

496.

RELATED CORRESPONDENCE

JUNE 1, 1984

DOCKETED
USNRC

84 JUN -4 AM 5:50

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In The Matter of)
METROPOLITAN EDISON COMPANY)
(Three Mile Island Nuclear Station,)
Unit No. 1))

Docket No. 50-289 SP
(Restart)

NOTICE TO THE COMMISSION,
APPEAL BOARD, LICENSING
BOARD AND PARTIES

In the course of reviewing documents related to the O-VV incident in July 1979, Licensee has discovered a VV make-up training test taken in May 1979, in which the last page of VV's response appears to be someone else's product. Enclosed is the test with the response in question (Enclosure (1)) and, for response format comparison purposes, a second VV test (Enclosure (2)) and a test by individual O (Enclosure (3)) in which responses to the same question appear.

Respectfully submitted,

Ernest L. Blake, Jr.
Ernest L. Blake, Jr., P.C.
Counsel for Licensee

cc: Attached Service List

DS03

TRAINING ASSIGNMENT ADMINISTRATIVE FORM

2.2 A

1. Lesson/Course: Emergency Procedure Review Employee No. 8 Completion Date 9
2. Name: VV 10 DAY 070912
3. Classification: Supr. of Ops - II

CATALOG NUMBER				LESSON	
C	A	T		ID	
15	A	TYPE	SUBJECT	26	
114501801013				CB	1

COURSE DURATION	
HOURS	
27	31
000120	

MODE PREFIX	
32	34
MMP	

MODE PREFIXES

Makeup - MUP
Correspondence -

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35	COMMENTS	53
EMERGENCY PROCEDURE REVIEW 13		

4. Reason for assignment

- ☐ FSR Requirement
- ☒ Lecture Missed Type OR
- ☒ Test Not Taken
- ☐ < 80% on Test

Cycle: 5

Cycle Completion Date: 1 March 79

Time Period: 8/21/78 to 9/24/78

Type of License (RO/SRO): R-6

5. Instructor Assigned: N.D. Brown Instructions:

Please review the below designated Emergency Procedures and take the attached test, closed book. Signify completion by signature:

Oper. at Controls (1038), Caution Tag (1037), Hand Calc Tilt on

Imbal. (1202-7) (2103-111), CRD Failures (1202-8) (2203-1.1)

2203-1.3), Loss of OTSG Feed (1202-26A/B) (2203-2.2),

Uncont. Criticality (1203-10) (2202-12), Loss of Burren (2203-1.1)

Signature / s / VV Date 8/12/78

6. RETURN TO TRAINING DEPARTMENT BY: ASAP

7. Method of Evaluation: (Check at least one)

- a) Written Test ☒ Score: 68.6%
- b) Oral Spot Check ☐
- c) Other ☐ (Explain):

8. N.D. Brown, 7/9/79

Instructor's Signature Date Supervisor of Training Date

EMERGENCY PROCEDURES TEST
CYCLE 5 REQUAL
SRO ANSWER ALL QUESTIONS

14.5 08.003 CB

7.7
16.8
24.5 = 68.6%

1. List 5 indications of an asymmetric rod fault.

2. What is your action upon discovery of a stuck control rod in Gp 7?

3. What gives a motor fault alarm?

SRO
4. After verifying a rod as being stuck what is ^{the} follow-up action?

5. Draw the asymmetric rod runback circuit.

6. On the attached figure (Unit I or Unit II control room as applicable) mark the area that an "operator at the controls" should not normally leave for routine operations.

(NOTE: X-license answer for both units)

SRO

7. An "Operator at the controls" may leave the routine operations area and briefly enter the nonroutine operations area of the control room. List (3) three conditions which warrant an "Operator at the controls" to enter the nonroutine operations area. *alarm, investigate abnormal or suspect abnormal conditions to initiate corrective action in emergency affecting safety*

8. Briefly explain the purpose of CAUTION tags. *prevent unauthorized operation*

9. Given the following information, calculate the quadrant power tilt. Use the attached data sheet:

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Recorder Point Number	Detector Reading	Recorder Point Number	Detector Reading
1-1	124	1-16	124
1-9	125	1-17	117
1-10	125	1-18	119
1-11	125	2-1	124
1-12	125	2-2	125
1-13	117	2-3	125
1-14	118	2-4	124
1-15	124	2-5	123

SRO

10. a) List the allowable tilt values for:

1. Symmetrical (full) incore system
2. Minimum incore system.
3. Power range channels.

NIA
-0.25 11-2
-0.75 11-1
-1.0

b) Explain the required actions if the applicable quadrant power tilt limit is exceeded. (assume that corrective actions do not decrease the tilt.)

11. What is the required frequency for monitoring:

- a) Quadrant power tilt *every 7 days within minutes and then 12 hrs.*
 b) Axial power imbalance *> 40% per day 12 hrs within minutes at the 1 hr.*

12. Following a loss of feed to both OTSG's, flow should be limited to *2 1/2 min 1200 gpm*

13. How do you recover from a dry steam generator? *EP 2 1/2 min of 25"*

14. List the power supplies and location of *supply* for main feedwater block valves.

15. Name at least *two* causes for unanticipated criticality. *84 TD*

16. What are the indications of a boron dilution accident in progress?

Total points	X-L	24.5
	SRD	17.25
	CRD	12.25

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Reference Procedures:

- AP 1028 Operator at the Controls
 AP 1037 Caution Tags
 EP (1203-7)(2103-1.1) Hand Calculation of Tilt & Imbalance
 EP (1202-8)(2203-1.2; 2203-1.3) CRD Equipment Failures
 EP (1202-26 A/B)(2202-2.2) Loss of OTSG Feed
 EP (1203-10)(2202-1.2) Unanticipated Criticality
 EP (2203-1.1) Loss of Boron

DATA SHEET 1

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QUADRANT POWER TILT - MINIMUM INCORE DETECTORS

1) Fill in the following incore valves:

Quadrant	Core Location	Axial Level	(Recorder - Detector) Point No. Reading	Quadrant Sums
XY	C10	2	(1-11) <u>125</u>	XY = <u>497</u>
XY	F13	2	(1-12) <u>125</u>	Quadrant
XY	E9	6	(2-5) <u>123</u>	1
XY	G11	6	(1-1) <u>124</u>	
YZ	L13	2	(1-13) <u>117</u>	YZ = <u>471</u>
YZ	O10	2	(1-14) <u>118</u>	Quadrant
YZ	K11	6	(1-17) <u>117</u>	2
YZ	M9	6	(1-18) <u>119</u>	
ZW	O6	2	(1-15) <u>124</u>	ZW = <u>497</u>
ZW	L3	2	(1-16) <u>124</u>	Quadrant
ZW	M7	6	(2-1) <u>124</u>	3
ZW	K5	6	(2-2) <u>125</u>	
WX	F3	2	(1-9) <u>125</u>	WX = <u>499</u>
WX	C6	2	(1-10) <u>125</u>	Quadrant
WX	G5	6	(2-3) <u>125</u>	4
WX	E7	6	(2-4) <u>124</u>	

2) Core Total = (WX) + (XY) + (YZ) + (ZW) = 1964

3) Quadrant Average Power (QAVE) = Core Total ÷ 4 = 491

4) Quadrant Tilt, % = $\left[\frac{\text{Quadrant Sum}}{\text{QAVE}} - 1 \right] \times (100\%)$:

