

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION UNIT 2
ELECTRICAL PREVENTIVE MAINTENANCE PROCEDURE

MASTER
07-195-01

N2-EPM-GEN-D690

REVISION 00

PROC. ID P _____
EPM _____
ASSIGNED TO _____
ASSOC. EQUIP. _____

OUTDOOR TRANSFORMER, SWITCHYARD AND MANHOLE CHECKS

THIS PROCEDURE WILL IMPACT SAFETY RELATED COMPONENTS

FOR INFO. ONLY

Approved By:
R. B. Abbott for
J. L. Willis

RB Abbott
General Superintendent, Nuclear Generation
Date 10/14/89

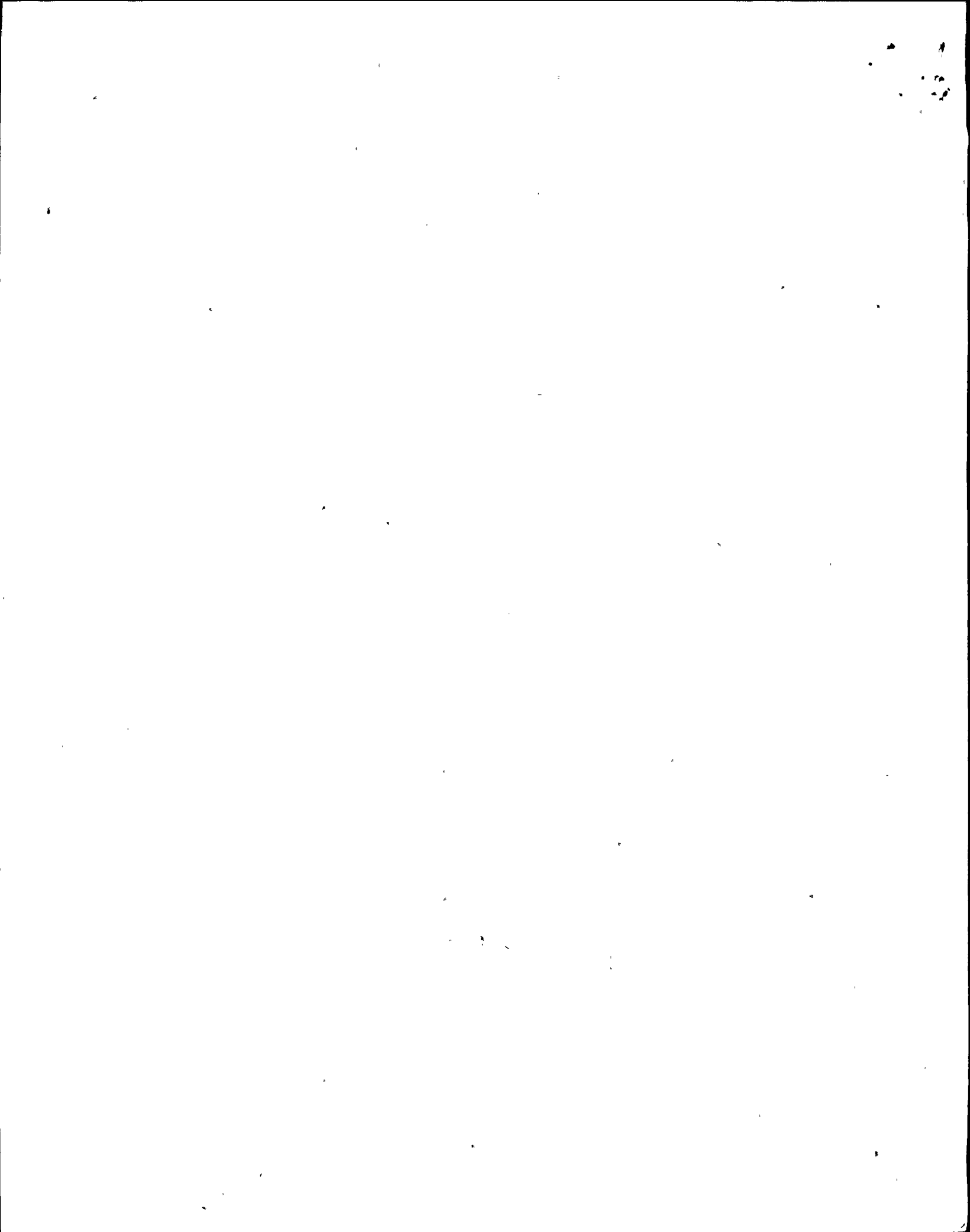
THIS PROCEDURE SUPERSEDES ALL REVISIONS TO N2-EPM-GEN-D690

Effective Date: 10/19/89

NOT TO BE USED AFTER October 1991
SUBJECT TO PERIODIC REVIEW

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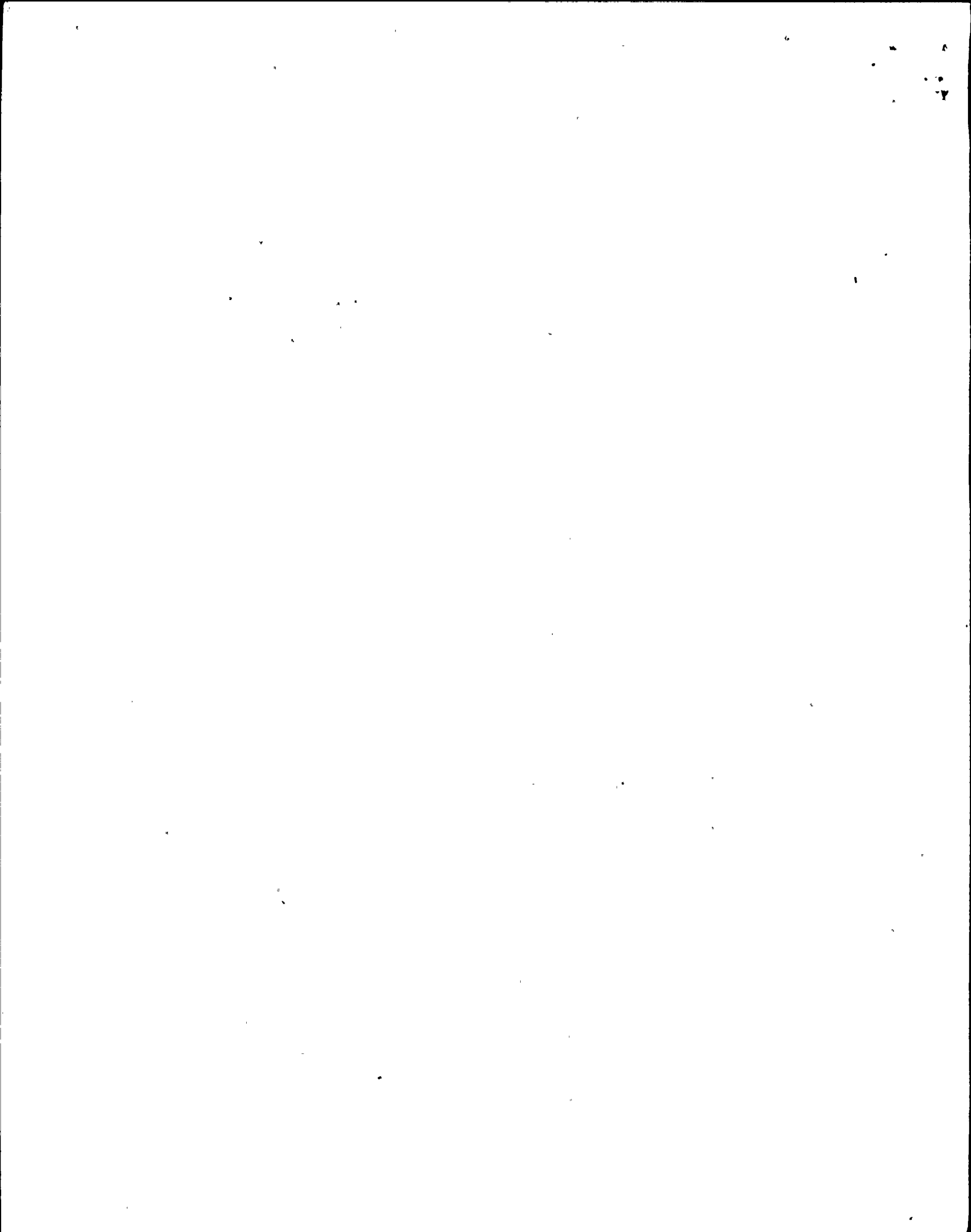
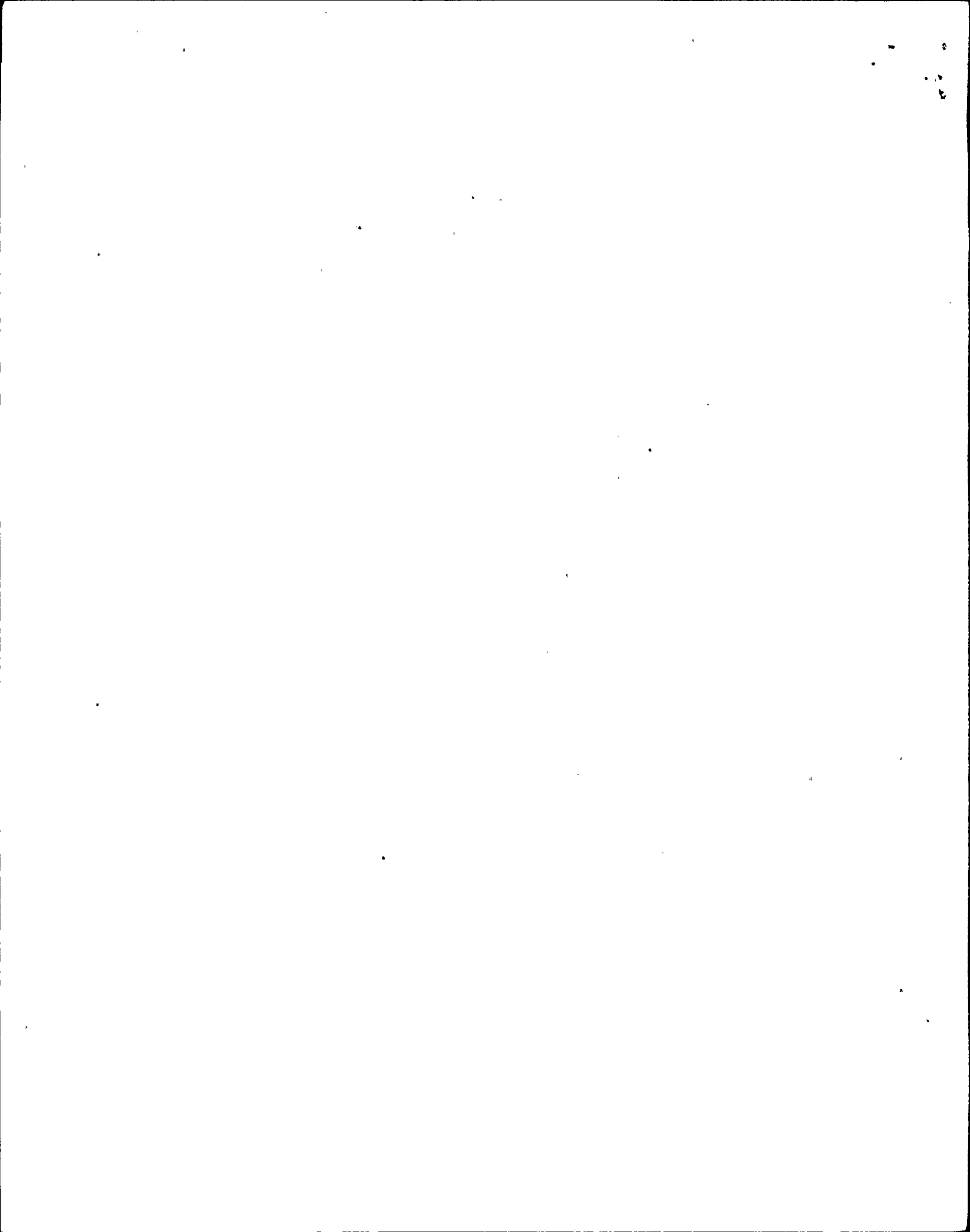


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1.0 PURPOSE

To provide direction in performing preventive maintenance checks on 345KV outdoor transformers and 115KV switchyard equipment on a daily basis and on manholes on a monthly (or as required by Unit Supervisor) basis.

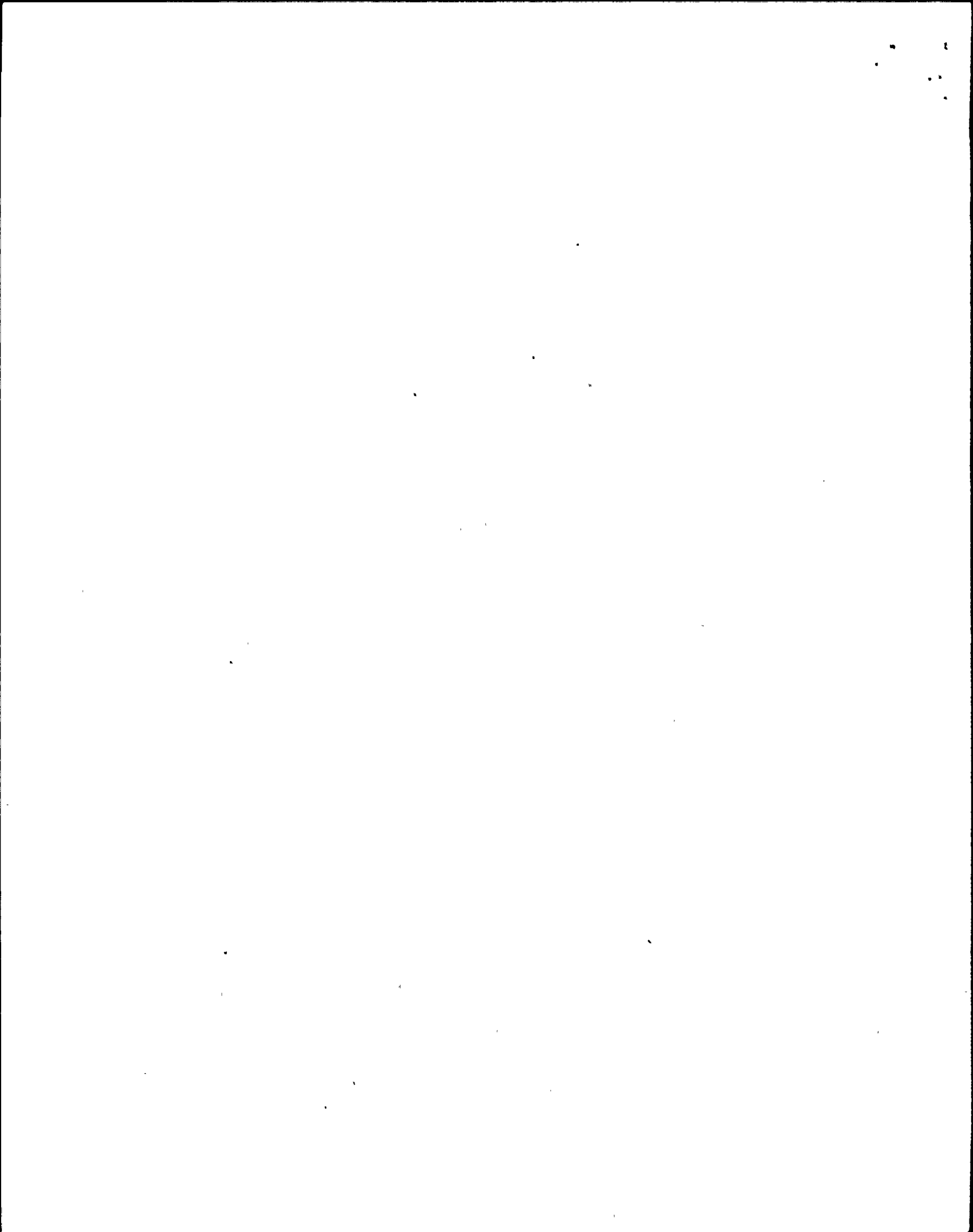
1.1 Frequency

This procedure is required to be performed:

- 1.1.1 Every six months all cooling fan on Spare Main Transformers shall be run for a minimum of three hours.
- 1.1.2 On a monthly basis (or as required by Unit Supervisor) for all manholes identified on Attachment 1.
- 1.1.3 On a daily basis for 345KV Outdoor Transformers.
- 1.1.4 On a daily basis for 115KV Switchyard Equipment.
- 1.1.5 As otherwise required by Unit Supervisor.

1.2 Equipment List

Component ID	SR	EQ	Location
2MTX-XM1A Main Transformer			345KV Switchyard
2MTX-XM1B Main Transformer			345KV Switchyard
2MTX-XM1C Main Transformer			345KV Switchyard
2MTX-XM1D Main Transformer			345KV Switchyard
2STX-XNS1 Normal Station Service Trans.			345KV Switchyard
2RTX-XSR1A Reserve Station Service Trans.			115KV Switchyard
2RTX-XSR1B Reserve Station Service Trans.			115KV Switchyard
2ABS-X1 Auxiliary Boiler Trans.			115KV Switchyard
2ATX-XS1 Stpdwn 13.8/4.2 Transformer			115KV Switchyard
2ATX-XS3 Aux. Stpdwn 13.8/4.2 Transformer			115KV Switchyard
Manholes			Locations are detailed on Attachment 1



1.3 Discussion

- 1.3.1 Outdoor transformer and switchyard equipment checks should be performed on a daily basis Monday through Friday unless otherwise directed.
- 1.3.2 Attachment 2, Outdoor Transformer Inspection Log and Attachment 3, Switchyard Inspection Log, will be filled out for completed items. Any unusual or unsatisfactory items shall be noted in the Remarks section.
- 1.3.3 Every six months cooling fans on Spare Main Transformer will be run for at least three hours.
- 1.3.4 Section 7.6, Maintenance Inspection of Manholes, should be performed once each month or more frequently as required, except for manhole #1 and #3, which will be inspected at the direction of Unit Supervisor.

2.0 REFERENCES AND COMMITMENTS

NOTE: The revision numbers listed below do not necessarily reflect latest revision, but was latest revision for procedural development/revision.

2.1 Unit 2 Technical Specifications

None

2.2 Policies, Programs and Procedures

- 2.2.1 AP-3.3.1, Rev. 4, Control of Equipment Markups
- 2.2.2 AP-3.3.2, Rev. 1, Control of Equipment Temporary Modifications
- 2.2.3 N2-MMP-GEN-923, Lifting of Miscellaneous Heavy Loads
- 2.2.4 S-RP-2, Radiation Work Permit Procedure

2.3 Technical Information

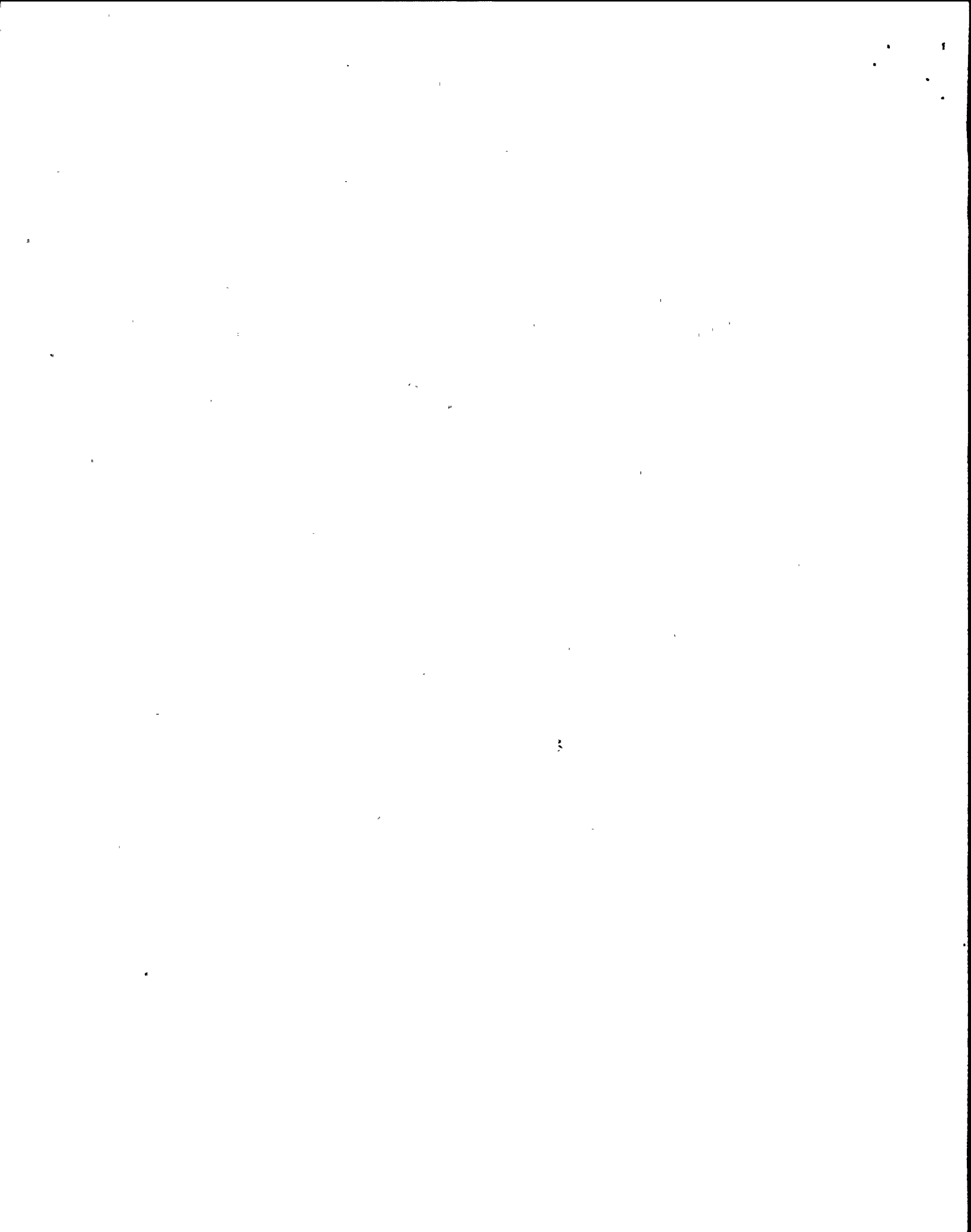
2.3.1 Drawings

12177-EE-M01A-5, EE-1EA-10, EE-1FA-10, EE-32C-16, EE-32D-11 and EE-932A-5

2.3.2 Instruction Manuals

Instruction Manual for Generator Step-Up Power Transformer, NMPC File Sequence No. N20445 (2MTX-XM1A, XM1B, XM1C, XM1D)

Instruction Manual for General Electric Power Transformer, NMPC File Sequence No. N20448 (2STX-XNS1)



2.3.2 (Cont)

Instruction Manual for General Electric Power Transformer, NMPC File Sequence No. N20814 (2RTX-XSR1A, XSR1B)

Instruction Book for Type SL Core Form Substation Transformer, NMPC File Sequence No. N20234 (2ABS-X1)

General Electric Transformer Instruction, NMPC File Sequence No. N20567 (2ATX-XS1, XS3)

Instruction Manual for S&C Circuit Switcher Mark 5, NMPC File Sequence No. N20022

2.4 Supplemental References

Letter from L. P. Prunotto to K. A. Dahlberg, dated January 21, 1987, Dewatering of Electrical Manholes

2.5 Commitments

<u>Section/Step No.</u>	<u>NCTS No.</u>	<u>Description</u>
NONE	NONE	NONE

3.0 TEST EQUIPMENT, SPECIAL TOOLS AND MATERIALS

3.1 Test Equipment

None

3.2 Special Tools

3.2.1 Crane Lifting capacity to be determined by Mechanical Maintenance

3.2.2 Crow bar

3.2.3 Socket set

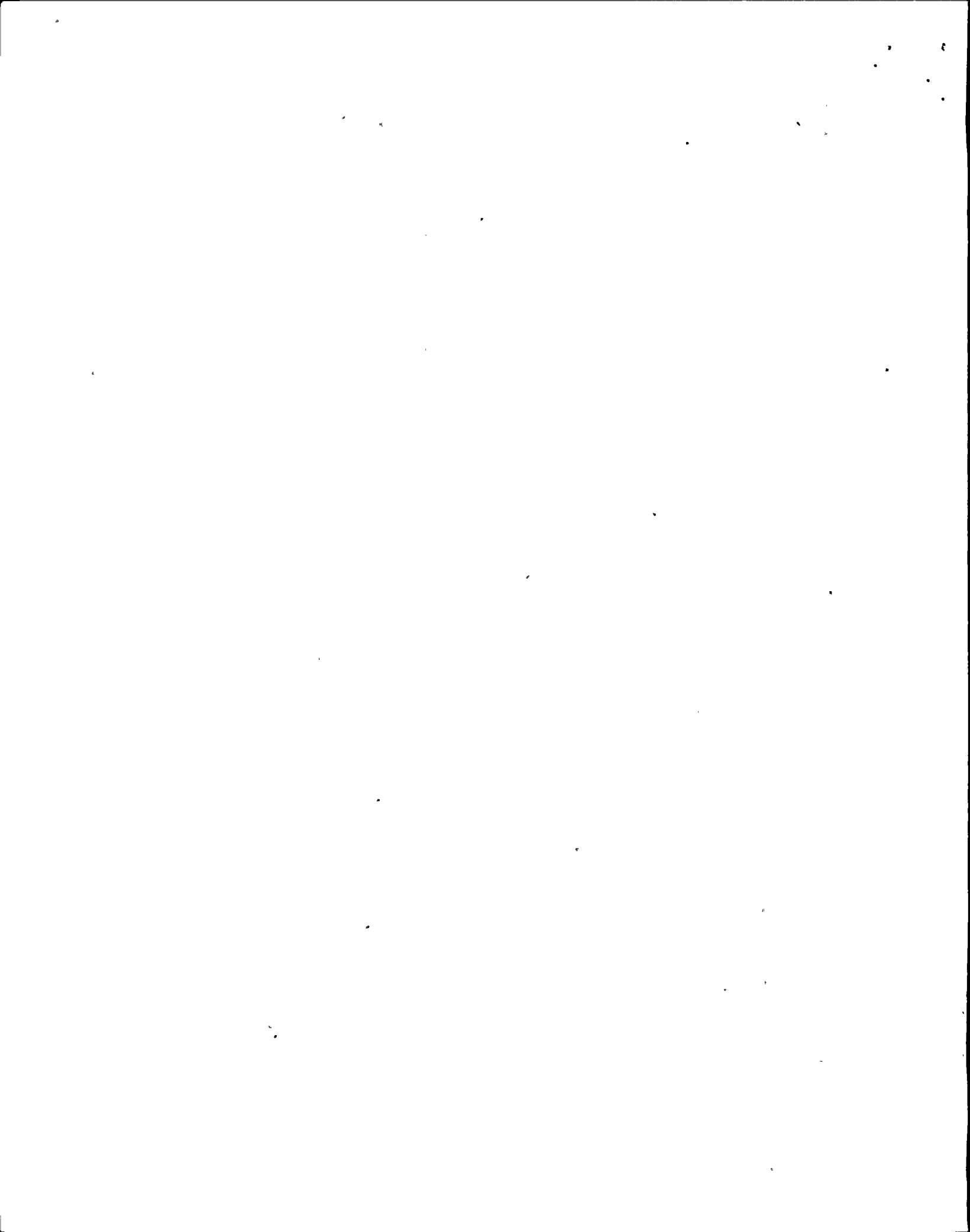
3.2.4 Portable pump unit

3.3 Materials

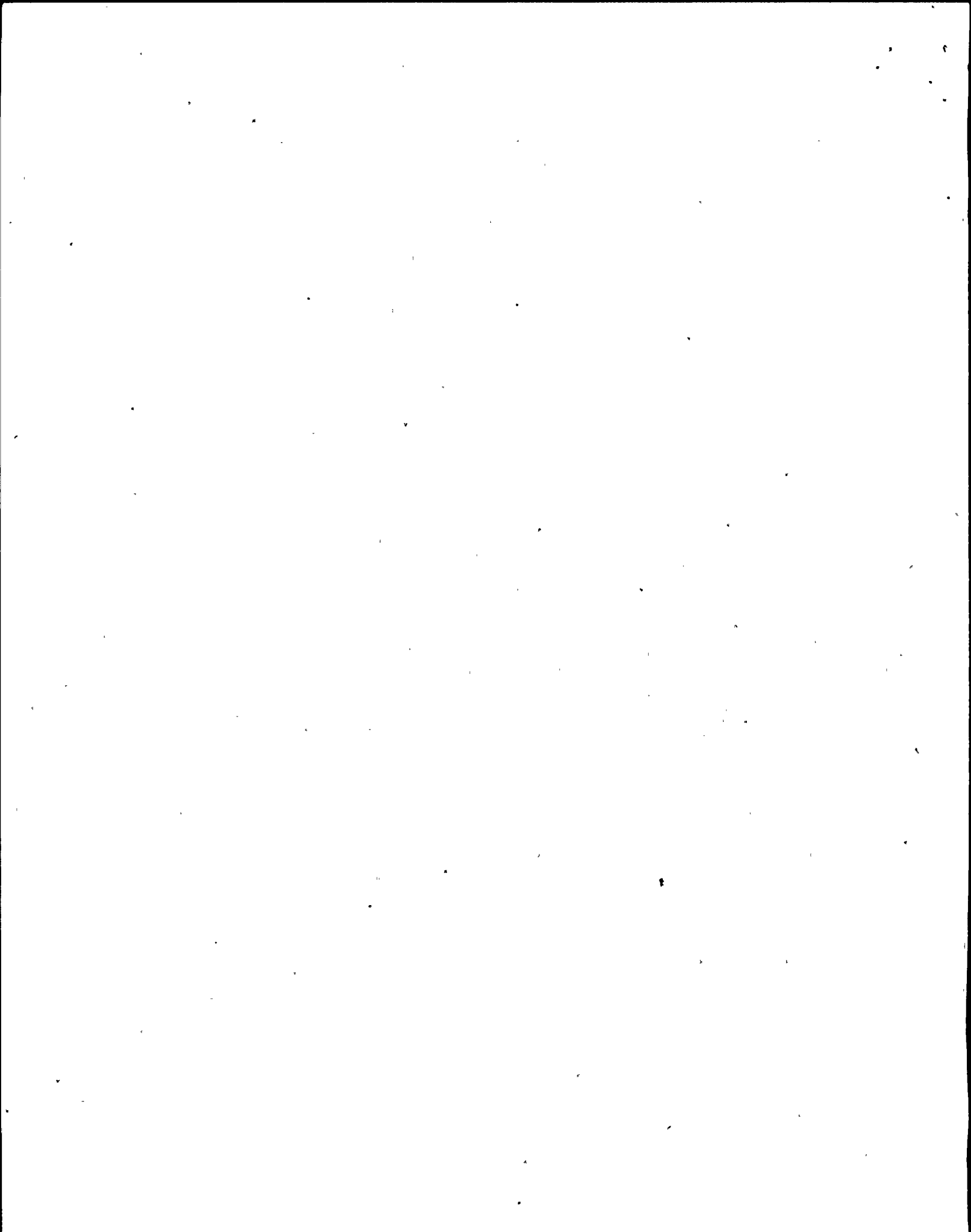
None

4.0 PRECAUTIONS

4.1 Appropriate safety precautions when working on electrically energized equipment shall be taken. The Maintenance Foreman shall be contacted for determining appropriate precautions for the job.



- 4.2 The external surface of component and surrounding area shall be free of dust, soil, foreign materials, rags, loose objects and debris before commencing work.
- 4.3 Maintenance checks will be performed near energized high voltages. Maintain your distance from these voltages. (See Section 1.2.4 of Accident Prevention Rules).
- 5.0 LIMITATIONS AND ACTIONS
- 5.1 This procedure shall be followed directly at the job site, OR communications shall be established between the job site and the controller (leadman) referencing the procedure.
- 5.2 Initiation of any work request (WR) shall be accomplished in accordance with AP-5.2.
- 5.3 The steps contained in Section 6.0 do not have to be performed in the sequence indicated.
- 5.4 Sections 7.2, 7.3, 7.4, 7.5, and 7.6 may be performed in any order/sequence.
- 5.5 Steps within Sections 7.2, 7.3, 7.4, and 7.5 may be performed in any order/sequence.
- 5.6 Steps within Section 7.6 shall be performed in sequence.
- 5.7 Procedure steps provided with an initial space "_____" or a check off space "()" shall be initialed or checked, as applicable.
- 5.8 If any step in the procedure cannot be completed as stated, the Station Shift Supervisor (SSS), then Electrical Department supervision shall be notified.
- 5.9 Procedure steps are to be marked "N/A" only if the procedure specifically allows for use of the annotation or where only a portion of the procedure is performed (such as PMT, a retest to verify questionable data, or other testing). Reasons for marking a step "N/A" shall be documented, initialed and dated in the Remarks section.
- 5.10 Area and system cleanliness shall be maintained in accordance with AP-8.5.
- 5.11 Applicable radiological precautions shall be observed. Radiation Protection shall be contacted for guidance.
- 5.12 All ALARA practices shall be observed to minimize personnel exposure and spread of contamination.
- 5.13 All Markups shall be performed in accordance with AP-4.2.
- 5.14 All cleanup of equipment and space within the work area shall be done in accordance with AP-8.5.



6.0 PREREQUISITES

6.1 Plant/System Conditions

Determine Plant Impact and record in space provided in Step 7.1.1.

6.2 Administrative

6.2.1 Read this procedure and documents needed to perform procedure. If there is any information contained within Sections 5.0, 6.0, 7.0, 8.0, 9.0, 10.0 that you do not understand, contact Supervision for clarification. When the information contained within procedure Sections 5.0, 6.0, 7.0, 8.0, 9.0, 10.0 is understood, acknowledge your understanding by printing your name and signing your initials below.

PRINTED NAME	INITIALS
_____	_____
_____	_____
_____	_____
_____	_____

6.2.2 Obtain Markups if required and record number below.

No. _____

Step N/A, No Markups required.

() _____

6.2.3 Obtain an RWP if maintenance is to be performed on Manhole No. 5 and record number below.

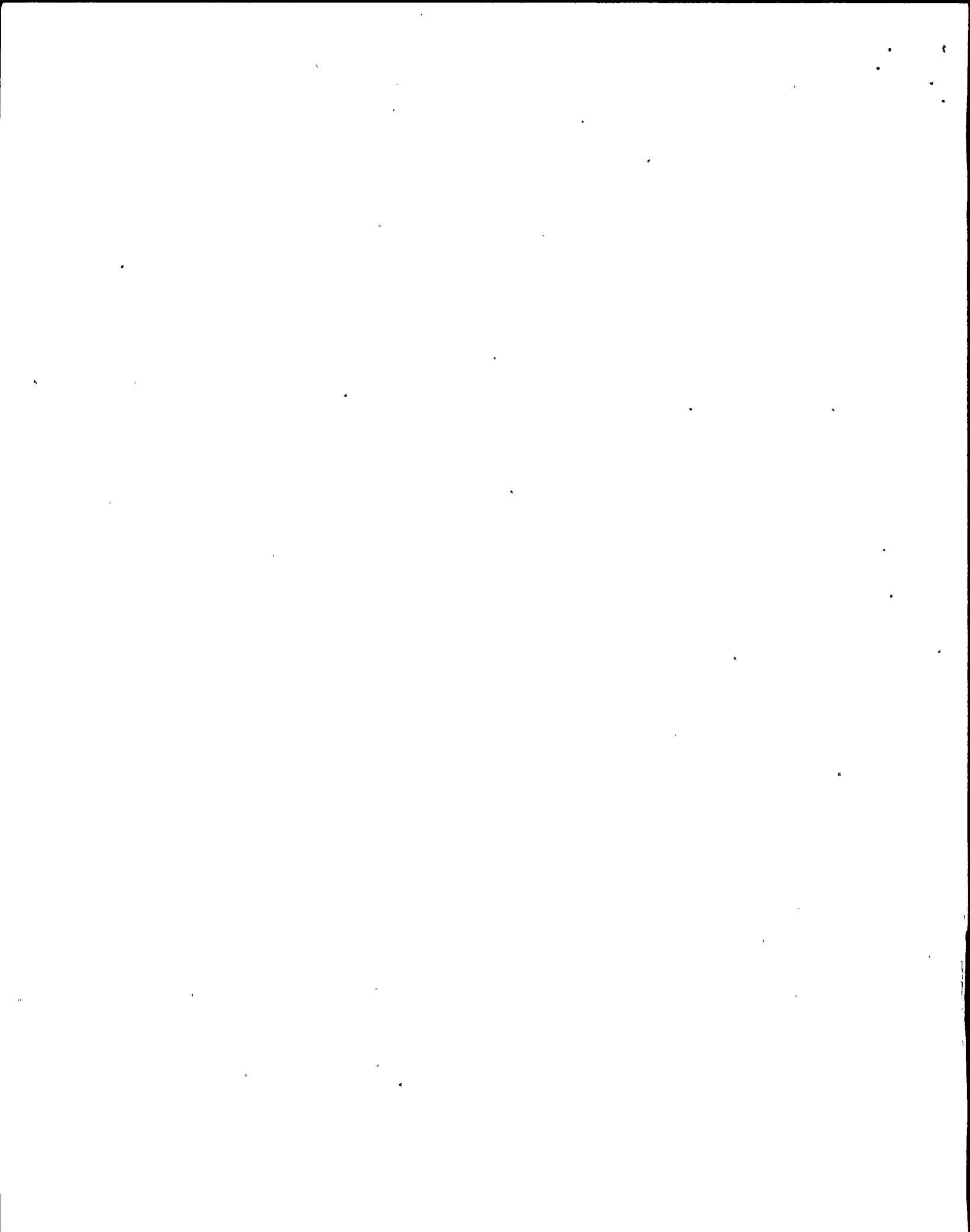
RWP _____

Step N/A, Maintenance not required on Manhole No. 5.

() _____

6.3 Notifications

- NOTES:**
1. Notification should be made at least 1 day prior to performing procedure.
 2. The following notification is only required if Manholes (MH) Number 1 and 3 are to be inspected.



6.3.1 Notify Mechanical Maintenance Department of intent to inspect Manhole No. 1 and 3. Document name of person contacted, time and date. If a message is left on answering machine, enter "machine" in the "person contacted" space below.

_____/_____/_____
Person Contacted Time Date

Step N/A, MH#1 and #3 not inspected. () _____

NOTE: The following notification is only required if Security Manholes (SMH) Number 1 through 13 are to be inspected.

6.3.2 Notify Security Department of intent to inspect Security Manholes No. 1 through 13. Document name of person contacted, time, and date. If a message is left on answering machine, enter "machine" in "person contacted" space below.

