

07.763-91

NY NIAGARA MOHAWK

NINE MILE POINT NUCLEAR STATION
SITE LICENSING DEPT.
AREA COMPLEX UNIT 2
P.O. BOX 32
LYCOMING, NY 13093

FAX COVER LETTER

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: FRANK ASHE

FAX PHONE NO.: 9-1-301-492-5031

COMPANY/AGENCY: NRC/IIIT

*2nd 1/2 of response to Q#1 of 8/6/91
FLUKE meter. - data.*

FROM:

NAME: ALEX PINTER

Telephone No. 315-349-4621

NUMBER OF PAGES: 10 (INCLUDING COVER SHEET)

DATE: 9/7/91

TIME: 1:50 A.M.
P.M.

IF YOU DO NOT RECEIVE ALL THE PAGES OR THERE IS A PROBLEM WITH THE TRANSMISSION, PLEASE CALL:

THE SITE LICENSING DEPARTMENT AT (315) 49-7479

9305070031 911031
PDR ADOCK 05000410
S PDR

9305070031

Handwritten marks and scribbles in the top right corner.

1957
1000

Mr. ASHE.

Response / data requests from your Questions
of 9/5/91 13:48 hours.

① a. Oscilloscope cal data sent 12:00 hrs. Noon.
9/7/91

b. Perry Burtch - user of the Digital
Volt meter - in Germany —

• unable to ascertain from records
what FLUKE METER WAS USED.

• Checked work request computerized
log to see what MITE equip
might have been used. — unable.
because Meter & Test Equipment
only used / recorded on work
Requests (WR) when Acceptance
testing is being performed.

However we know he either had a
FLUKE 8060A or 8062A meter out.

These are cal. on 6mo. intervals.

Specs for these attached, as well
as 2 pg of WR's for which he might
have used them - but unable to
tell which one of the 80 were used.

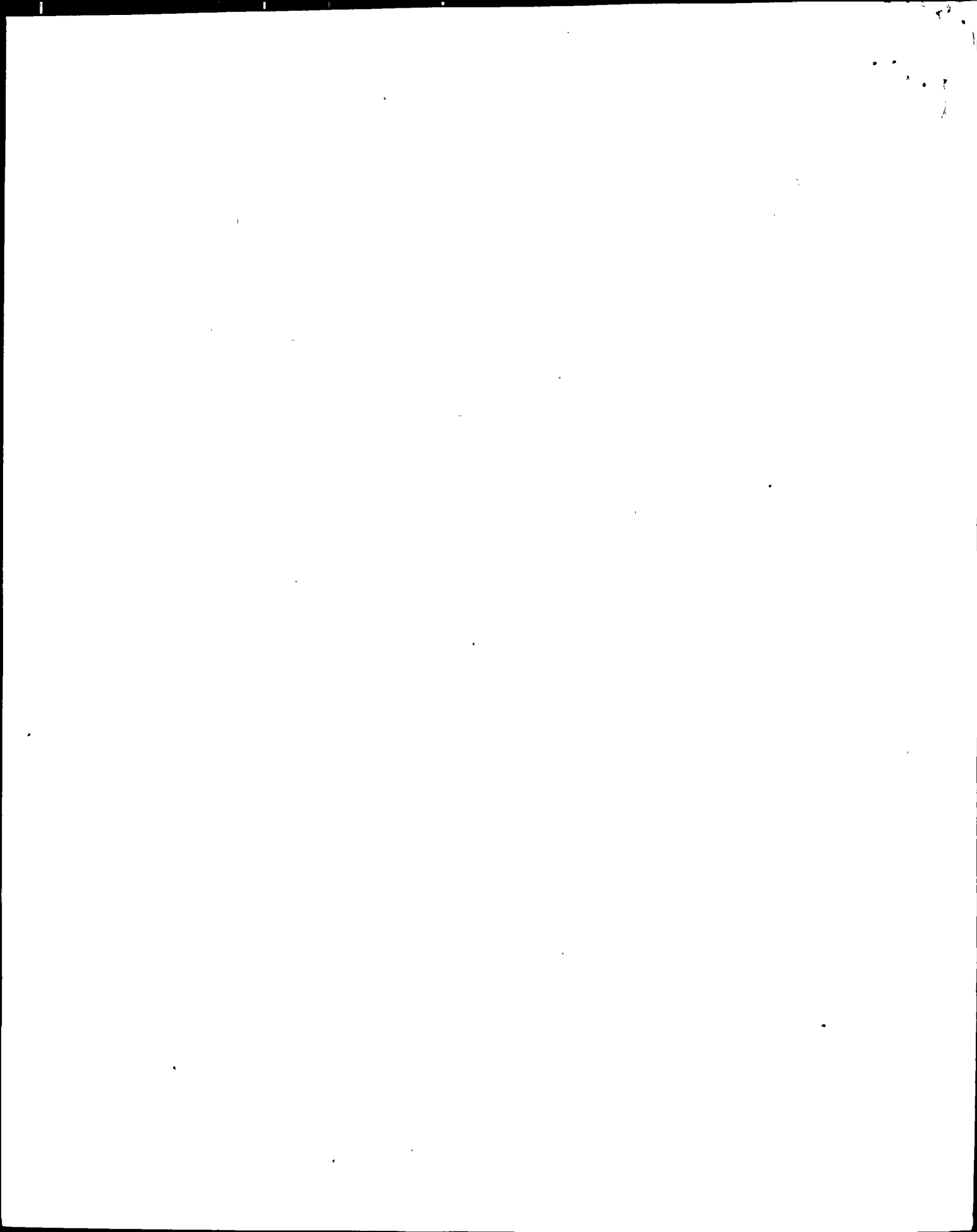
They get turned in regularly to
the issue station. (1 week in max which
they can have them out.)

②. Anil Jukta is responding - probably
by 9/9/91 - if we have the
data —

1000

③ JOHN CONWAY / CRANDALL responded.
"We do not have this data - we don't know we did not have measurements of this data to determine."

④ JOHN CONWAY -
"We cannot respond to response times." - NOT AVAILABLE.



Handwritten initials/signature

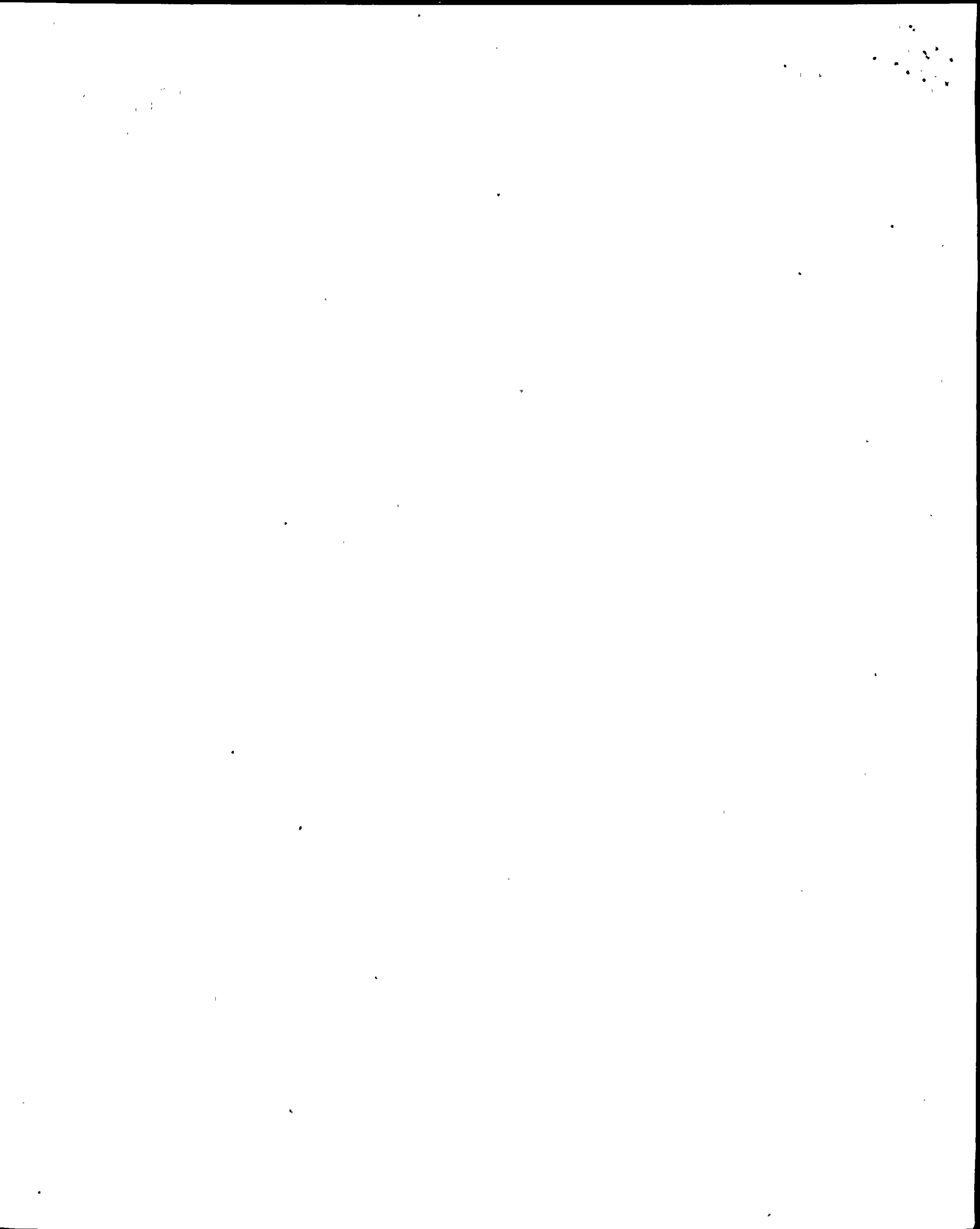
Supervisor Review Date: 910831
 QC Work Accepted by: QUEEN S
 Option? (NL, Hn, D, DP, SR, RD, RV, S, Q, ?)
 Display of Work Item Data
 QC Work Accept date: 910813
 PMT Test Rpt: Y
 Acceptance date: 910901
 Plan LO: 910902
 Lead/Supprt Dpt: 300, 100
 Completion Entry Date: 910902