Quadrant 1 XY Tilt = +0.0122%

Quadrant 2 YZ Tilt = -0.040%

Quadrant 3 ZW Tilt = +0.0122%

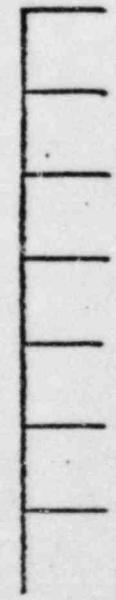
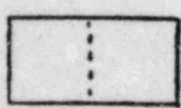
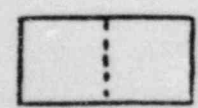
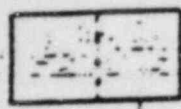
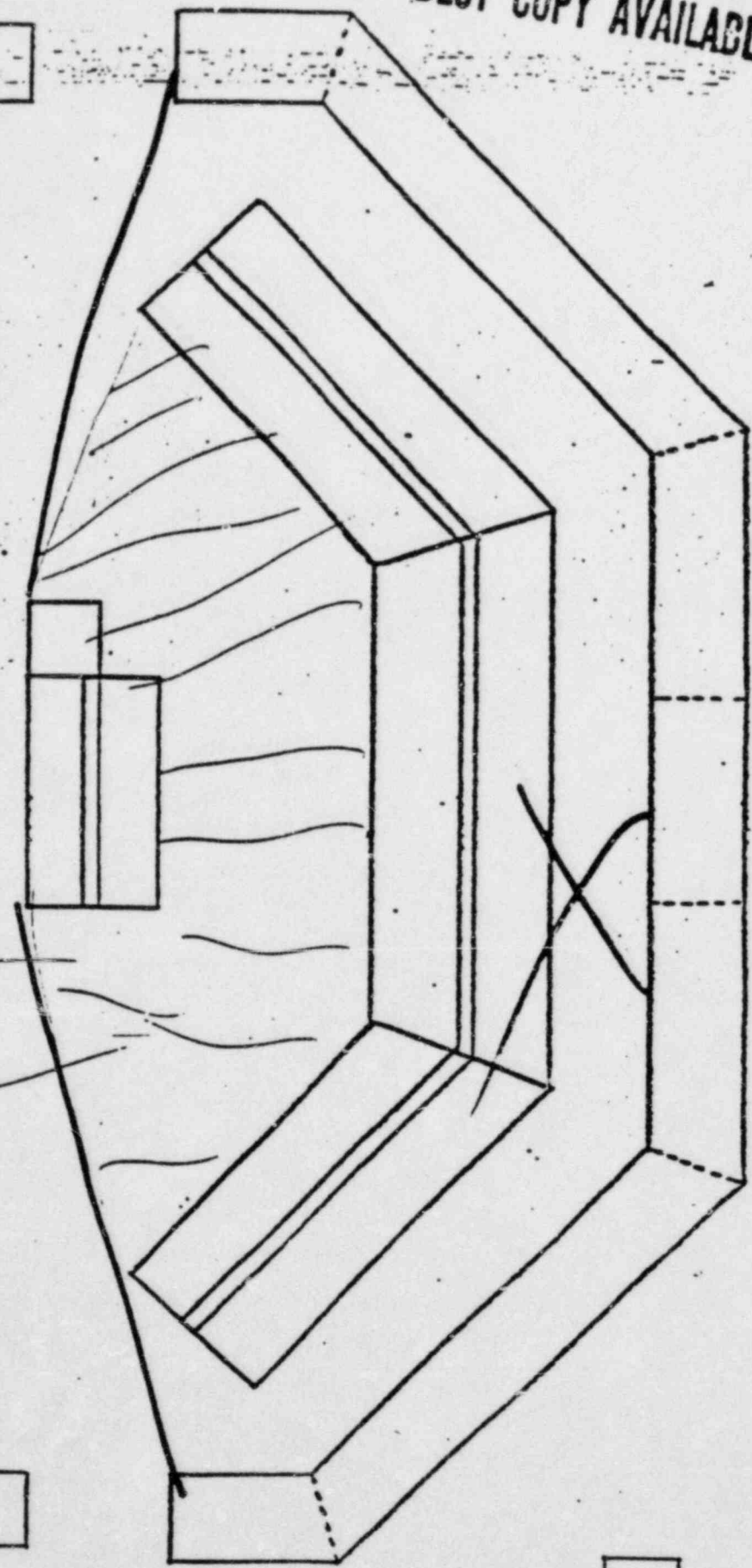
Quadrant 4 WX Tilt = +0.0162%

OK

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UNIT 1
CONTROL ROOM 3

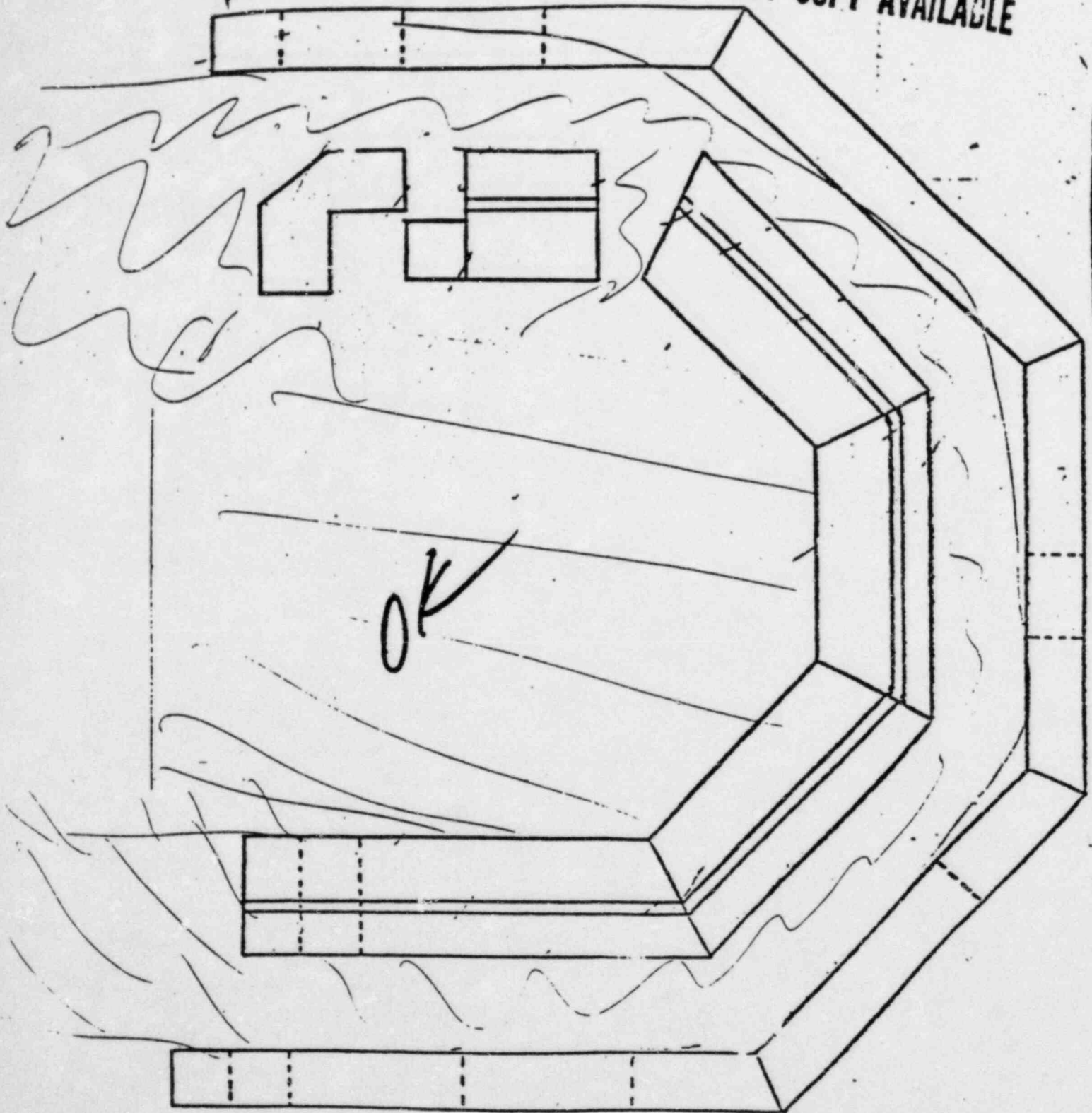
05



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ANTI-COMMUNISM ROOMS

OK



- 1. ~~Reopen~~ foot fault on Δ ✓
- yellow light on back panel ✓
- CRD pattern again clear on back panel ✓
- Possible ICS in back ✓
- PI on back panel and computer ✓
- Possible 6/7 fault on Δ ✓

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- 2. Transfer Δ to manual. -
- Transfer red to aux power supply. - ✓
- attempt to move in at Δ (20 sec) then out. X (0.2) d-1
- If moves - return to manual.
- If no move - reduce power to 60% allowable for 10 min.

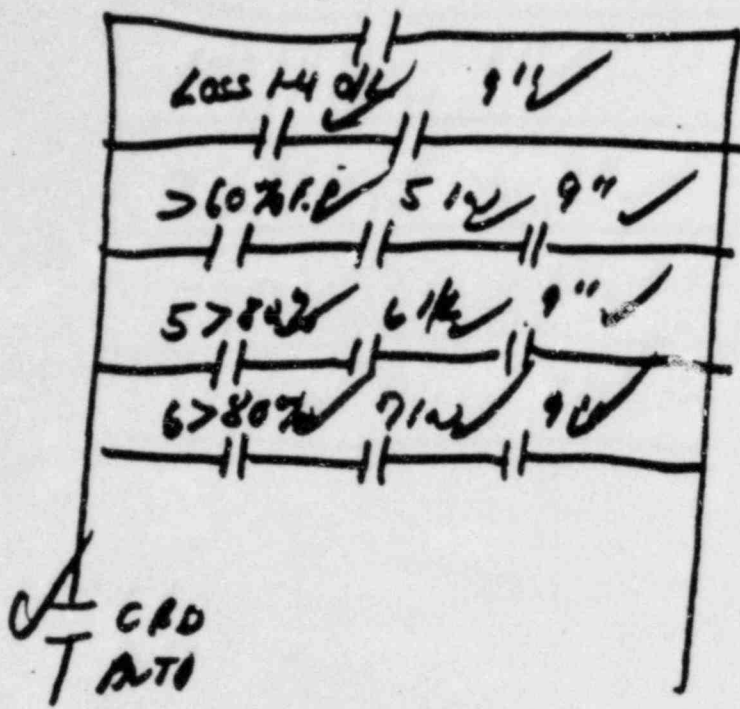
- 3. Uncommanded red motion ✓
- or out when in asked for ✓ (0.25)

- 4. Check Quad Tilt & action ✓
- check/replace fuses to motor
- take phase current readings
- If mechanical - try to move AC
- check API at nearest zone loop
- determine shielder margin ✓
- If mechanical check to holotically

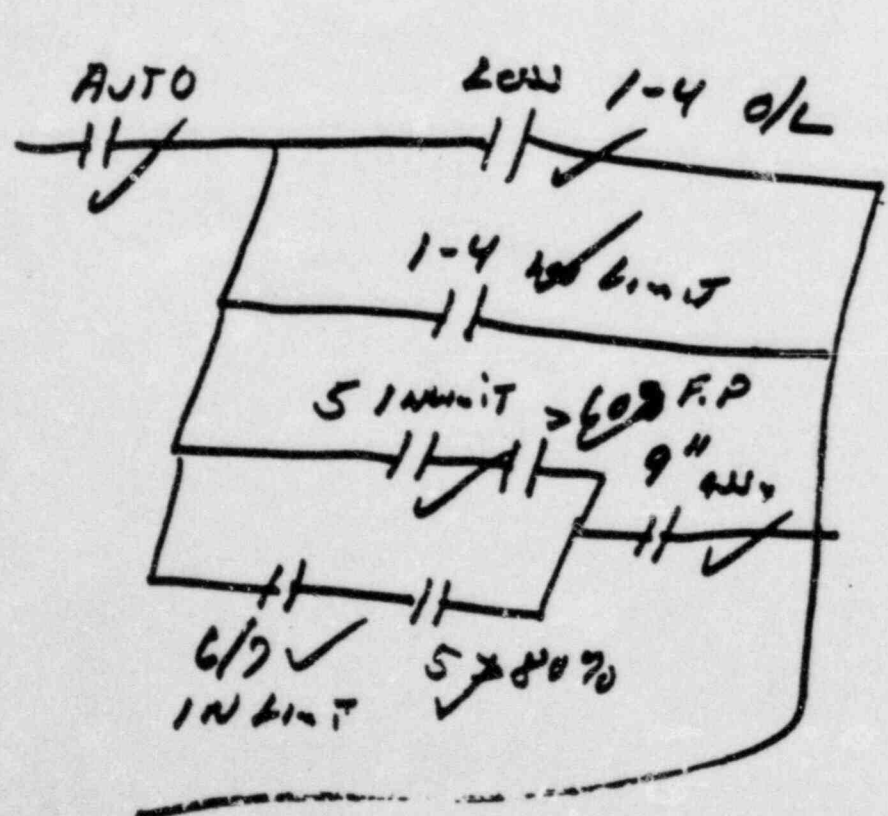
indif (0.25)

5. See attached

~~U-I~~ U-I
 1-4 IN LIMIT



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U-I

2.2.A

Employee No.

Completion Date

4 8

9 1

2. Name:

VV

MO.	DAY	YR.
-----	-----	-----

3. Classification:

Supervisor of Ops - Unit 2

MODE PREFIXES

Makeup - MUP

Correspondence - CCS

13	C A T		LESSON
	A	TYPE SUBJECT	ID 26
11450801013 CB 1			

COURSE DURATION	
HOURS	
27	31
00020	

MODE	
PREFIX	
32	34
M141D	

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35	COMMENTS	59
AMEEC IPIROK RIVULEM GRIOWUPI 13		

4. Reason for assignment

FSR Requirement

Lecture Missed Type

Test Not Taken

~~✓~~ < 80% on Test

Cycle: 5

Cycle Completion Date: 1 March 79

Time Period: 8/21/78 to 9/24/78

Type of License (RO/SRO): SRO/XL

5. Instructor Assigned:

N. D. Brown

Instructions:

Please review the below designated Emergency Procedures and take the attached test, closed book. Signify completion ^{of review} by signature below

Oper. at Controls (1028), Caution Tag (1037), Hand Calc Tilt and Imbal. (1203-7) (2103-1.11), CRD Failures (1202-8) (2203-1.2, 2203-1.3), Loss of OTSG Feed (1202-26A/B) (2202-2.2), Unant. Criticality (1203-10) (2202-1.2), Loss of Boreon (2203-1.1) D

Signature _____ Date _____

6. RETURN TO TRAINING DEPARTMENT BY:

ASAP

7. Method of Evaluation: (Check at least one)

a) Written Test ✓

Score: 84.9%

b) Coral Spot Check



Res. ltr Sent

c) Other

(Explain):

3.

Nicholas Brown
Instructor's Signature:

Date _____

2/26/79

Supervisor of Training

Date _____

EMERGENCY PROCEDURES TEST
CYCLE 5 REQUAL
SRO ANSWER ALL QUESTIONS

14.508.003 C B

20.8 = 84.9%
24.5

7/18/79

1. List 5 indications of an asymmetric rod fault.
2. What is your action upon discovery of a stuck control rod in Gp 7?
3. What gives a motor fault alarm?

SRO 2.0
2.0 1.25
1.0 1.0
0.75 0.75

- SRO
4. After verifying a rod as being stuck what is ^{the} follow-up action?
 5. Draw the asymmetric rod runback circuit.

2.0 1.0
2.0 4

6. On the attached figure (Unit I or Unit II control room as applicable) mark the area that an "operator at the controls" should not normally leave for routine operations.
(NOTE: X-license answer for both units)

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- SRO
7. An "Operator at the controls" may leave the routine operations area and briefly enter the nonroutine operations area of the control room. List (3) three conditions which warrant an "Operator at the controls" to enter the nonroutine operations area. *See legend, C-104.*

2.75

8. Briefly explain the purpose of CAUTION tags.

2.0

9. Given the following information, calculate the quadrant power tilt. Use the attached data sheet:

2.0

Recorder Point Number	Detector Reading	Recorder Point Number	Detector Reading
1-1	124	1-16	124
1-9	125	1-17	117
1-10	125	1-18	119
1-11	125	2-1	124
1-12	125	2-2	125
1-13	117	2-3	125
1-14	118	2-4	124
1-15	124	2-5	123

- SRO
10. a) List the allowable tilt values for:
 1. Symmetrical (full) incore system.
 2. Minimum incore system.
 3. Power range channels.

2.75

- b) Explain the required actions if the applicable quadrant power tilt limit is exceeded. (assume that corrective actions do not decrease the tilt.)

1.5

11. What is the required frequency for monitoring:

- a) Quadrant power tilt $1 \text{ hr} > 15^\circ$ every 7 days unless written
b) Axial power imbalance; $6 > 40$ every 12 hrs unless the 1 hr

12. Following a loss of feed to both OTSG's, flow should be limited to 560 gpm. 25

20

13. How do you recover from a dry steam generator?

14. List the power supplies and location of ~~supply~~ for main feedwater block valves.

10. Name at least two causes for unanticipated criticality. lack of communication

16. What are the indications of a boron dilution accident in progress?

class only, conduct, history with head alone, # 66 under, how could head

Total points

X-L

24.5

SRD

17.25

۷۲

12.25

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Reference Procedures:

AP 1028 Operator - at the controls

DP 1037 Caution Tags

EP (1203-7) (2103-1.11) Hand Calculation of Tilt & Imbalance.

EP (1202-8)(2203-1.2; 2203-1.3) CRD Equipment Failures

EP (1202-26 A/B)(2202-2.2) Loss of OTSG Feed

EP (1203-10)(2202-1.2) Unanticipated Criticality

EP (2203-1.1) Loss of Borneo

DATA SHEET 1

QUADRANT POWER TILT - MINIMUM INCORE DETECTORS

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1) Fill in the following incore valves:

Quadrant	Core Location	Axial Level	(Recorder - Detector) Point No. Reading	Quadrant Sums
XY	C10	2	(1-11) <u>125</u>	XY = <u>497</u>
XY	F13	2	(1-12) <u>125</u>	Quadrant
XY	E9	6	(2-5) <u>123</u>	1
XY	G11	6	(1-1) <u>124</u>	
YZ	L13	2	(1-13) <u>117</u>	YZ = <u>471</u>
YZ	O10	2	(1-14) <u>118</u>	Quadrant
YZ	K11	6	(1-17) <u>117</u>	2
YZ	M9	6	(1-18) <u>119</u>	
ZW	O6	2	(1-15) <u>124</u>	ZW = <u>497</u>
ZW	L3	2	(1-16) <u>124</u>	Quadrant
ZW	M7	6	(2-1) <u>124</u>	3
ZW	K5	6	(2-2) <u>125</u>	
WX	F3	2	(1-9) <u>125</u>	WX = <u>499</u>
WX	C6	2	(1-10) <u>125</u>	Quadrant
WX	G5	6	(2-3) <u>125</u>	4
WX	E7	6	(2-4) <u>124</u>	

2) Core Total = (WX) + (XY) + (YZ) + (ZW) = 1964

3) Quadrant Average Power (QAVE) = Core Total ÷ 4 = 491

4) Quadrant Tilt, % = $\left[\frac{\text{Quadrant Sum}}{\text{QAVE}} - 1 \right] \times (100\%)$:

Quadrant 1 XY Tilt = _____ % X

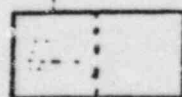
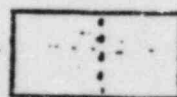
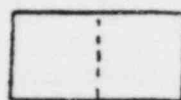
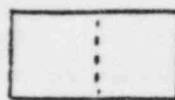
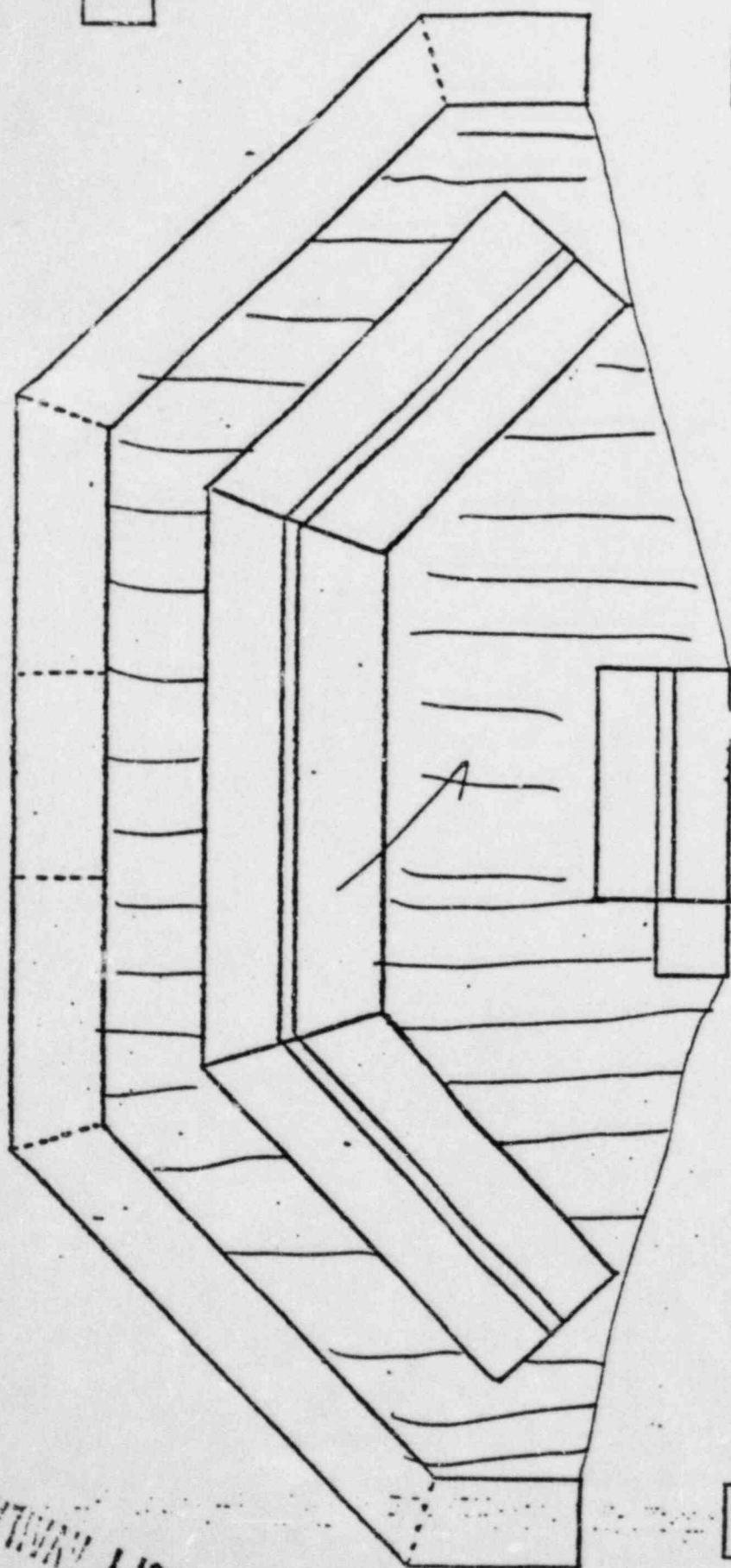
Quadrant 2 YZ Tilt = _____ % X

Quadrant 3 ZW Tilt = _____ % X

Quadrant 4 WX Tilt = _____ % X

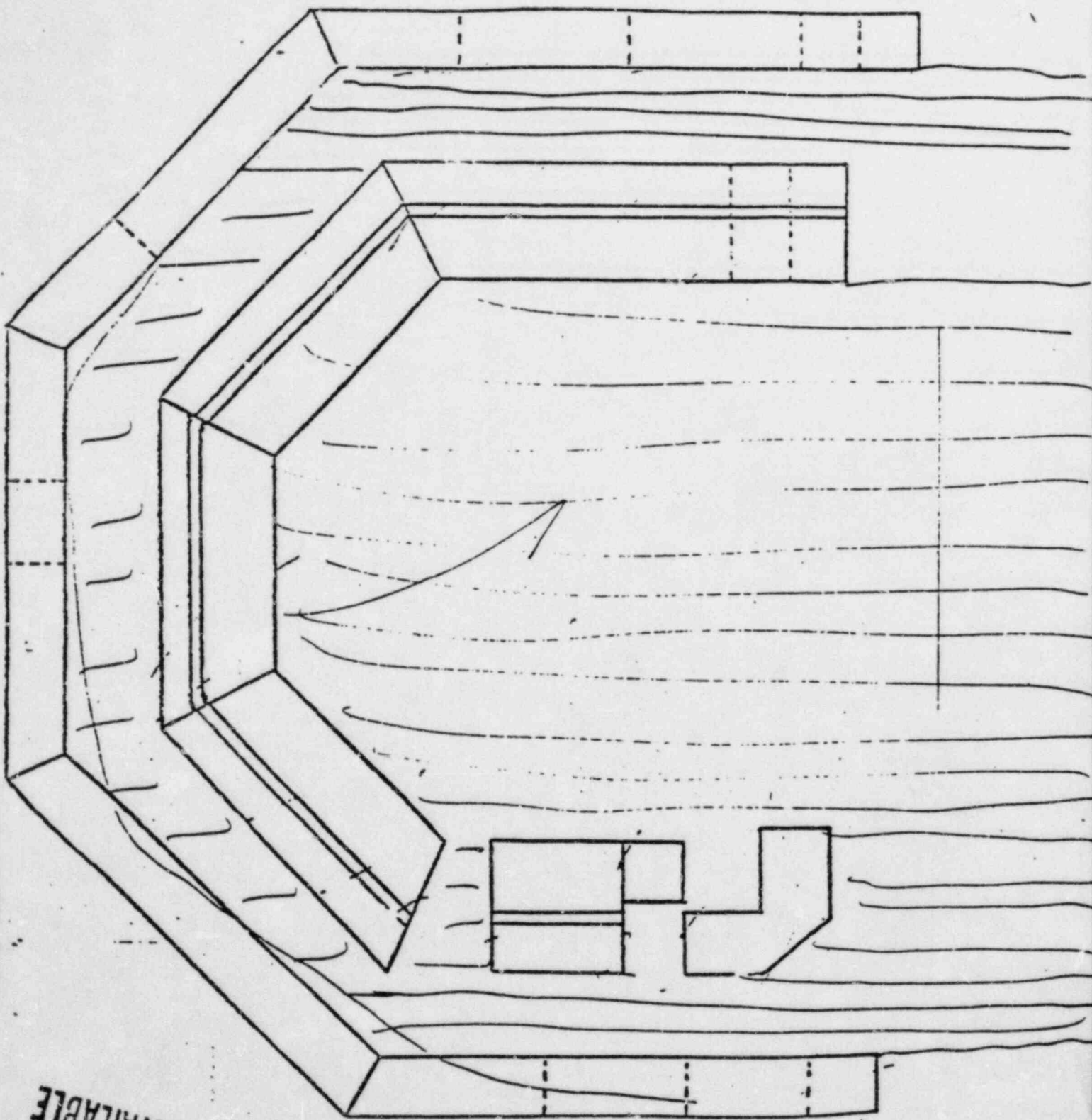
not completed.
-0.8

UNIT 1
CONTROL ROOMS



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3 UNIT L UNIT KUL ROOMS



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1. a) asymmetric rod fault on ϕ ✓
- b) fault langes on PI panel ✓
- c) CEO pattern asymmetric on slave panel ✓
- d) possible ICS sunback ✓
- e) PI meter and/or computer ✓

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2. Unit Ireduce pow to $< 60\%$ if required ✓

attempt to insert the wither - "in" ✓

watch Tilt

4 hr to reduce Q/CO/flow refpt.

Unit II

1 hr to 2 command.

1 hr to Unit P/S

dog in (20 sec) then out

if work - change 1 hr to manual P/S ✓

if no work - reduce pow to $< 60\%$ allowed

3. Programmer motor recovery on OUT direction when not commanded

loss of pow to programmer motor control

also Unit 2 2 command - no motion ✓

-0.25

4. Unit Imaintain pow $< 60\%$ allowable... ✓

SOM. check inside with of stick and ✓

Position OK

Specify other rods ✓

operate with rod with hand limits &

keep group within 7" of stick rod.

Unit II

watch Tilt ✓

check phase phase

read current to each coil ≈ 15 ampsif mechanical - try to operate it...
if no go wait 6 hrs.

check API vs zone ref. after

you are in action status.

X

-0.125

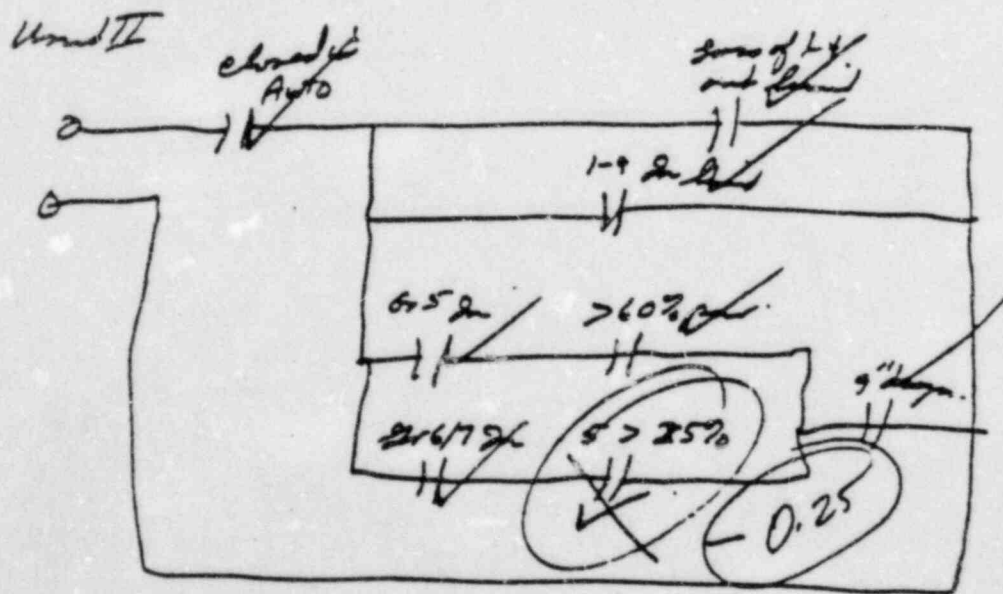
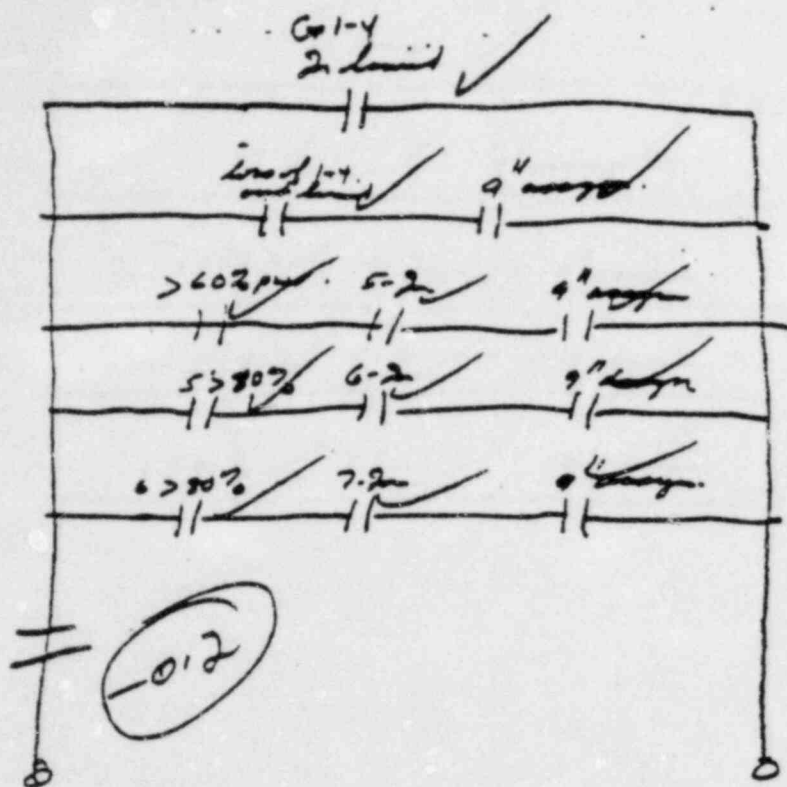
XXX

-1.375

Total QY
-0.5

5. Unit 2

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Total Q5
-0.45

6. See attached

6/K

7. a) Investigate alarm ✓
 b) Respond to alarm ✓
 c) Emergency response OK

8. Information of off-normal condition or specific information for the operator about a piece of equipment! ✓

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9. see attached.

	Unit I	Unit II	max
10) 1. Sym	+3.52 %	<u>0.2</u> <u>3.20</u> ✓ <u>3.71</u>	<u>20</u>
2. Min.	+1.90 % ✓	1.72 ✓ 3.71	
3. OOC	+1.96 % ✓	0.96 ✓ 5.88	

5. (1) Reduce PLO to below the prior limit cutoff. PLO is reduced 2% for each 1% in excess of limit. 2% 4800's 2% for each 1% 0.1

Unit I { within 4 hrs - reduce $\Delta Q/\Delta t$ flow set to 2% for 1% 0.2 greater than limit
 not with break limits reduced 2% for 1% > limit ✓
 operational imbalance limits, reduced 2% for 1% > limit ✓

* If Sym +16.80, min +9.50 or OOC +14.20% - go to hot shutdown

Reduce PLO to PLO - 2% for 1% > limit & 4 hrs to reduce $\Delta Q/\Delta t$ 2/1/24

24 hrs reduce PLO to less than 60% allowable for RCP with also $\Delta Q/\Delta t$ 6.5% with 4 hrs.

If > ~~transient~~ but < ~~transient~~ ^{transient} 30 minutes, stop then also 17

If > ~~transient~~ but < ~~transient~~ ^{transient} 30 minutes, stop then also 17

If > ~~transient~~ but < ~~transient~~ ^{transient} 30 minutes, stop then also 17

11. Unit I Unit II
 Test every hour > 15% every 7 days unless monitor stops, then every 12 hours
 Test every 2 hours > 40% every 12 hrs unless monitor stops, then every hour.

12. 360 gpm. Unit I. ✓
X 4-2 (0.15)

13. If log - get power below 8% if not triggered & use EF @ 360 gpm - use 5
in to 25" indicated on S.U. range - then use normal feed.

14. Unit I

1C ES Values at 281 - FNA ✓

Unit II

2-41B ✓ 305 TB R by hot water
2-31B ✓ 305 TB SN correct.

15. Power reduction, rod motion, and/or temperature changes - ECS.

16. Chemical analysis ✓

condensate increasing ✓

heating with lead alarm in MUT & Payot

Fuel & bleed cable alarm ✓

if hand off - lead increase - fuel & gas control.

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Enclosure (3)
EMERGENCY PROCEDURES TEST
CYCLE 5 REQUAL
SRO ANSWER ALL QUESTIONS

14.5.08.003 CB

Graded by Brown
21.9 / 24.5 = 91.3%
2.6

1. List 5 indications of an asymmetric rod fault. 1.0
2. What is your action upon discovery of a stuck control rod in GP-7? 1.0
3. What gives a motor fault alarm? .75
4. After verifying a rod as being stuck what is ^{the} follow-up action? 1.0
5. Draw the asymmetric rod runback circuit. 2.0
6. On the attached figure (Unit I or Unit II control room as applicable) mark the area that an "operator at the controls" should not normally leave for routine operations. 1.0
7. (NOTE: X-license answer for both units)
8. An "Operator at the controls" may leave the routine operations area and briefly enter the nonroutine operations area of the control room. List (3) three conditions which warrant an "Operator at the controls" to enter the nonroutine operations area. .75
9. Briefly explain the purpose of CAUTION tags. 1.0
10. Given the following information, calculate the quadrant power tilt. Use the attached data sheet: 2.0

Recorder Point Number	Detector Reading	Recorder Point Number	Detector Reading
1-1	124	1-16	124
1-9	125	1-17	117
1-10	125	1-18	119
1-11	125	2-1	124
1-12	125	2-2	125
1-13	117	2-3	125
1-14	118	2-4	124
1-15	124	2-5	123

- SRO
10. a) List the allowable tilt values for:
 1. Symmetrical (full) incore system.
 2. Minimum incore system.
 3. Power range channels..75
 - b) Explain the required actions if the applicable quadrant power tilt limit is exceeded. (assume that corrective actions do not decrease the tilt.) 1.5

11. What is the required frequency for monitoring:

- a) Quadrant power tilt
- b) Axial power imbalance

1.5
.5

12. Following a loss of feed to both OTSG's, flow should be limited to _____ gpm. 25

PRO

13. How do you recover from a dry steam generator? 1.0

14. List the power supplies and location of ~~supply~~ for main feedwater block valves. .5

15. Name at least two causes for unanticipated criticality. .5

16. What are the indications of a boron dilution accident in progress? 1.0

Total points	X-L	24.5
	SRO	17.25
	CRO	12.25

Reference Procedures:

AP 1028 Operator at the Controls

AP 1037 Caution Tags

EP (1203-7)(2103-1.1) Hand Calculation of Tilt & Imbalance

EP (1202-8)(2203-1.2; 2203-1.3) CRD Equipment Failures

EP (1202-26A/B)(2202-2.2) Loss of OTSG Feed

EP (1203-16)(2202-1.2) Unanticipated Criticality

EP (2203-1.1) Loss of Boron

DATA SHEET 1

QUADRANT POWER TILT - MINIMUM INCORE DETECTORS -

1) Fill in the following incore valves:

Quadrant	Core Location	Axial Level	(Recorder - Detector) Point No. Reading	Quadrant Sums
XY	C10	2	(1-11) <u>125</u>	XY = <u>497</u> Quadrant 1 ✓
XY	F13	2	(1-12) <u>125</u>	
XY	E9	6	(2-5) <u>123</u>	
XY	G11	6	(1-1) <u>124</u>	
YZ	L13	2	(1-13) <u>117</u>	YZ = <u>471</u> Quadrant 2
YZ	O10	2	(1-14) <u>118</u>	
YZ	K11	6	(1-17) <u>117</u>	
YZ	M9	6	(1-18) <u>119</u>	
ZW	O6	2	(1-15) <u>124</u>	ZW = <u>497</u> Quadrant 3
ZW	L3	2	(1-16) <u>124</u>	
ZW	M7	6	(2-1) <u>124</u>	
ZW	K5	6	(2-2) <u>125</u>	
WX	F3	2	(1-9) <u>125</u>	WX = <u>499</u> Quadrant 4
WX	C6	2	(1-10) <u>125</u>	
WX	G5	6	(2-3) <u>125</u>	
WX	E7	6	(2-4) <u>124</u>	

