PREP SHEET

JPM NO.: SRO A.4

TASK TO BE PERFORMED:

Perform event classification for graded scenario

REFERENCE PROCEDURE(S):

EPIP 1.0

INITIAL PLANT CONDITIONS:

N/A

REQUIRED JPM PREP:

REQUIRED HANDOUT MATERIAL:

EPIP 1.0

AVAILABLE FOLLOW-UP QUESTIONS:

OTHER: