

LICENSED OPERATOR JOB PERFORMANCE MEASURE

Title: Transfer UPS2A to the Alternate Power Supply Revision: 1

Task Number: 2620140101

Operator: \_\_\_\_\_ (RO/SRO) Evaluator: \_\_\_\_\_

Directions to operators:

When I tell you to begin you are to transfer UPS2A to the ~~alternate~~ power supply through the point of verifying proper output after transfer. I will describe general conditions and provide you access to the tools to complete this task. Before you start, I will state the task standards and initiation cues and answer any questions.

*FB 11/20/90.  
MAINTENANCE*

Evaluation Method: \_\_\_\_\_ Perform \_\_\_\_\_ Simulate

Evaluation Location: \_\_\_\_\_ Plant \_\_\_\_\_ Simulator \_\_\_\_\_ Control Room

Average Completion Time: 10 minutes Actual completion time: \_\_\_\_\_

JPM Overall Rating: Sat/Unsat Questions: # Asked \_\_\_\_\_ # Correct \_\_\_\_\_

Comments: (Note: Any grade of Unsat requires a comment. A JPM overall rating of UNSAT shall be given if any critical step is graded as unsat. If all critical steps are performed satisfactorily and the Task Standards met, a JPM overall rating of SAT shall be given.)

Evaluators Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Approvals: *Stewart 2/14/90*  
Training Supervisor - Unit 2