_____/_____/_____
Person Contacted Time Date

Step N/A, SMH #1 through #13 not inspected. () _____

7.0 PROCEDURE

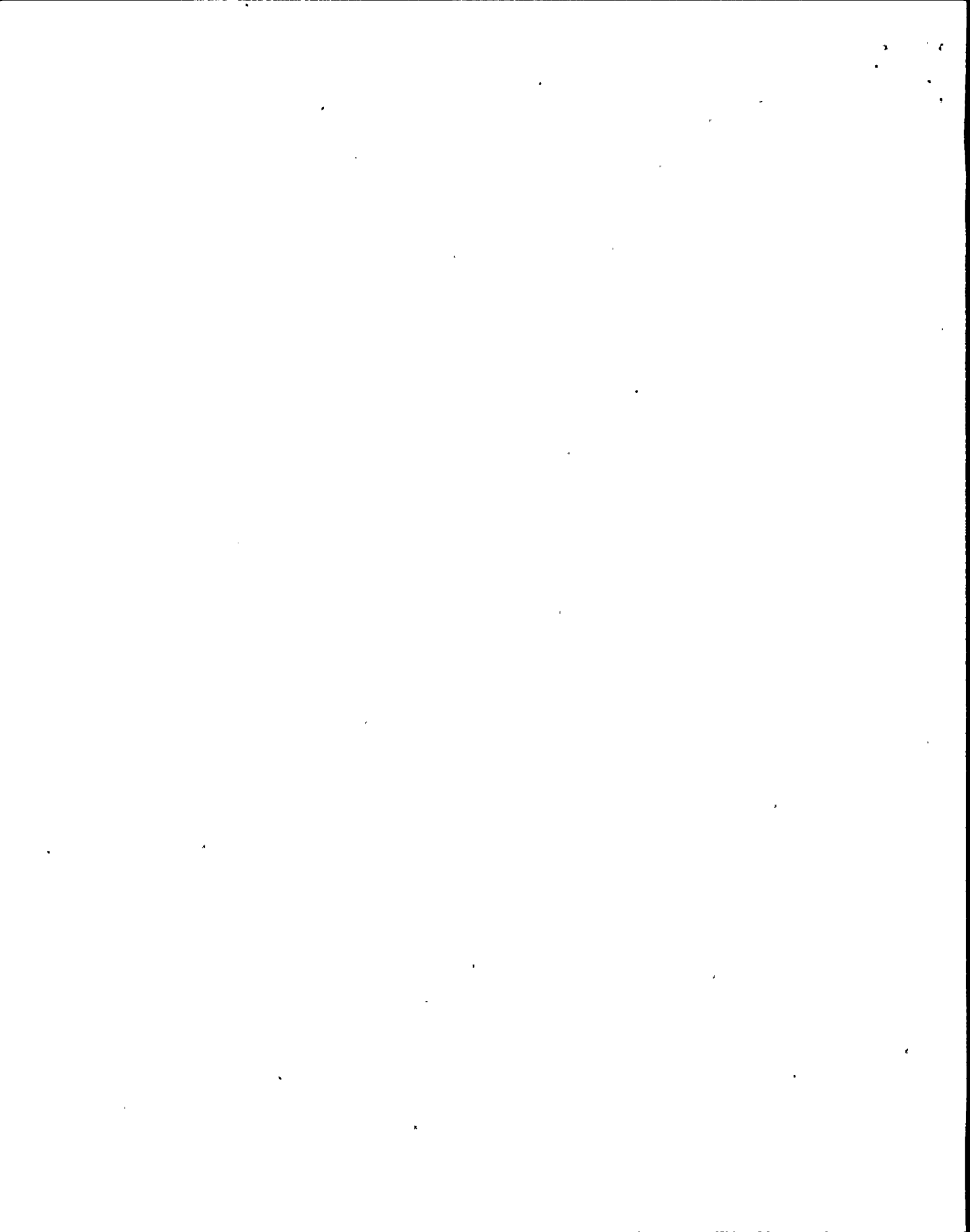
7.1 Preliminary Actions

7.1.1 Discuss Plant Impact and resulting effect on plant due to performance of procedure with Station Shift Supervisor (SSS) and Chief Shift Operator (CSO).

PLANT IMPACT: NONE

- a. Request CSO to supply current Operating Condition and percent Reactor Power below.

OPERATIONAL CONDITION _____
REACTOR POWER _____%



7.1.1 (Cont)

- b. Obtain SSS and CSO permission to perform procedure by obtaining their signatures below.

 SSS Signature

 CSO Signature

- 7.1.2 Notify CSO of commencement and record start time/date.

 Date

- 7.1.3 Record outside ambient temperature as indicated on 2CEC*PNL882 (met tower) temperature indicator.

*7

Outside Ambient Air Temp. _____°F

7.2 Daily Transformer Inspections

Perform the following inspections for each transformer, unless indicated otherwise. Document inspection results on Attachment 2.

- 7.2.1 Record transformer winding temperature(s).

(Acceptance Criteria, $\leq 117^{\circ}\text{c}$ for 2ABS-X1 and $\leq 105^{\circ}\text{c}$ for all others).

- 7.2.2 Record transformer oil temperature.

(Acceptance Criteria, $\leq 75^{\circ}\text{c}$).

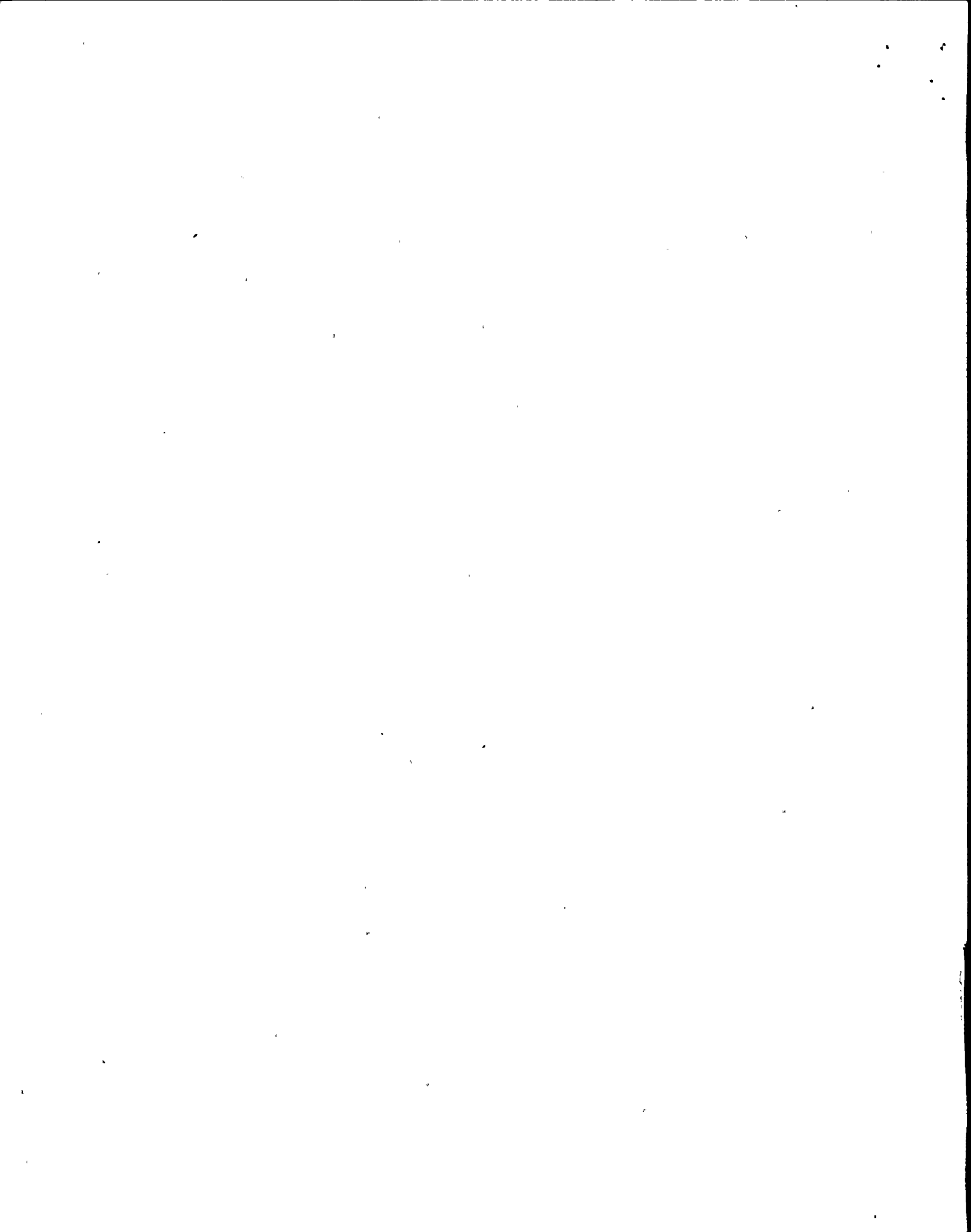
- 7.2.3 Check transformer oil level indicator. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

(Acceptance Criteria, Level should not read High or Low).

- 7.2.4 Check gas volume indicator on main transformers (2STX-XM1A, 1B, 1C, 1D). Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

(Acceptance Criteria, Indication should not be in RED area).

*7



NOTE: A positive pressure should be observed, however, during periods of cold weather and/or light load conditions a slight vacuum may exist. If pressure gauge reads zero and there is no change in reading with concurrent change in temperature, the possibility of a leak should be investigated.

7.2.5 Record transformer gas pressure for following transformers:

- 2STX-XNS1 2ABS-X1
- 2RTX-XSR1A 2ATX-XS1
- 2RTX-XSR1B 2ATX-XS3

(Acceptance Criteria, Should read positive pressure, except as noted above)

NOTE: Pressure relief devices are located on top of transformers.

7.2.6 Check pressure relief device for signs of operation. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

7.2.7 Check bushing oil levels. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

7.2.8 Check tap changer oil level on following transformers and indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

- 2STX-XNS1
- 2RTX-XSR1A
- 2RTX-XSR1B

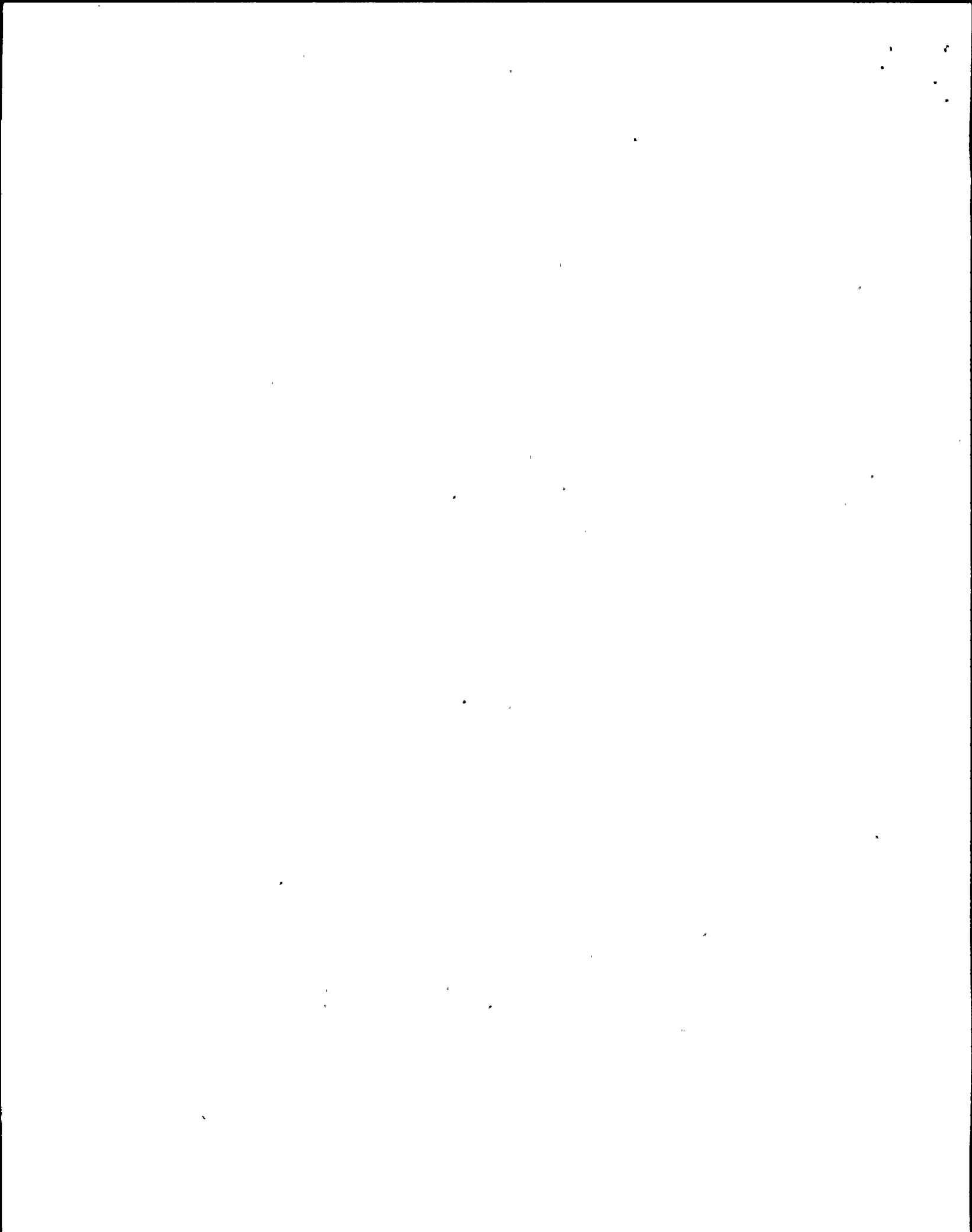
(Acceptance Criteria, Level should not read High or Low).

7.2.9 Record (circle) which bank(s) of cooling fans are operating.

CAUTION

WHEN PERFORMING THE FOLLOWING INSPECTION;
ANY BANK(S) OF FANS THAT ARE NOT RUNNING
SHALL NOT BE STARTED.

7.2.10 Verify no single fan failure in operating fan bank(s). Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat). If fans are not operating circle N/A.



- 7.2.11 Using installed flow meters, verify oil flow to the operating fan banks on the following transformers. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat). If pumps are not operating circle N/A.

2MTX-XM1A	2STX-XNS1
2MTX-XM1B	2RTX-XSR1A
2MTX-XM1C	2RTX-XSR1B
2MTX-XM1D	

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7.3 Weekly Transformer Inspections

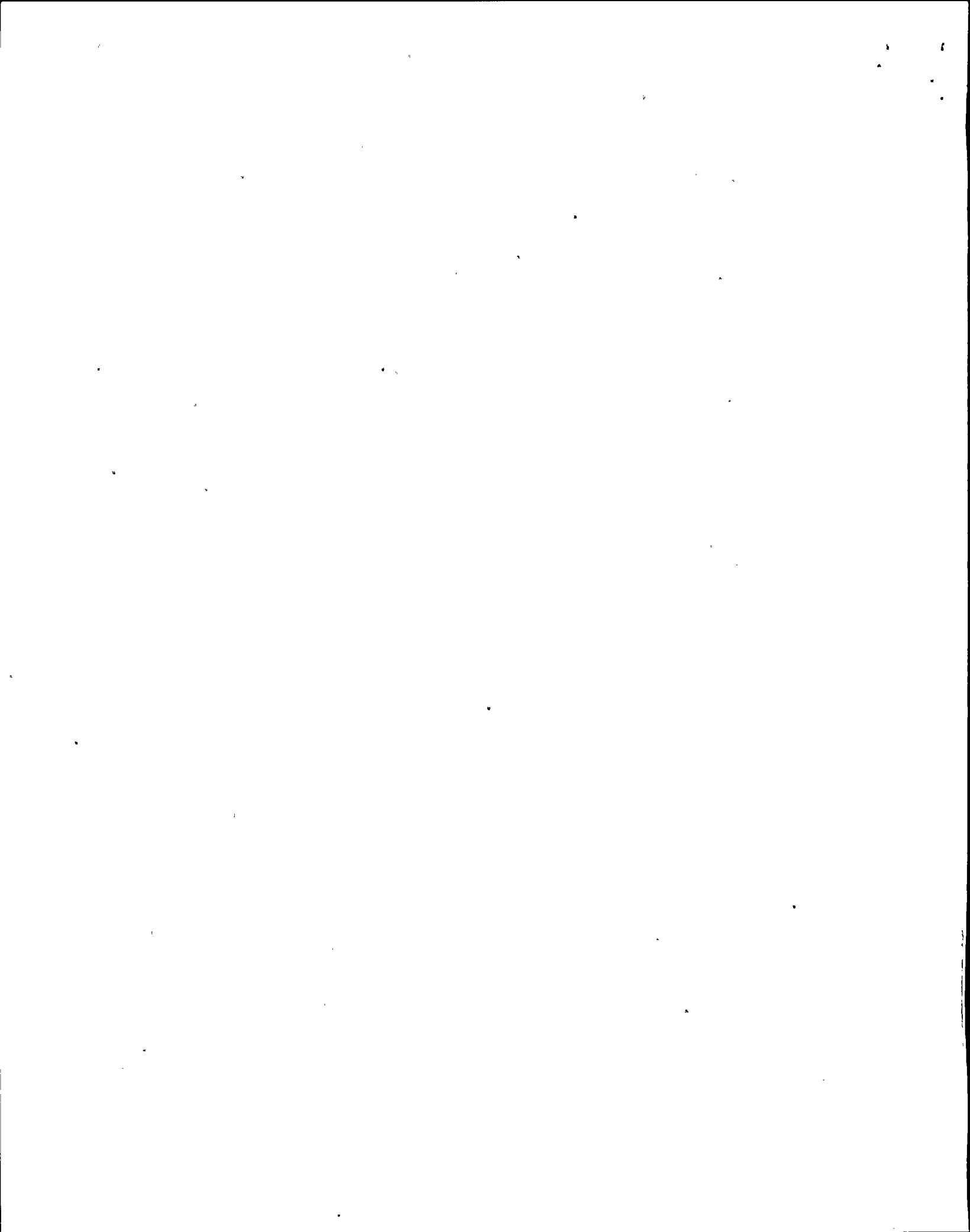
Perform the following inspections on Monday of each week for each transformer, unless indicated otherwise. Document inspection results on Attachment 2.

- 7.3.1 Record reading from lighting arrester count meter located on main transformers (2MTX-XM1A, 1B, 1C, 1D).
- 7.3.2 Record tap changer control cabinet space heater status (ON/OFF) for Normal Station (2STX-XNS1) and Reserve Station (2RTX-XSR1A and 1B) transformers.
- 7.3.3 Record main control cabinet space heater status (ON/OFF).
- 7.3.4 Inspect control cabinet(s) for signs of dirt, moisture, or other debris and clean as necessary. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

7.4 Switchyard Inspections

Perform following Switchyard inspections daily unless indicated otherwise. Document inspection results on Attachment 3.

- 7.4.1 Visually inspect switchyard bus, switches, disconnects etc., for any unusual conditions. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).
- 7.4.2 Verify all switcher low gas pressure indicator sight glasses to be GRAY (not red). Refer to Attachment 5, for locations. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).
- 7.4.3 Verify all interrupter trip indicator sight glasses to be GRAY (not yellow). Refer to Attachment 5 for locations. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).



NOTE: The potential transformer liquid level indicator is a target type gauge, mounted near top of potential transformer.

7.4.4 Verify all potential transformer liquid level gauges to be WHITE, not red. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

7.4.5 On Monday, record space heater status (ON/OFF) for motor operated switches, 2YUC-MDS3, 2YUC-MDS4, and 2YUC-MDS5.

7.4.6 On Monday, inspect control cabinets on 2YUC-MDS3, 2YUC-MDS4, and 2YUC-MDS5 for signs of dirt, moisture, etc. and clean as necessary. Indicate (circle) as satisfactory (sat) or unsatisfactory (unsat).

7.5 Spare Main Transformer Semi-Annual Inspection

NOTE: The following inspection should be performed on a semi-annual basis during months of May and November unless otherwise directed.

7.5.1 Verify proper operation of cooling fans on spare main transformer (2MTX-XM1D) by running them for three hours. Document inspection results on Attachment 2.

7.6 Maintenance Inspection of Manholes

Perform following inspection on a monthly basis, or as directed by the Unit Supervisor. Document inspection results on Attachment 4.