2) Core Total = (WX) + (XY) + (YZ) + (ZW) = 1964

3) Quadrant Average Power (QAVE) = Core Total ÷ 4 = 491 ✓

4) Quadrant Tilt, % = $\left[\frac{\text{Quadrant Sum}}{\text{QAVE}} - 1 \right] \times (100\%)$:

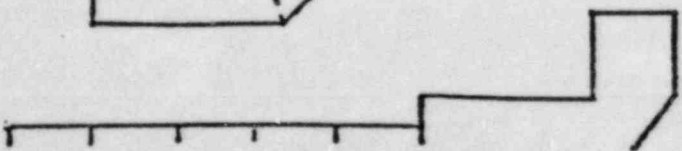
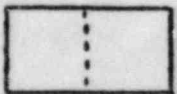
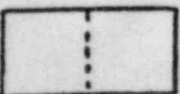
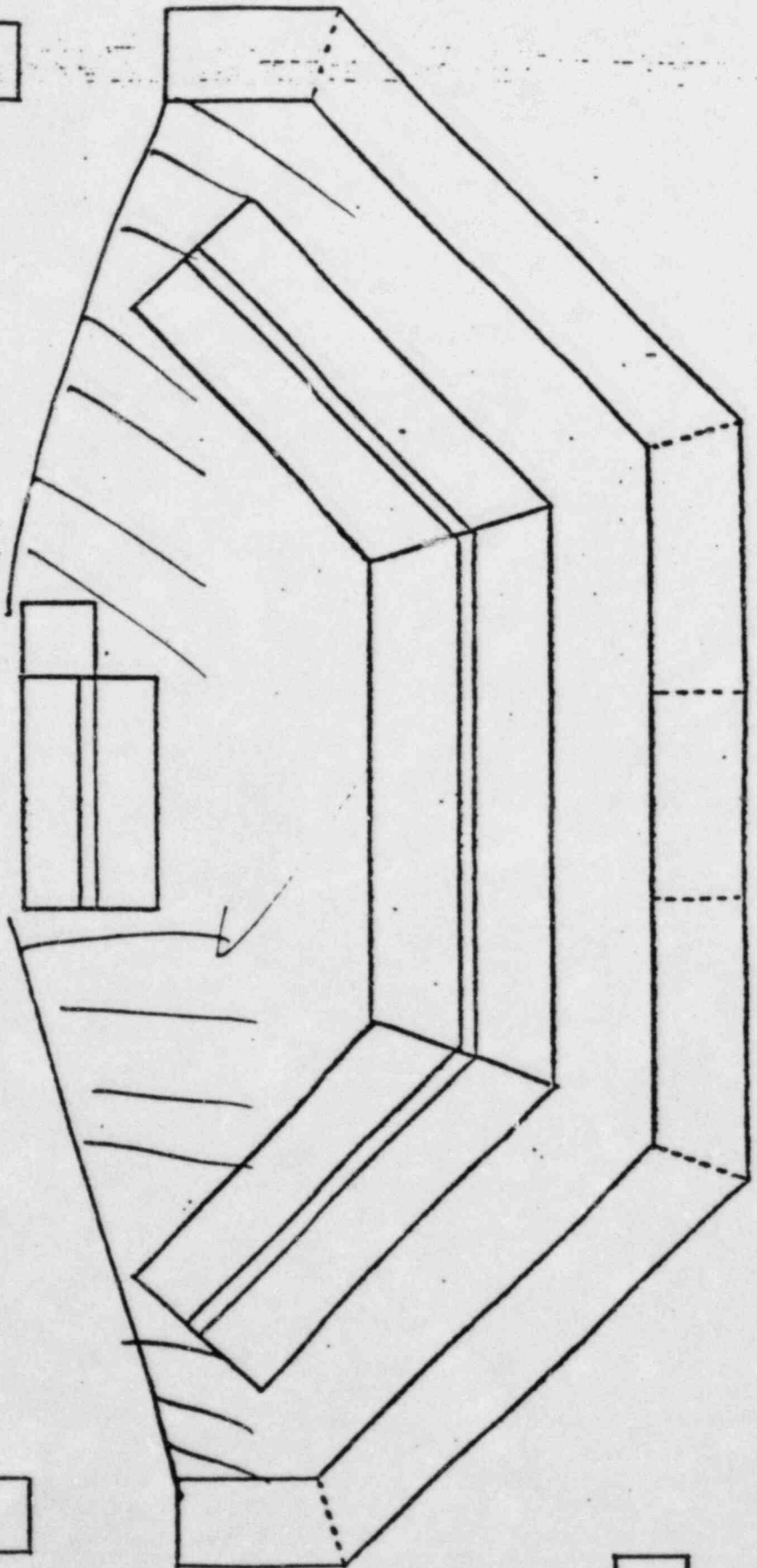
Quadrant 1 XY Tilt = +1.22 %

Quadrant 2 YZ Tilt = +4.07 % ✓

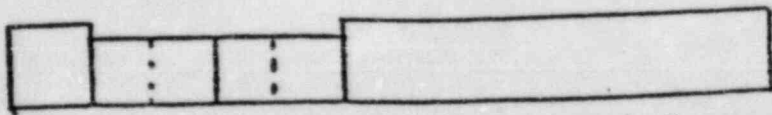
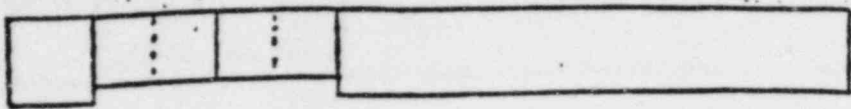
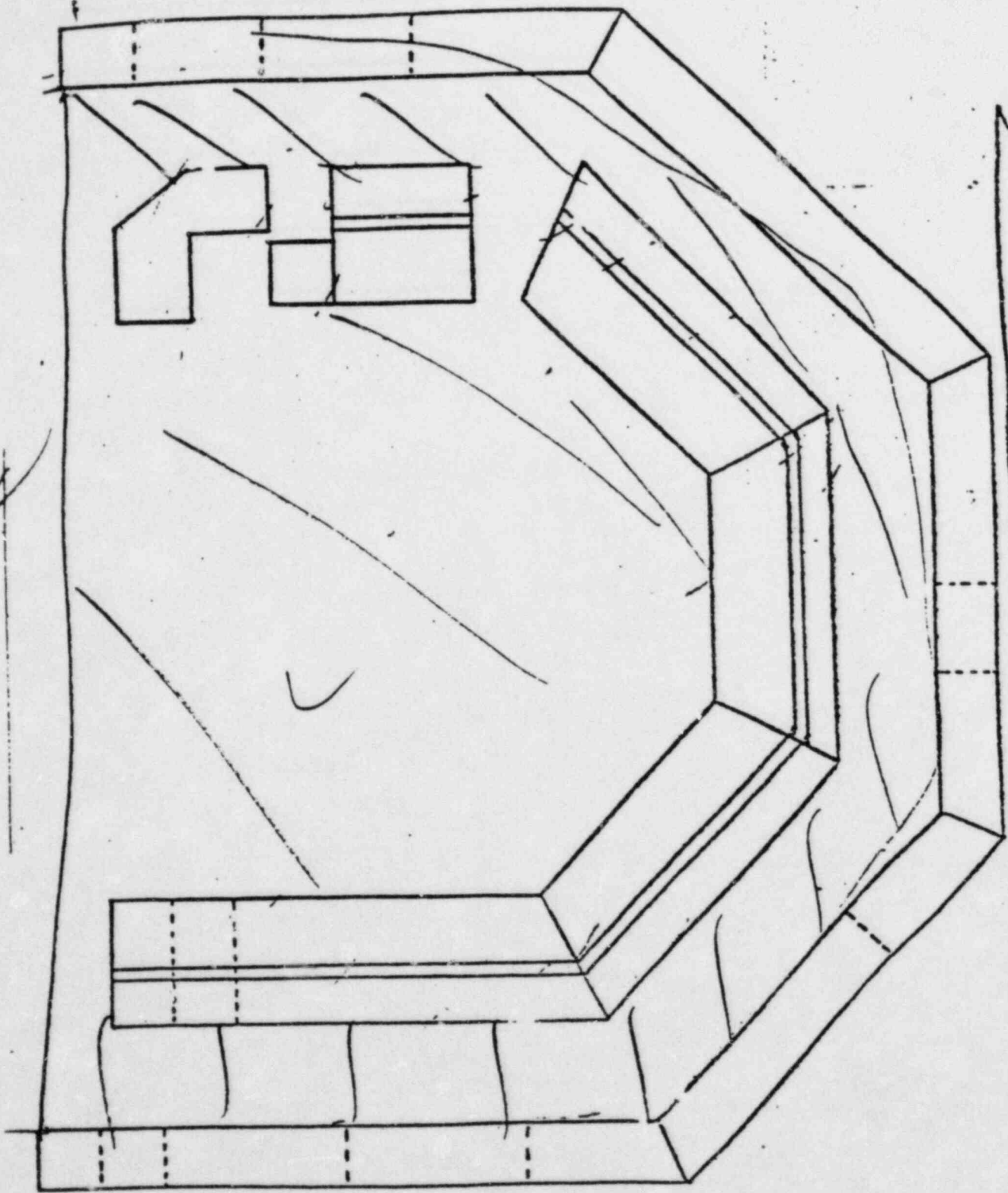
Quadrant 3 ZW Tilt = +1.22 % ✓

Quadrant 4 WX Tilt = +1.62 % ✓

UNIT 1
CONTROL ROOM



3 UNIT & COMMERCIAL ROOMS



- ① Any rod light on CWD panel
 one a main fault, light on P1 panel
 possible, required in 1CS
 overhead alarm
 P.I. panel show rod malfunctions -

UNIT I

- ② a) issue number if applicable
 b) try to move rod
 c) monitor tilt, if > 13.64 reduce power below
 the power level cutoff 2% for each 1%
 tilt > 3.64 .
 d) within 4 hours reduce O/S/F setpoint
 2% for each 1% tilt.

Note - get E.P. out & do follow up
 action

UNIT II

- ③ a) issue number if applicable (0.25)
 b) any 1CS station in bar on the bar of
 applicable
 c) get E.P. out & do follow up action

- ③ Movement without a command, movement is opposite
 direction of command (0.25)

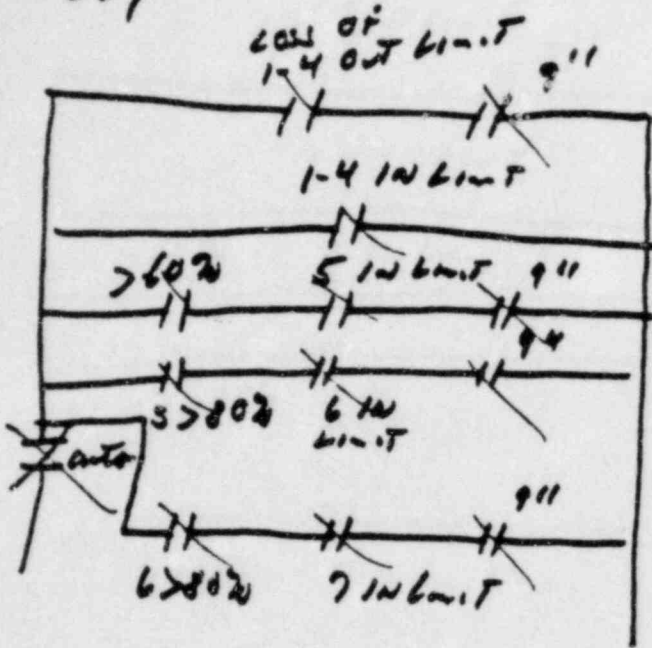
U-I

- ④ a) maintain power at 60%
 b) exercise all rods with bar (0.25)
 c) limit 12% S.D.

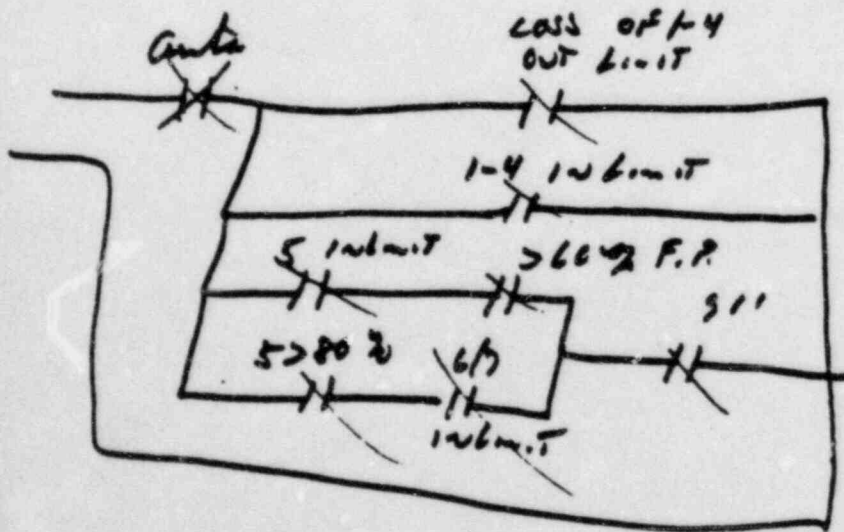
UNIT II

- ④ a) word file & monitor with list
- b) check from a A+0CC plan
- c) test current reading

⑤ U-1



U-II



⑥ See attached

DATE: / /

⑦ 2 engine, a alarm
✓ Check readout a routine check of fuel
✓ Bleed a fuel - pump down. A/G down fuel -
(normal op)

⑧ Try an information tape which tells
the operator that there is something
peculiar with its equipment but that it
may not be out of service.

⑨ be attached

⑩ $\frac{U-I}{3.52} \times 10^{25}$ $\frac{U-II}{S/S} - 1.115$
+ 3.52 \times Fall 1 year - + 2.3
+ 1.90 - " " - + 1.72
+ 1.96 - O.O.C. - + .96

U-I
Reduce power to power level cutoff & the
moreover 2% for each 1% in excess of limit
Below P.L.C. Let it be with 4 h
a) reduce $\phi/\sigma/\tau$ trip returns 2% for each
1% let
b) reduce CRD withdrawal limit &
sub. limits 2% for each 1% let
in excess of limit. Q. Sub. Curve 0.2
U-II

Let within S/S limit with 2 hours a
reduce power including the $\phi/\sigma/\tau$ for the
P.L.C. combination 2% for each 1% let

in spec of S/S limit & which 4 lower
value $\phi/\Delta\phi/F$ and high ϕ try separate 22 for end
190 in spec of S/S limit. (0.4)

- (11) Unit I - one try 2 hr $> 15\%$
Unit II - one try 2 days $> 15\%$ unless monitor is
OK then one 1/2 hr

- Unit I - one 1/2 hr $> 40\%$ F.P.
Unit II - one 1/2 hr $> 40\%$ unless monitor is OK
then one 1 hr

- (12) 360 gpm /

- (13) Unit I
Established feed then normal feed when a startup feed
value at 2" / min

Unit II

One F.F.W. value & established flow at 2" / min
when at 25" go back to normal F.W. flow
path.

- (14) Unit I - 1CESU 280' F.W. Bldg
Unit II - 2-41EA 242EB - 242EB 305 lb. (1.0)

- (15) Red jacket, brown liberation

- (16) See book on + ...

initial 1CS in auto rock string in
S.F. pool a FTC but going up doing study

DEPT. OF COMMERCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Commission

In the Matter of)

METROPOLITAN EDISON COMPANY)

(Three Mile Island Nuclear)
Station, Unit No. 1))

Docket No. 50-289 SP
(Restart-Management
Phase)

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