*R.T. Smith 2/27/90*  
Asst. Supt. Training

*Donlan FOR MJC 2/23/90*  
Supt. of Operations - Unit 2

CONTROLLED DOCUMENT  
02-REQ-PJE-262-2-66-1 February, 1990

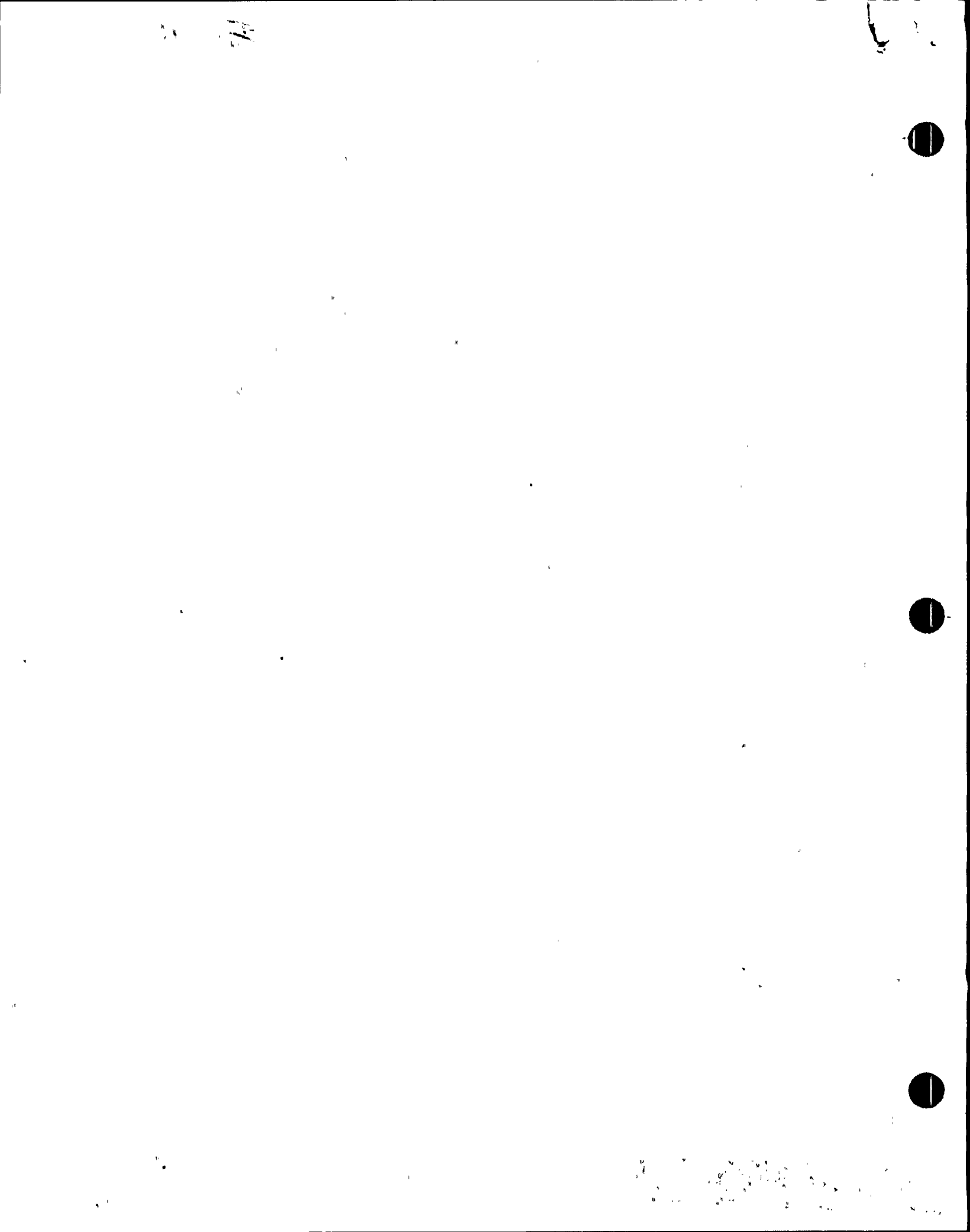
NRCU2/256

Rev. 2

9304290255 911031  
PDR ADDCK 05000410  
S PDR

DOCUMENT

*12  
4/29/255*



K/A Rating: 3.60

Initial (Task) Conditions:

1. UPS2A supplying the critical load
2. The ~~alternate (Bypass)~~ <sup>MAINTENANCE</sup> regulation/transformer is energized  
RJB 11/20/90

General Tools and Equipment:

None

General References:

N2-OP-72, Rev. 4, 12/14/88, "Standby and Emergency A.C. Distribution System", Section H.3.3.a through H.3.3.d

Task Standards:

Perform actions to transfer 2VBA\*UPS2A to the ~~alternate~~ <sup>MAINTENANCE</sup> source in accordance with the applicable procedures.  
RJB 11/20/90

Critical Steps are denoted by (\*):

Note: All steps are non-sequence critical unless noted.

Initiating cues:

You are directed by Shift Supervision to transfer UPS2A to the ~~alternate~~ <sup>MAINTENANCE</sup> power source.  
RJB 11/20/90

Performance Steps	Standard	Sat/Unsat
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Start Time: \_\_\_\_\_

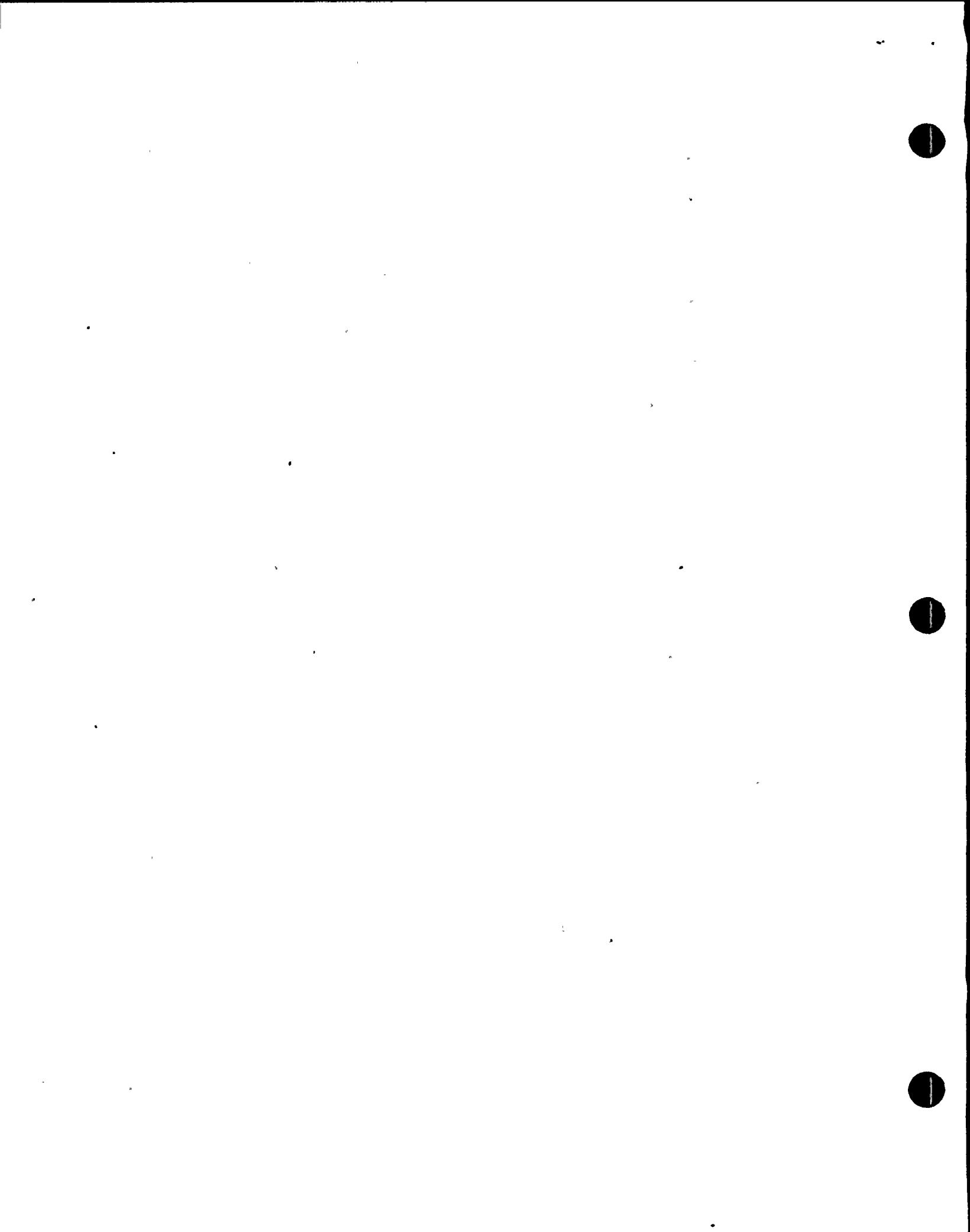
- |                                     |                    |           |
|-------------------------------------|--------------------|-----------|
| 1. Obtain current copy of procedure | Procedure obtained | Sat/Unsat |
|-------------------------------------|--------------------|-----------|



Performance Steps	Standard	Sat/Unsat
2. Verify all applicable precautions and prerequisites	Precautions/Preqs verified	Sat/Unsat
*3. Check <del>"Loss of Synch"</del> lamp is out <del>(Cue: "Loss of Synch" red LED is out)</del> <i>"SYNC LOSS" AB 11/20/90</i>	"Loss of Synch" lamp is out	Sat/Unsat
*4. Push the reverse transfer pushbutton <del>S-101</del> (Cue: Yellow LED next to the "Forward" pushbutton goes out and the red LED next to the "Reverse" pushbutton is illuminated)	Reverse transfer pushbutton <del>S-101</del> depressed <i>AB 11/20/90</i>	Sat/Unsat <i>AB 11/20/90</i>
5. Put <del>switch S-52</del> "AC Voltmeter Select Switch" in the "Output" position <i>AB 11/20/90</i>	<del>Switch S-52</del> in "AC Voltmeter Select Switch" in the "Output" position <i>AB 11/20/90</i>	Sat/Unsat
6. Verify output voltage to be nominally 120V and 60 Hz	Output voltage verified to be approximately 120V and 60 Hz	Sat/Unsat

Terminating Cue: Output voltage verified to be  $\approx$  120V and 60 Hz.

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



QUESTION NUMBER: 02-REQ-PJE-262-2-66-J01

TASK NUMBER: 2620140101

K/A RATING: 3.60

Requal TIF: 3.43

QUESTION:

WHAT POWER SUPPLY IS SUPPLYING POWER TO THE UPS LOADS AT THE COMPLETION OF THE JPM?

ANSWER:

POWER IS BEING SUPPLIED BY ~~ALTERNATE AC~~ <sup>MAINTENANCE</sup> SUPPLY OR 2LAC\*PNL100A.

AB 11/20/90

COMMENTS:

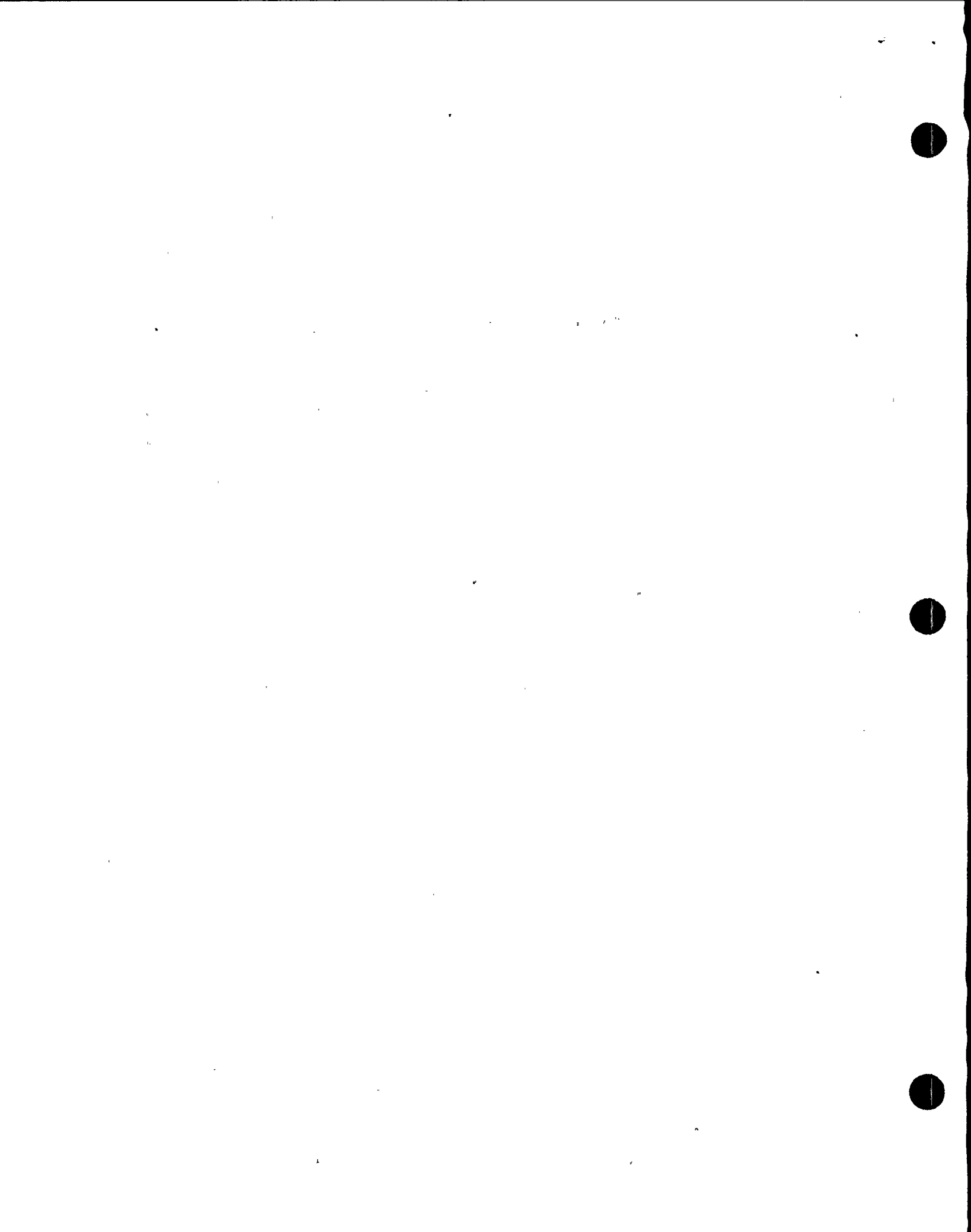
SAT / UNSAT

REFERENCES:

DRAWING 12177-EE-ICB-7

DRAWING 12177-EE-MOIE-5

N2-OP-72, REV. 4, 12/88, "STANDBY & EMERGENCY A.C. DISTRIBUTION SYS" SEC. B.3.5





QUESTION NUMBER: 02-REQ-PJE-262-2-66-J02

TASK NUMBER: 2620140101

K/A RATING: 3.60

Requal TIF: 3.43

QUESTION:

*TAB 11/20/90*

~~IF THE UPS INVERTER IS OPERATING OFF THE NORMAL~~  
IF NORMAL AC SUPPLY TO A UPS INVERTER IS LOST, WHICH POWER SUPPLY WILL THEN  
SUPPLY THE UPS INVERTER? (*INVERTER WAS OPERATING OFF NORMAL AC SUPPLY*)

ANSWER:

*TAB 11/20/90*

THE DC SUPPLY.

COMMENTS:

SAT / UNSAT

REFERENCES:

DRAWING 12177-EE-MOIE-5

N2-OP-72, REV. 4, 12/88, "STANDBY & EMERGENCY A.C. DISTRIBUTION SYS," SEC. B. 3.5



QUESTION NUMBER: 02-REQ-PJE-262-2-66-J03

TASK NUMBER: 2620140101

K/A RATING:

Requal TIF: 3.43

QUESTION:

DURING THE TRANSFER OF THE UPS TO THE ~~ALTERNATE~~ <sup>MAINTENANCE</sup> POWER SOURCE CONTROL ROOM ANNUNCIATOR 852116 "DIV I UPS 2A SYSTEM TROUBLE" ANNUNCIATES. IDENTIFY THE CAUSE OF THIS ANNUNCIATOR DURING THIS ~~EVALUATION~~ <sup>EVOLUTION</sup>.

ANSWER:

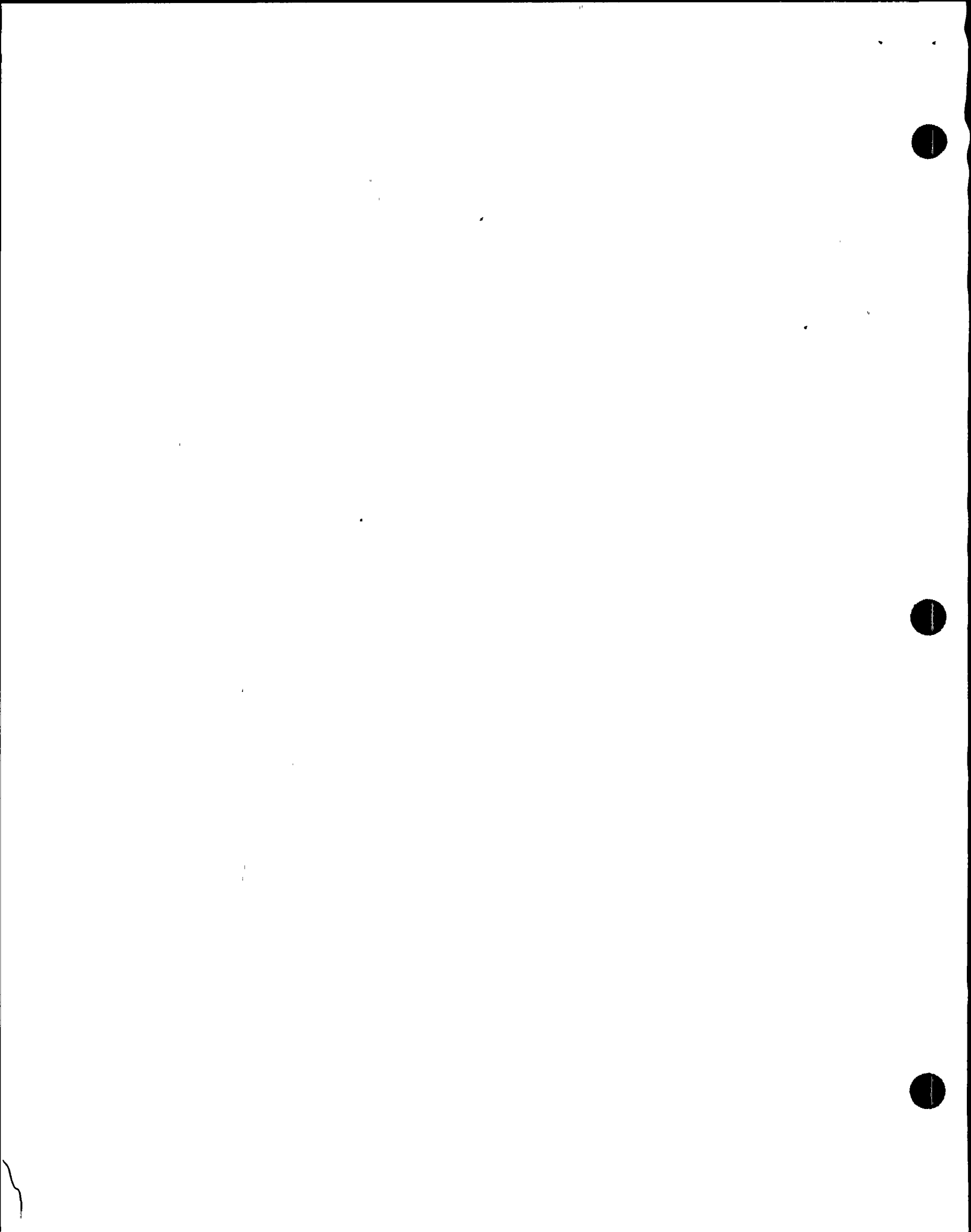
REVERSE TRANSFER (LOAD IS ON ~~ALTERNATE (BYPASS)~~ <sup>MAINTENANCE</sup> SOURCE THROUGH STATIC SWITCH)

COMMENTS:

SAT / UNSAT

REFERENCES:

N2-OP-72, REV. 4, 12/88, "STBY AND EMERG AC DISTRIBUTION", SECT. I.5.1



QUESTION NUMBER: 02-REQ-PJE-262-2-66-J04

TASK NUMBER: 2620140101

K/A RATING:

Requal TIF: 3.43

QUESTION:

WHAT EFFECT WILL A LOSS OF DC POWER TO THE UPS HAVE ON IT'S ABILITY TO SUPPLY CRITICAL LOADS FOLLOWING TRANSFER TO IT'S ALTERNATE POWER SUPPLY, ~~AND WHAT LOCAL INDICATIONS WILL IDENTIFY THIS FAILURE?~~ MAINTENANCE

*RUB 11/20/90*

*RAB 11/20/90*

ANSWER:

THIS FAILURE WILL HAVE NO EFFECT ON THE UPS'S ABILITY TO SUPPLY CRITICAL LOADS. ~~THE "LOW BATTERY" ALARM WILL INITIATE.~~

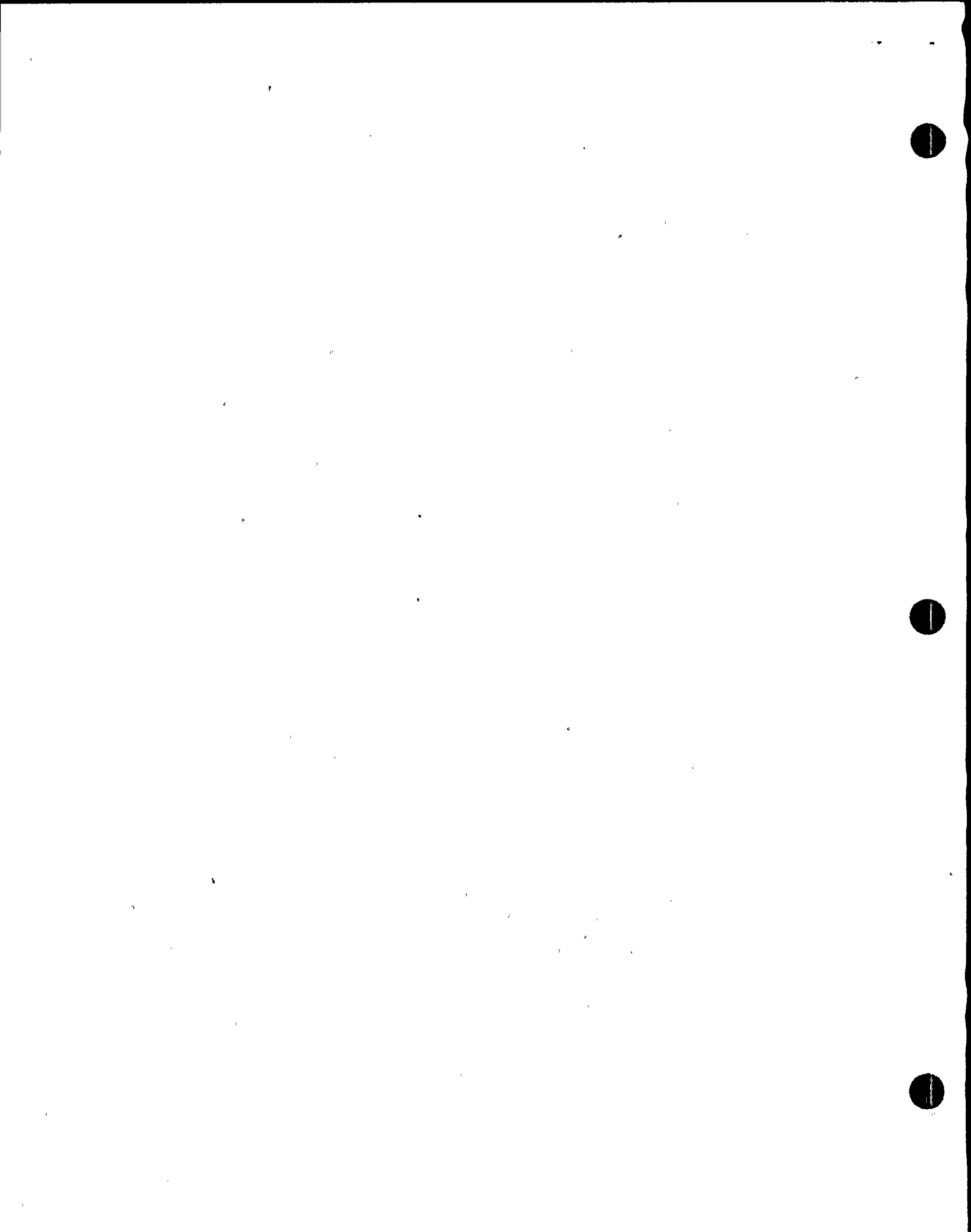
*RAB 11/20/90*

COMMENTS:

SAT / UNSAT

REFERENCES:

N2-OP-72, REV. 4, 12/88, "STBY AND EMERG AC DISTRIBUTION", SECT. H.3.2



# NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # 02-REQ-PJE-262-2-66-J03

You have removed the alternate (bypass) supply to 2VBA\*UPS2A and the UPS is supplying the critical load. What will occur if the UPS trips?

ANSWER The load will be lost.

## K/A REFERENCE

262002 - UNINTERRUPTABLE POWER SUPPLY (AC/DC)

K 4.01

APPLICABILITY RO&SRO

IMPORTANCE 3.1/3.4

Knowledge of uninterruptable power supply (AC/DC) design features and interlocks which provide for transfer from preferred power to alternate power supplies.

## NMP2 REFERENCES

N2-OP-72; Standby and Emergency A.C. Distribution System; Page 24; Item H.3.4.I Note; REV 4

LESSON PLAN 02-REQ-001-262-2-02

OBJECTIVE EO-8.0.d

## NETS COMMENTS

New question.

REVALIDATE (Y/N)? Y

AUTHOR - Collins

REVIEWER -





# NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

QUESTION # 02-REQ-PJE-262-2-66-J04	
UPS 2VBA*UPS2A has been shutdown for maintenance. When the normal AC input circuit breaker is closed, what are the indications that the UPS is operating?	
ANSWER	DC rectifier volts increase to 140V DC and there is an audible increase in noise level.

K/A REFERENCE		
262002 - UNINTERRUPTABLE POWER SUPPLY (AC/DC)		
SG 09	APPLICABILITY RO&SRO	IMPORTANCE 3.2/3.4
Ability to locate and operate components, including local controls.		

NMP2 REFERENCES	
N2-OP-72; Standby and Emergency A.C. Distribution Systems; Page 17; Item E.15.i; REV 4	
LESSON PLAN 02-REQ-001-262-2-02	OBJECTIVE EO-8.0.a

NETS COMMENTS		
New question.		
REVALIDATE (Y/N)? Y	AUTHOR - Collins	REVIEWER -



# NINE MILE POINT - UNIT 2 - REQUAL EXAMBANK - PART J

**QUESTION # 02-REQ-PJE-262-2-66-J05**

The manual switch for UPS 2VBA\*UPS2B is in the UPS position. The load is being supplied by bypass power through the static switch. To transfer load to the inverter:

- a. What check is made before the load is transferred?
- b. What action causes the transfer?

<b>ANSWER</b>	<ul style="list-style-type: none"> <li>a. Verify the loss of sync light is out.</li> <li>b. Push the Static Switch Inverter Transfer pushbutton, S102.</li> </ul>
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**K/A REFERENCE**

262002 - UNINTERRUPTABLE POWER SUPPLY (AC/DC)

SG 09	APPLICABILITY RO&SRO	IMPORTANCE 3.2/3.4
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Ability to locate and operate components, including local controls.

**NMP2 REFERENCES**

N2-OP-72; Standby and Emergency A.C. Distribution Systems; Page 19; Item E.17.s; REV 4

LESSON PLAN 02-REQ-001-262-2-02	OBJECTIVE EO-8.0.a
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**NETS COMMENTS**

New question.

REVALIDATE (Y/N)? Y	AUTHOR - Collins	REVIEWER -
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ATTACHMENT 3: LESSON PLAN TEMPORARY/PUBLICATION CHANGE FORM

The attached change was made to:

Lesson plan title: Transfer UPS 2A to the Alternate Power Supply

Lesson plan number: 02-REQ-PJE-262-2-66

Name of instructor initiating change: J. COBB

Reason for the change: Conform with procedure TCN ("alternate/bypass" is always referred to as "maintenance"). Conform JPM guide to front panel indications. Simplification of one question.

Type of change: Temporary change  Publication change

Disposition:

- 1. Incorporate this change during the next scheduled revision. The change does not alter the intent of the lesson plan.
- 2. Begin revising the lesson plan immediately. Supervisor initiate the process.

Approvals:

Instructor: [Signature] /Date 11-20-90  
Senior Instructor: [Signature] /Date 11/20/90  
Supervisor: [Signature] /Date 11/20/90