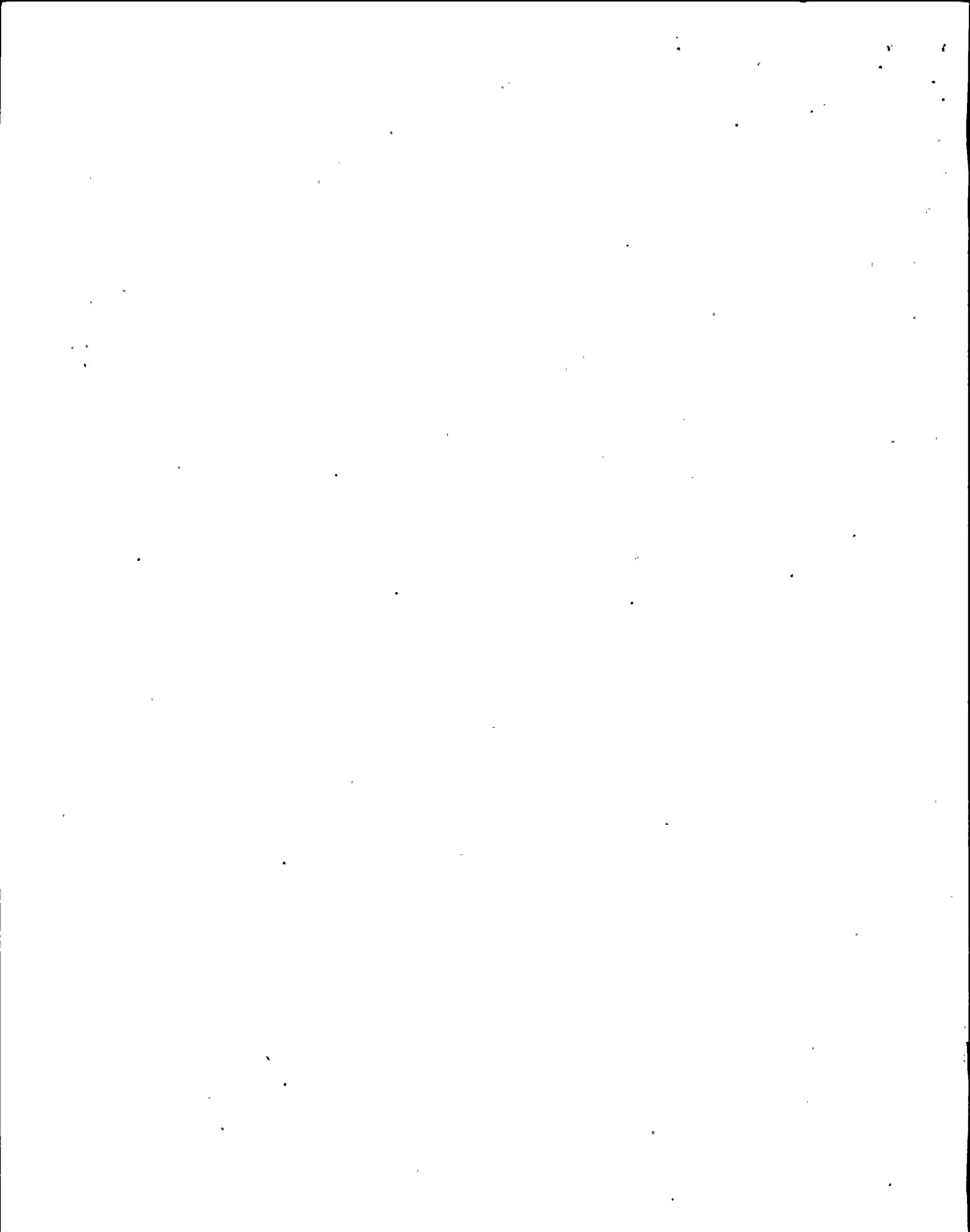
7.6.1 For manholes #1 and #3, unbolt mounting hardware.

NOTE: Lifting equipment (slings, shackles, turnbuckles, etc.) shall be selected by Mechanical Maintenance in accordance with N2-MMP-GEN-923.

7.6.2 Request Mechanical Maintenance to remove missile shields number 1 and 3 in accordance with N2-MMP-GEN-923.

7.6.3 Remove manhole cover.

7.6.4 Check manhole for water and remove as necessary using a portable pump unit.



- 7.6.5 Inspect manhole for debris and remove as necessary.
- 7.6.6 Replace manhole cover.
- 7.6.7 Request Mechanical Maintenance to replace missile shields number 1 and 3 in accordance with N2-MMP-GEN-923.
- 7.6.8 For manholes #1 and #3, mounting hardware bolted.

8.0 RETURN TO NORMAL

8.1 See Work Request for additional inspections or test(s) required to be completed. Step N/A, WR not required. () _____

8.2 Notify Operations of maintenance completion. _____

Record STOP Date and have CSO and SSS acknowledge maintenance completion by obtaining their initials.

Date	CSO Initials	SSS Initials

8.3 Return RWP.
Section N/A, No RWP issued. () _____

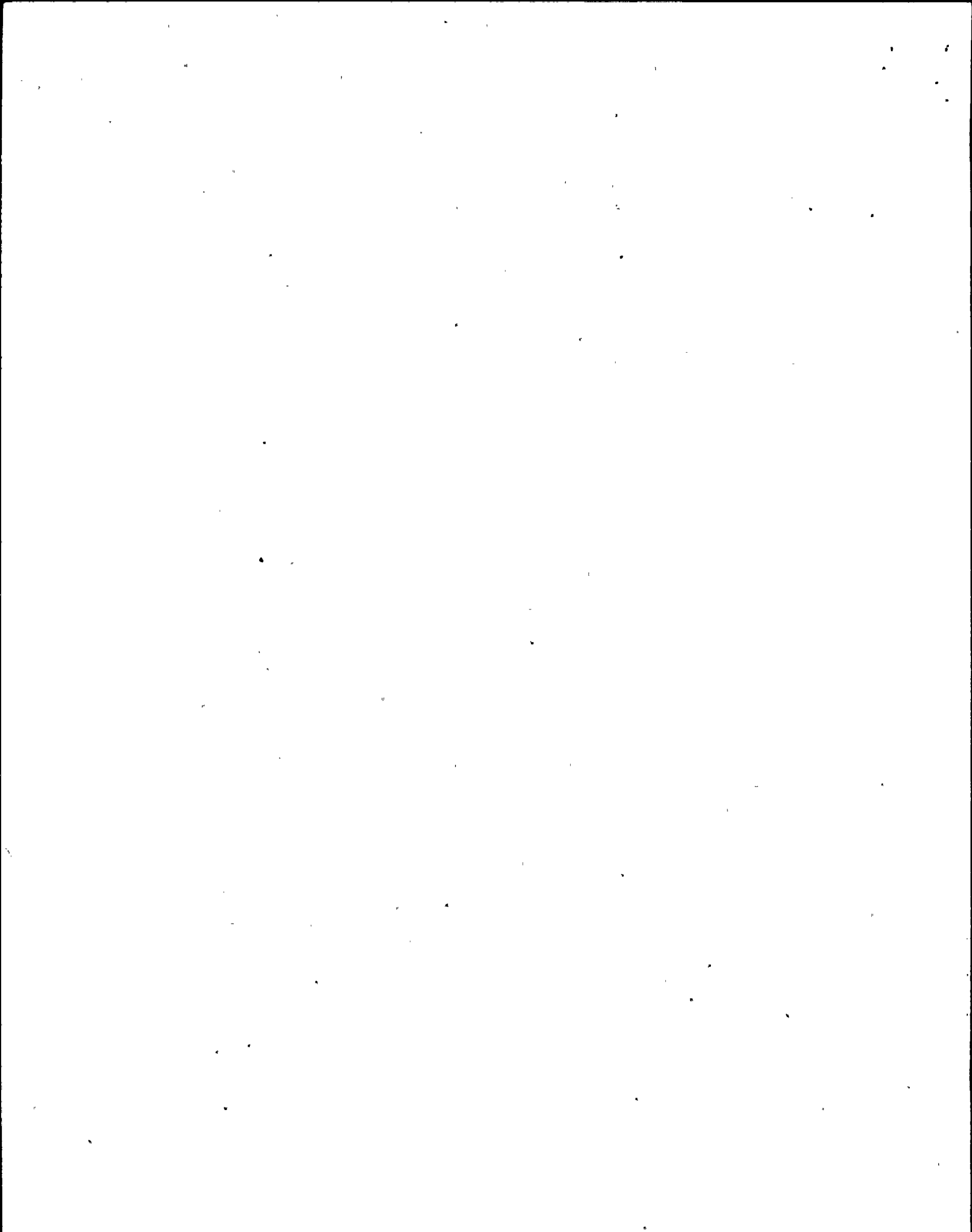
8.4 After completion of the maintenance activity coordinate with Operations Department to clear Equipment Markup.

Section N/A, No markups required. () _____

9.0 ACCEPTANCE CRITERIA

NOTE: The acceptance criteria shall be satisfied when following conditions have been met.

As Left data listed on Attachment 2,3, and 4 is within specified ranges or identified as satisfactory.



10.0 RECORD REVIEW AND DISPOSITION

10.1 Record remarks concerning procedure performance including problems that occurred and method of resolution, or recommended resolution, as applicable.

Remarks: _____

10.2 Personnel who have performed portions of this procedure shall sign, initials, print name, and sign name below:

	<u>Initials</u>	<u>Print Name</u>	<u>Signature</u>
Performed by	_____	_____	_____
Performed by	_____	_____	_____
Performed by	_____	_____	_____
Performed by	_____	_____	_____
Performed by	_____	_____	_____
Performed by	_____	_____	_____

10.3 Maintenance supervision shall review data resulting from performance of this procedure for completeness, accuracy and acceptability. If inspection performance is unsatisfactory enter Work Request Number.

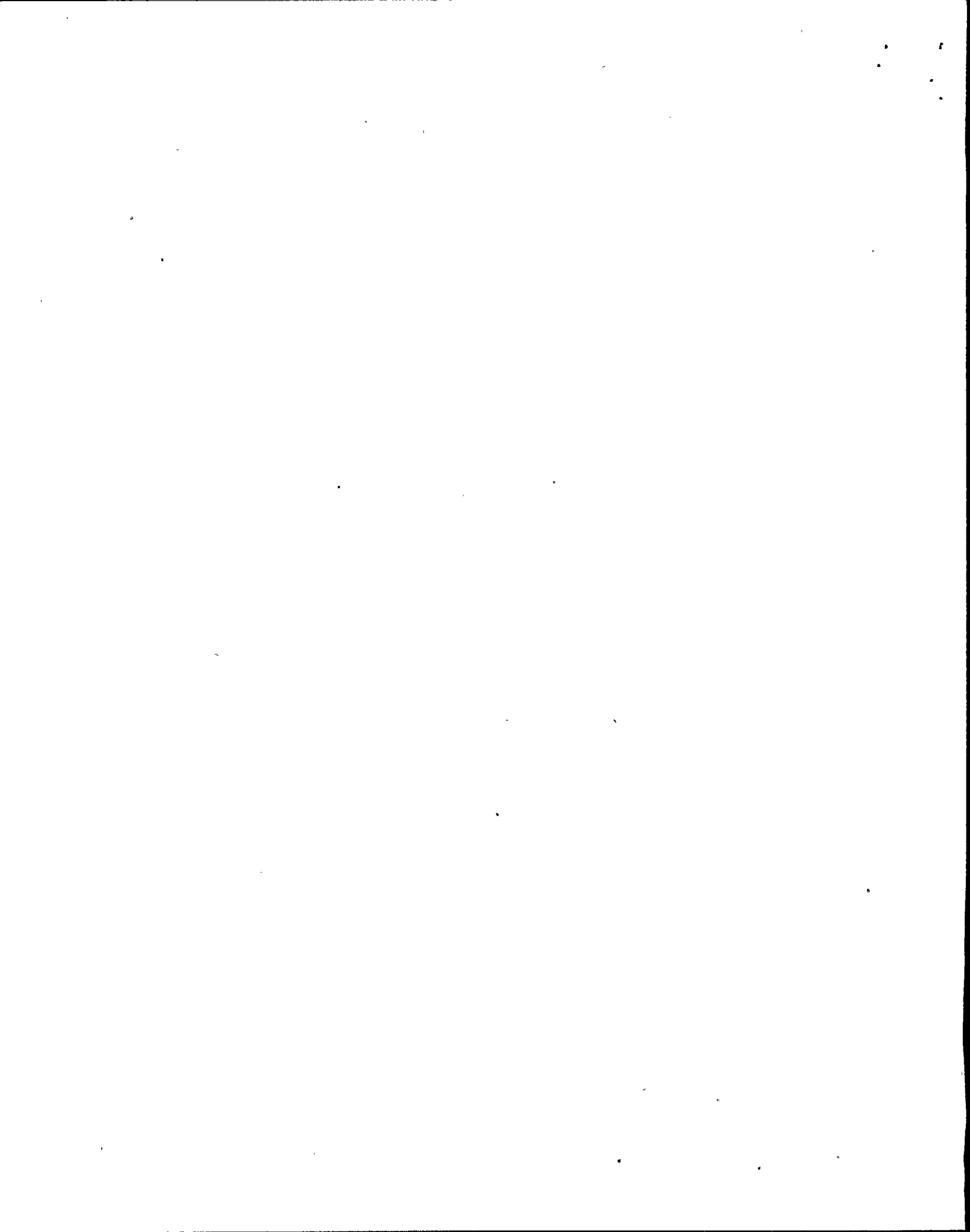
() Satisfactory () Unsatisfactory WR# _____