Option? (NL, Hn, D, DP, SR, RD, RV, S, Q, ?)
 Display of Work Item Data

HIT: 292
 Work No: W162319
 Issued: 910813
 Depart: 100
 Status: V
 Lead or Supprt: S
 WCC Status: 99
 Unit: 2
 Component No: 2VBB-UPS1A
 System No: VBB
 BIP No: 071B, 075
 Safety Class: NSR
 ASME Component: N
 Title: NORMAL AC LOW VOLT DIST TR A INST/CONT UPS
 Work Item Description: WHEN RESTARTING UNIT BREAKER 1 ON PANEL 301 TRIPS. POSSIBLE FAULT IN RECTIFIER SECTION. TROUBLESHOOT
 Location: NTR, 237, AK, 008. 50
 NPRDS Failcode: C
 Originator: ADAMS W
 Approved by: MCANDREW J
 Approval date: 910813
 Received By: GANOUNG S

Option? (NL, Hn, D, DP, SR, RD, RV, S, Q, ?)
 Display of Work Item Data

HIT: 291
 Work No: W195024
 Issued: 910831
 Depart: 100
 Status: C
 Lead or Supprt: L
 WCC Status: 100
 Unit: 2
 Component No: 2VBB-PNL301-2
 System No: VBB
 BIP No: 071B, 075
 Safety Class: NSR
 ASME Component: N
 Title: POWER TO : 2VBB-UPS1B CABLE NO 2VBBANL201
 Work Item Description: CHANGE BREAKER TRIP SETTING FROM LO TO 3 PER EDC 2E10363A AND SDC SC2-0039-90
 Location: NTR, 237,
 Originator: CRANDALL B
 Approved by: MURRAY R
 Approval date: 910831
 Received By: GIBSON R
 Rcvd By Dt: 910831
 Option? (NL, Hn, D, DP, SR, RD, RV, S, Q, ?)



CONTROLLED 440-

JOHN FLUKE MFG., CO.

DOCNO: 8062A
ACCESS: 023823152

8062A DIGITAL MULTIMETER, INSTRUCTION
MANUAL

PLEASE NOTE !!!

THIS MANUAL BELONGS TO THE M & TE
DEPARTMENT, IF BORROWED, REMOVED
OR FOUND, RETURN TO UNIT 2 M& TE.

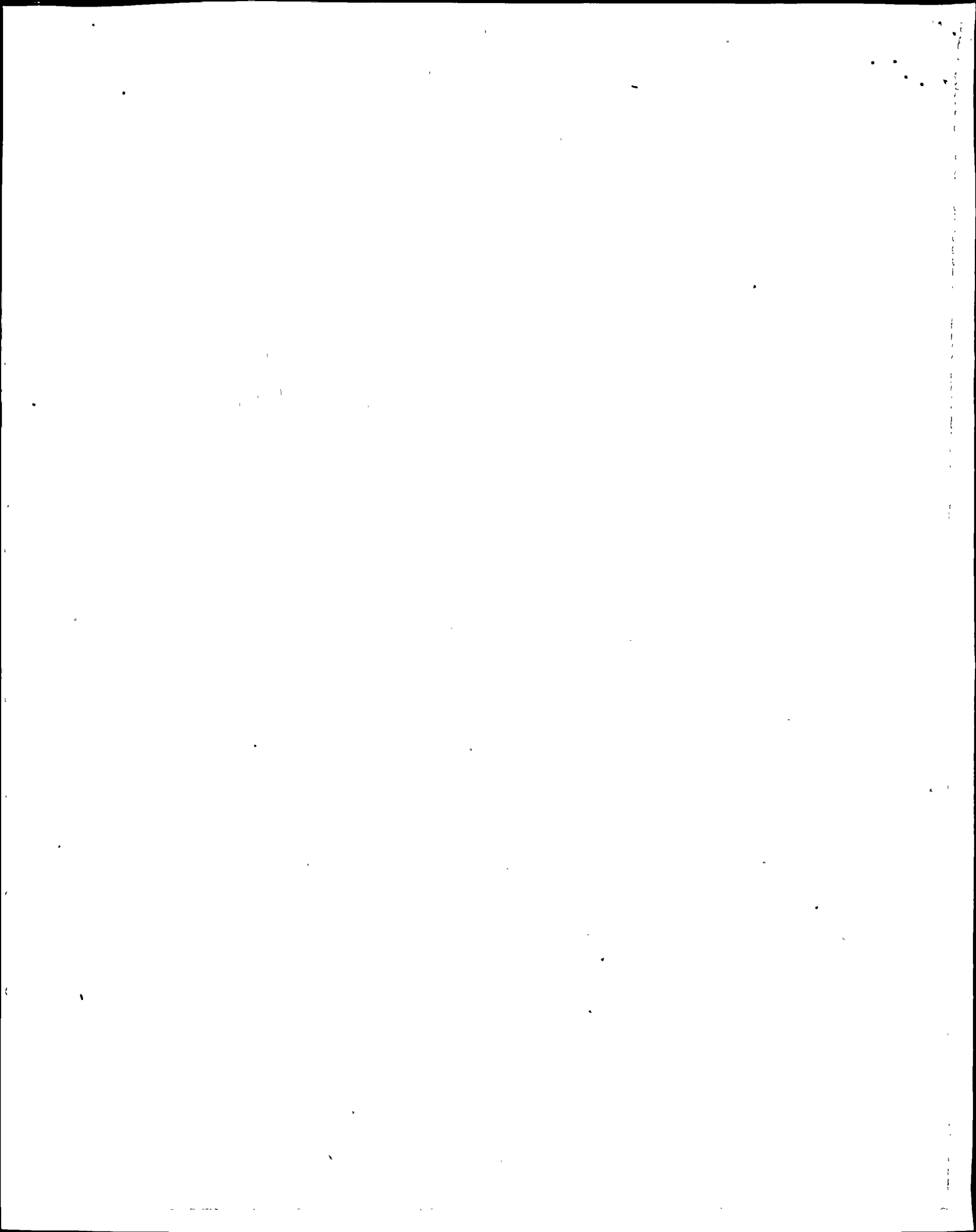


Table 1-2. 8062A Specifications

ELECTRICAL

The following specifications are based on a one-year calibration cycle, an operating temperature of 18 to 28°C (64 to 82°F) and a relative humidity not exceeding 90%.

DC Voltage

RANGE	RESOLUTION	ACCURACY ±(% of reading - no. of digits)
200 mV 2 V	.01 mV 1 mV	0.05% + 2
20 V 200 V 1000 V	1 mV 10 mV 100 mV	0.07% - 2

RESPONSE TIME 1 second maximum, to rated accuracy within selected range.

INPUT IMPEDANCE 10 MΩ shunted by <100 pF

NORMAL MODE NOISE

REJECTION >60 dB at 50 Hz or 60 Hz

COMMON MODE NOISE

REJECTION >120 dB at dc, >90 dB at 50 Hz and 60 Hz (1 kΩ imbalance)

OVERLOAD

PROTECTION 1000V dc or peak ac continuous, except 20 seconds maximum on 200 mV and 2V ranges above 300V dc or rms.

DC Voltage, High Impedance Mode

All specifications are the same as for the dc voltage mode except the following (only 200 mV and 2V ranges are available):

RANGE	RESOLUTION	ACCURACY ±(% of reading - no. of digits)
200 mV 2V	.01 mV .1 mV	0.06% + 2

INPUT IMPEDANCE >1000 MΩ, typically >10,000 MΩ

OVERLOAD

PROTECTION 300V dc or rms continuous, 20 seconds maximum 300V to 1000V dc or peak ac.

Internal

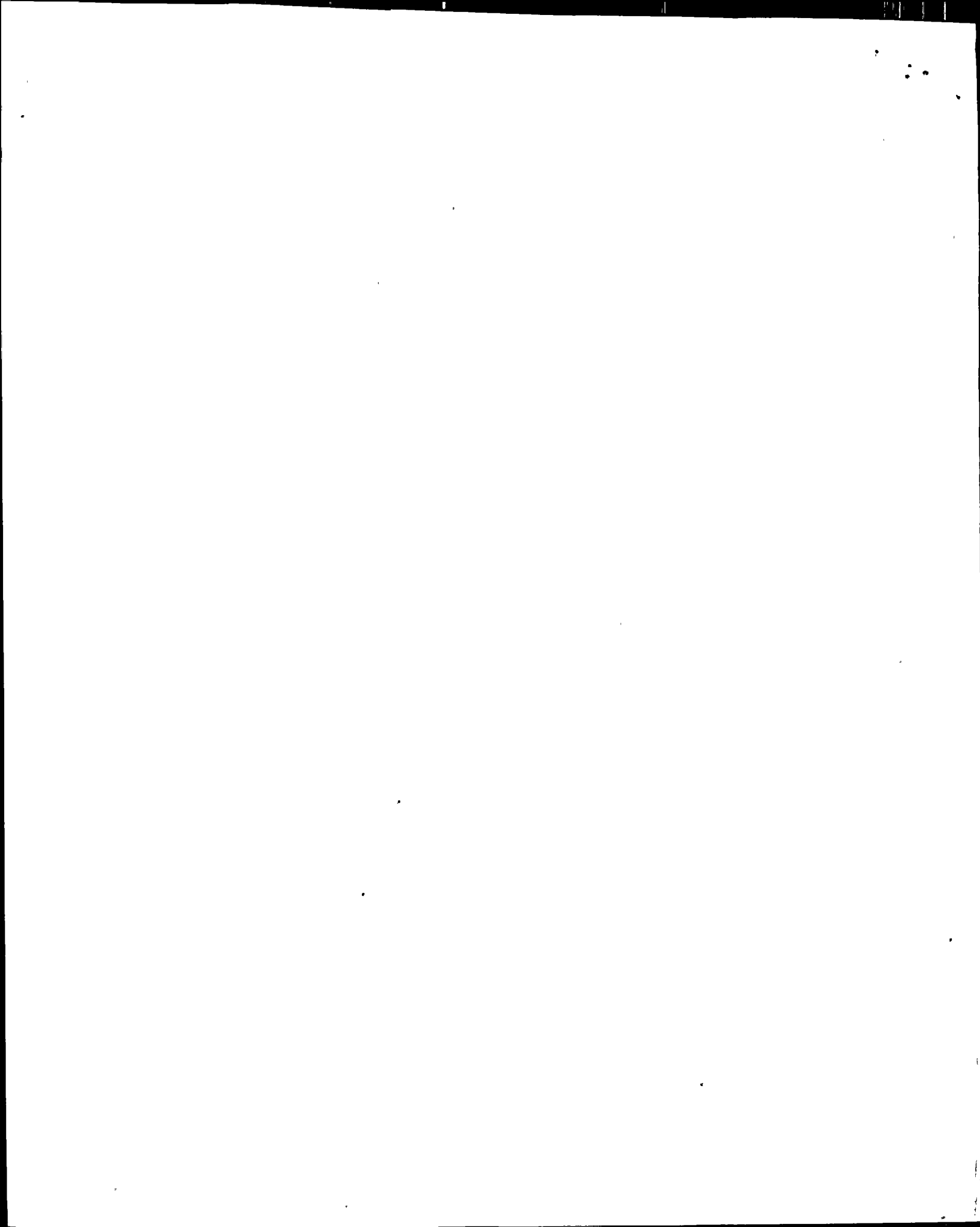
kaline

e low
of the

attery

062A.

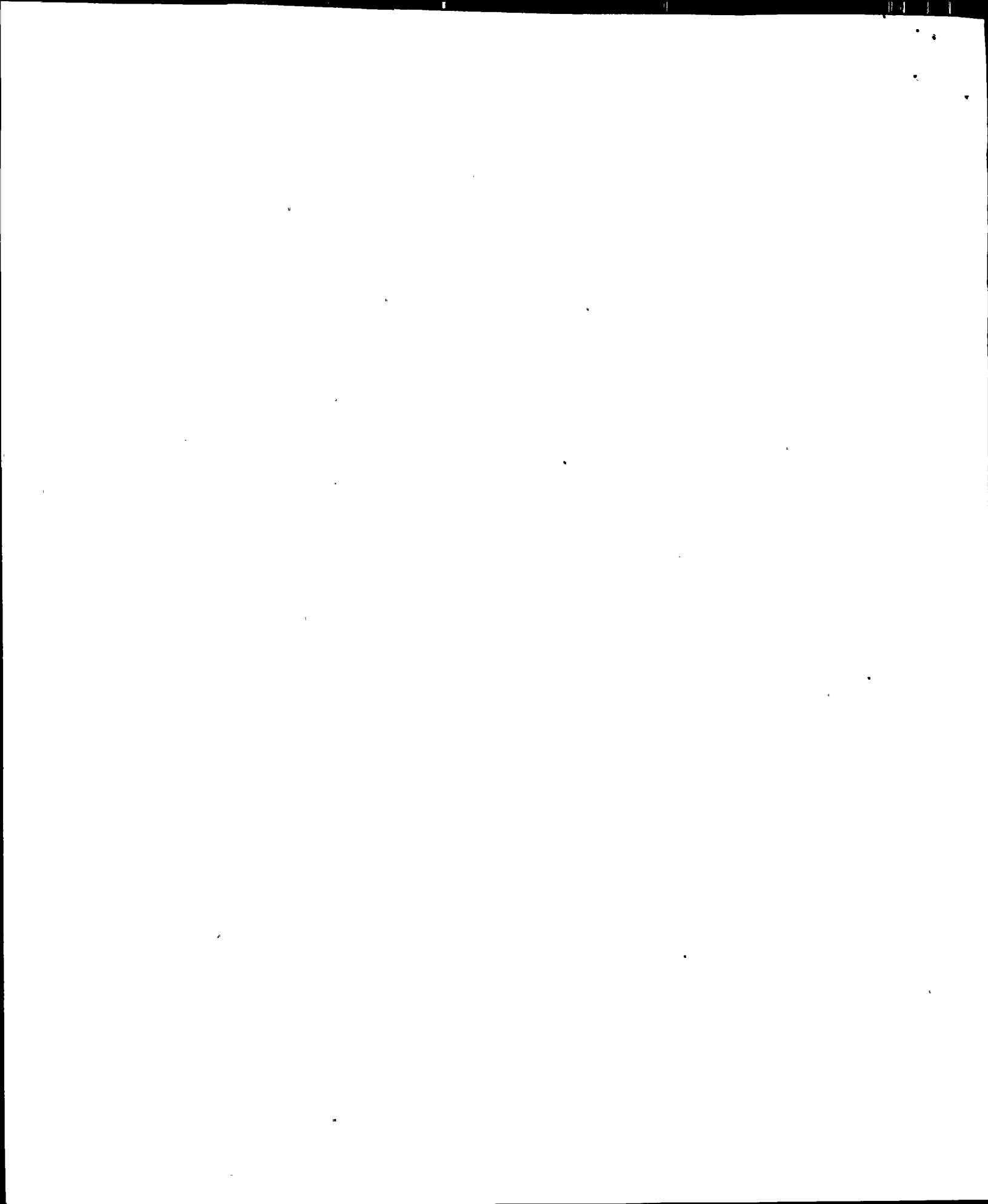
3172
02102



Digital Multimeter

Instruction Manual

FLUKE



loads and transients up to 6 kV

from a/d conversion to ensure noise-free

resistance range (to 300 MΩ), as well as four fixed 200Ω to 200 kΩ.

CONVENIENCE:

Stable Display.

Self-test routines for quick verification of operation.

Operation can be expected from a 9V alkaline

automatically detected and displayed. The low appears on the display when about 20% of the

is possible using a Fluke Model 881 Battery Station 7 for a description).

is available to enhance the capabilities of the meter listed in Table 1-1 and described in Section 7.

Options are listed in Table 1-2.

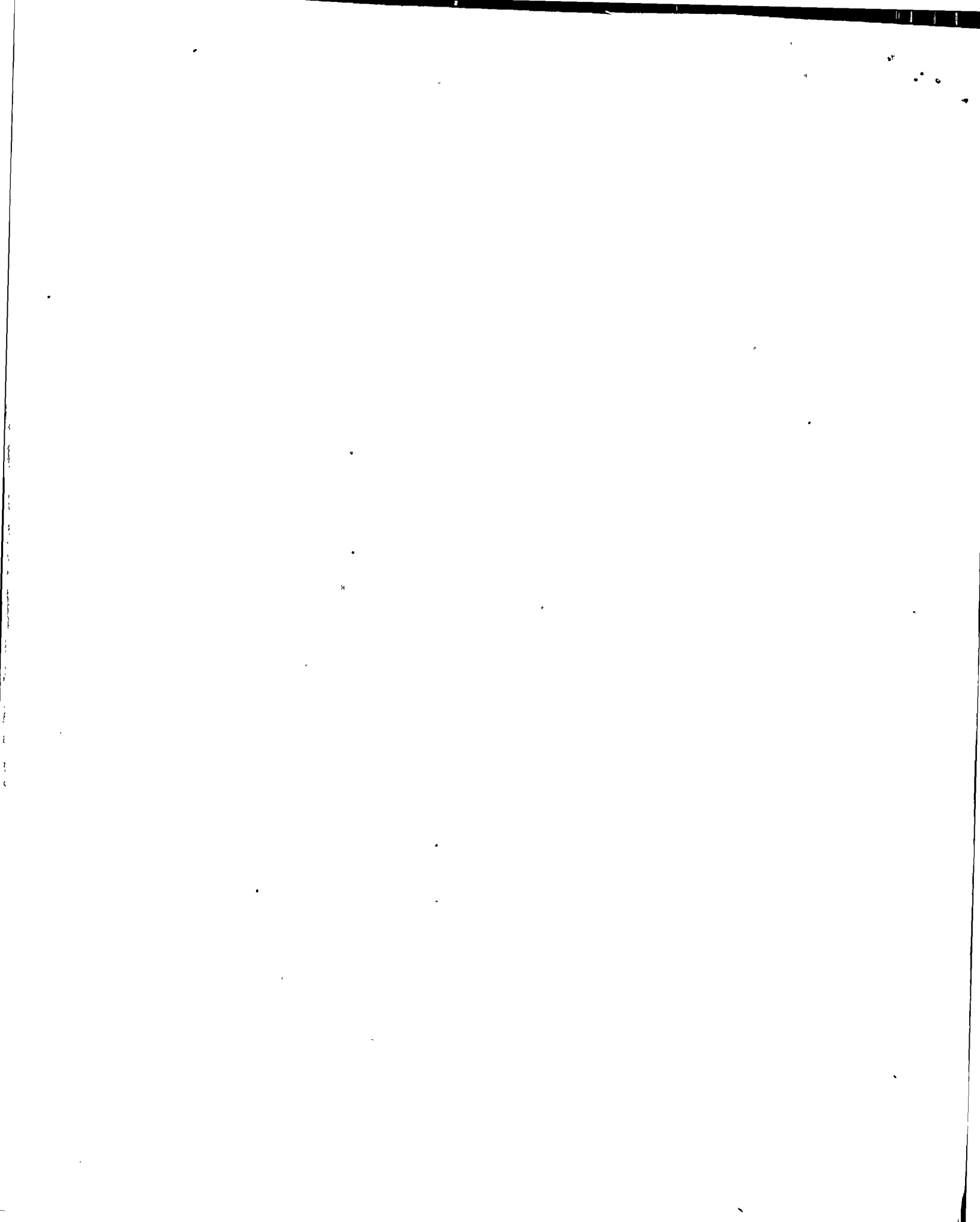
Table 1-1. 8060A Accessories

DESCRIPTION
Battery Eliminator
Vinyl Carrying Case
Temperature Probe °C
Temperature Probe °F
Current Transformer 2" jaws
High Voltage Probe (6 kV)
High Voltage Probe (40 kV)
Current Shunt
High Frequency Probe (100 MHz)
High Frequency Probe (500 MHz)

and phono adapters are also available as accessories in Section 7.

Table 1-2. 8060A Specifications

ELECTRICAL		
The following specifications are based on a one-year calibration cycle, an operating temperature of 18 to 28°C (64 to 82°F) and a relative humidity not exceeding 80%.		
DC Voltage		
RANGE	RESOLUTION	ACCURACY ±(% of reading - no. of digits)
200 mV 2 V	01 mV 1 mV	0.04% - 2
20 V 200 V 1000 V	1 mV 10 mV 100 mV	0.05% - 2
RESPONSE TIME 1 second maximum (to rated accuracy within selected range)		
INPUT IMPEDANCE 10 MΩ nominal		
NORMAL MODE NOISE REJECTION 60 db at 50 Hz or 60 Hz		
COMMON MODE NOISE REJECTION 120 dB at dc, 90 dB at 50 Hz and 60 Hz (1 kΩ imbalance)		
OVERLOAD PROTECTION 1000V dc or peak ac continuous, except 20 seconds maximum on 200 mV and 2V ranges above 300V dc or rms.		
DC Voltage, High Impedance Mode		
All specifications are the same as for the dc voltage mode except the following (only 200 mV and 2V ranges are available):		
RANGE	RESOLUTION	ACCURACY ± (% of reading - no. of digits)
200 mV 2 V	01 mV 1 mV	0.05% - 2
INPUT IMPEDANCE 10 000 MΩ, typically 80,000 MΩ		
OVERLOAD PROTECTION 300V dc or rms continuous, 20 seconds maximum 300V to 1000V dc or peak ac.		



SEP - 6 RECD A. PINTER
IT F. ASK.

I. List of Additional Needs - (From Utility)

① ^{50kva} Latest calibration dates for the Scriba Substation Oscillograph recording equipment, the Oscilloscope (Sony Techtronics) and Digital Voltmeter used for Exide UPS testing activities. In addition, provide rated specifications (such as, response times, accuracies, ranges, etc.) for this equipment.

Probably at 80-60A
Flukes 8062A

② Provide voltage profiles for the normal and alternate sources to UPS 2A and 2B during faulted conditions - (similar to that provided for UPS 1A, 1B, 1C, 1D, 1G).

This is the normal...
same as Jim's request
Stoner's of 9-5

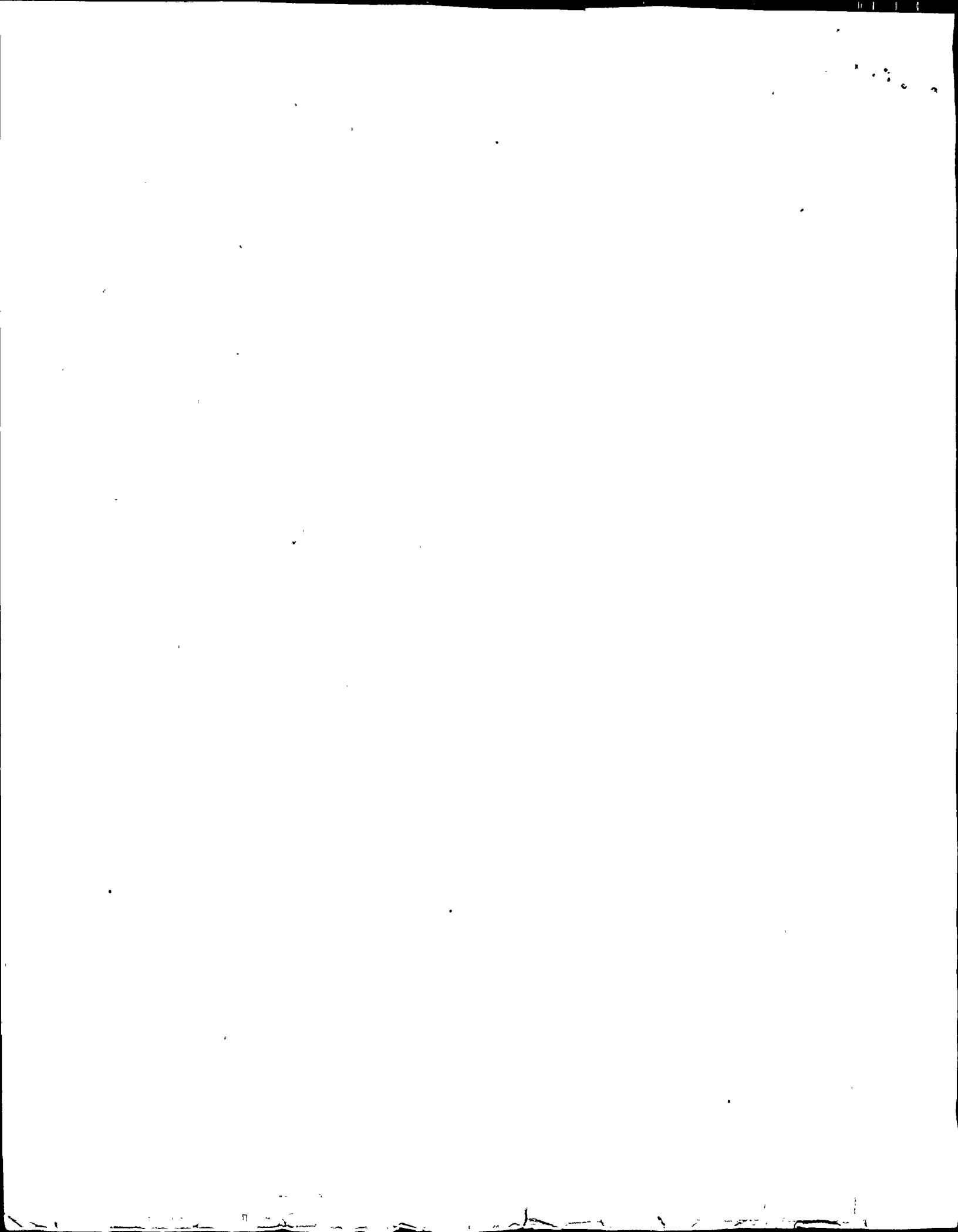
③ Trip signal current (in amperes) required to open each of the Exide UPS (75kva units) breakers (that is, breakers CB-1, CB-2, and CB-3).

did not
know
didn't
definit

④ Actuation response times for relays K1, K2, and K3 on the A27 board in the 5 Exide UPS units.

can't
reply

may or may not be available



CONVERSATION: FRANK ASKE

12:30

9/6/91

BOB CRANDALL

ASKE: WHAT IS RESPONSE TIME OF K-5 ON DROP OUT?

CRANDALL: OUR TEST DID NOT PROVIDE DROP OUT

TIME OR SETPOINT. IT PROVIDED RESULT

DROP OUT AT 450V LOGIC FAIL AT 25VAC

ONLY. INTERRUPTION OF 100-200 MSEC WILL

CAUSE TRIP. TOTAL LOSS WILL NOT.

ASKE: WHERE IS SENSING & COMPLETE CIRCUIT SENSING

CRANDALL: SENSING IS AFTER INVERTER BEFORE CB-3

AND AFTER REGULATOR BUT BEFORE CB-4

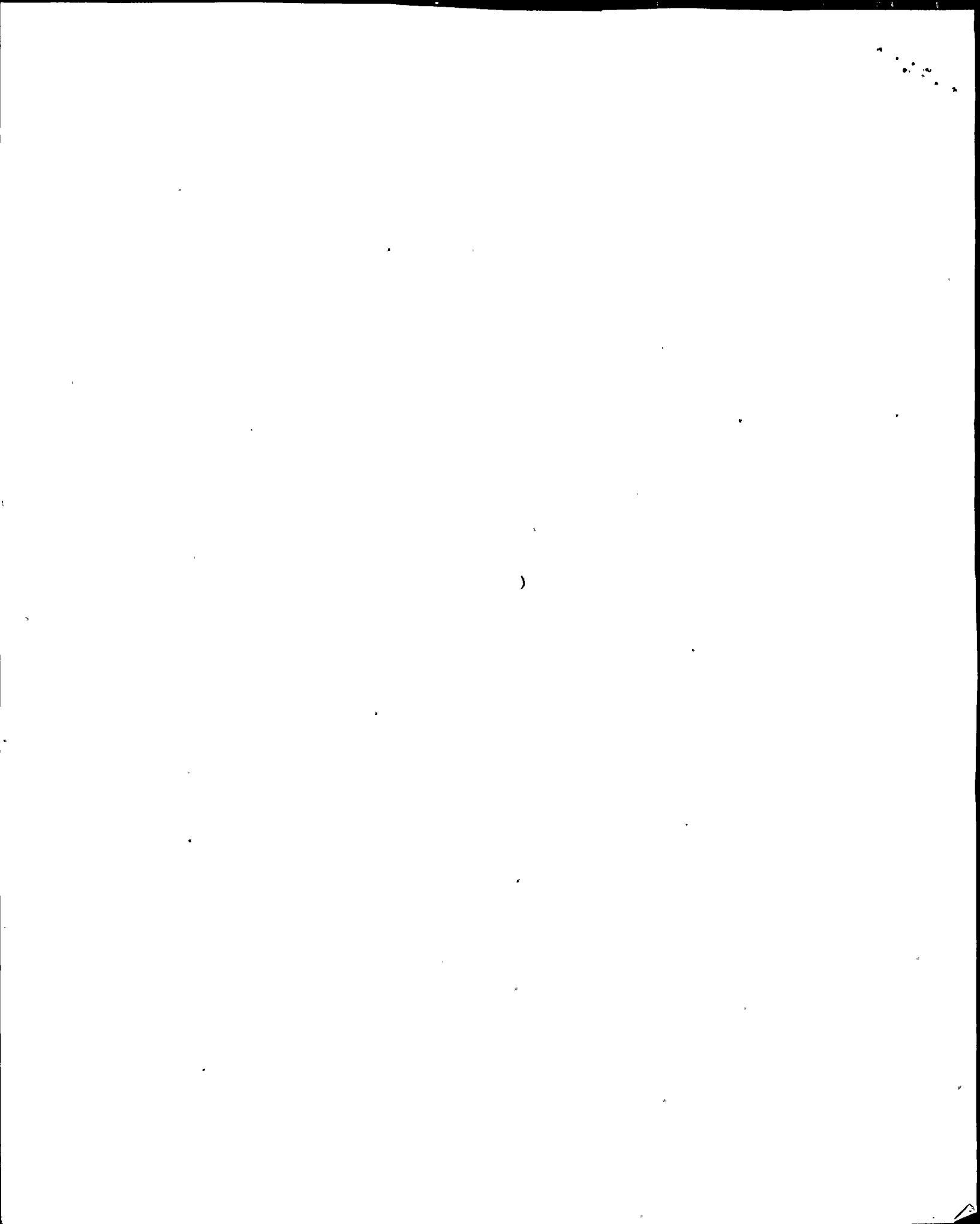
INSIDE UPS BOX.

ASKE: WHAT PHASE IS SENSED

CRANDALL: A-PHASE TO A-PHASE

B-PHASE TO B-PHASE

C-PHASE TO C-PHASE.



SUBJECT _____

DATE _____

INDEX OR FILE NO. _____

PREPARED BY _____

CHECKED BY _____

On 9/5 Jose Ibara called + asked whether power was lost to the drive motors for SRMs + IRMs during the event. I had sys. engr. look up power supplies to SRMs + IRMs drive motors and control circuits. Results are all power supplies are from non safety related AC power (not from UPS unit). I communicated these results to Jose later in the day and made it clear that power was not lost to the subject equipment during the event.

John Conway