Signature / Date

10.4 Maintenance supervision shall ensure records (maintenance or test data) are included in Work Request Package. Step N/A, WR not issued. () _____

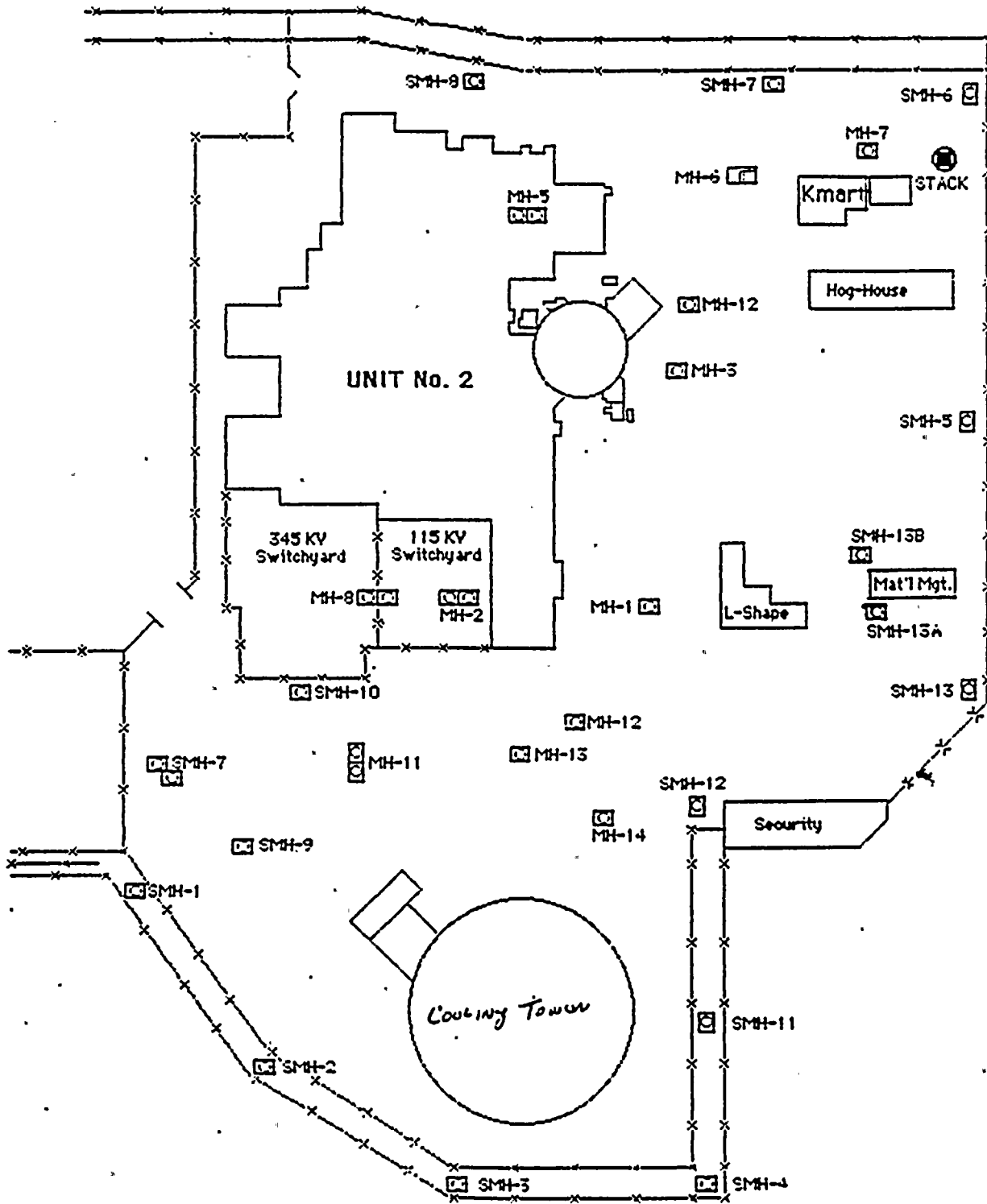
11.0 ATTACHMENTS

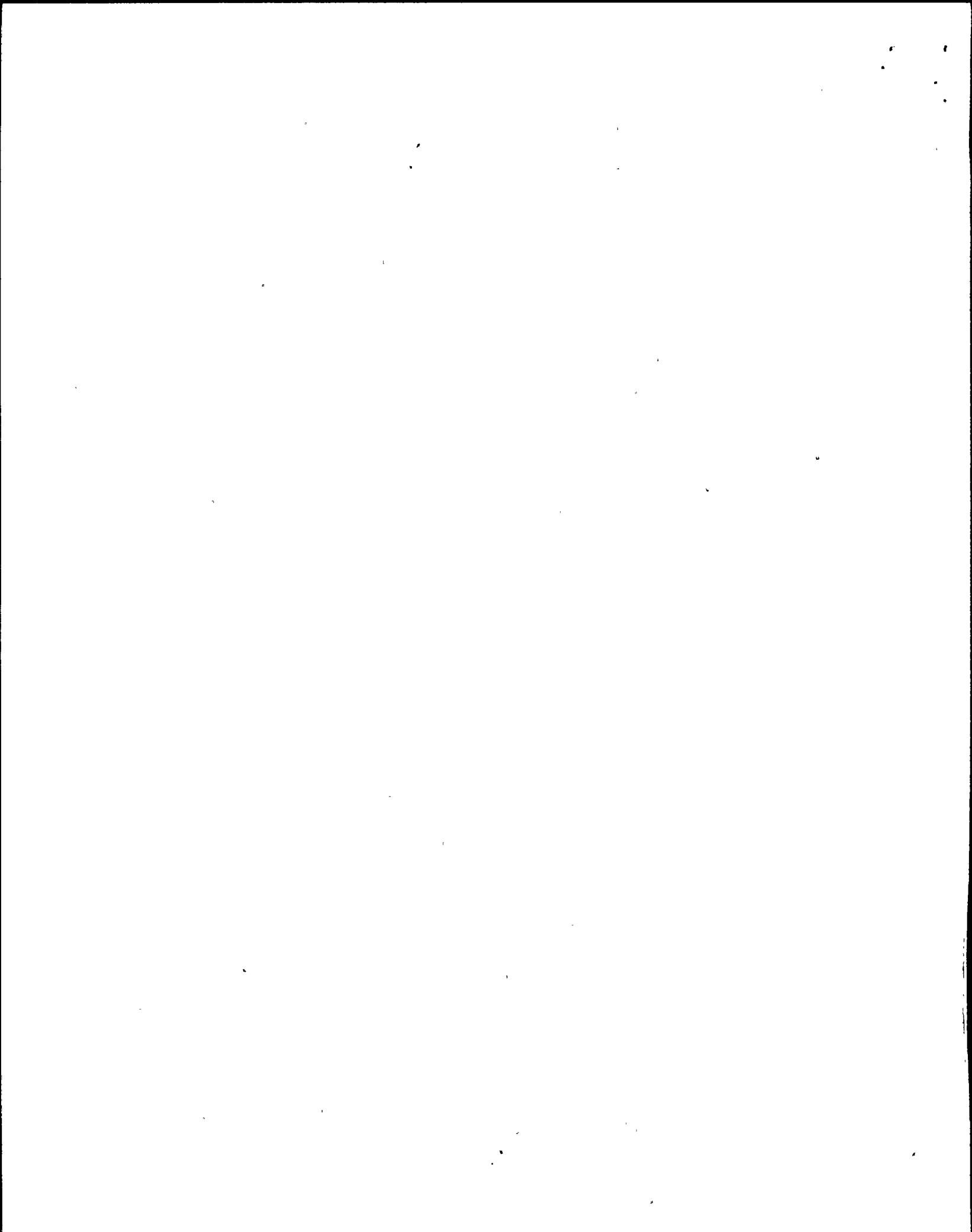
- Attachment 1: Unit 2 Manhole Diagram
- Attachment 2: Outdoor Transformer Inspection Log
- Attachment 3: Switchyard Inspection Log
- Attachment 4: Manhole Inspection Log
- Attachment 5: Circuit Switcher Indicators



ATTACHMENT 1

UNIT 2 MANHOLE DIAGRAM





OUTDOOR TRANSFORMER INSPECTION LOG, 2MTX-XM1A

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C) (Should be < 75°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.4	Check Gas Volume Indicator (Should not be in red area)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Busing Oil Level using sight glass (Should be at least partially red)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.1	Record Lightning Arrestor Count (Monday Only)	XXXXX XXXXX		XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

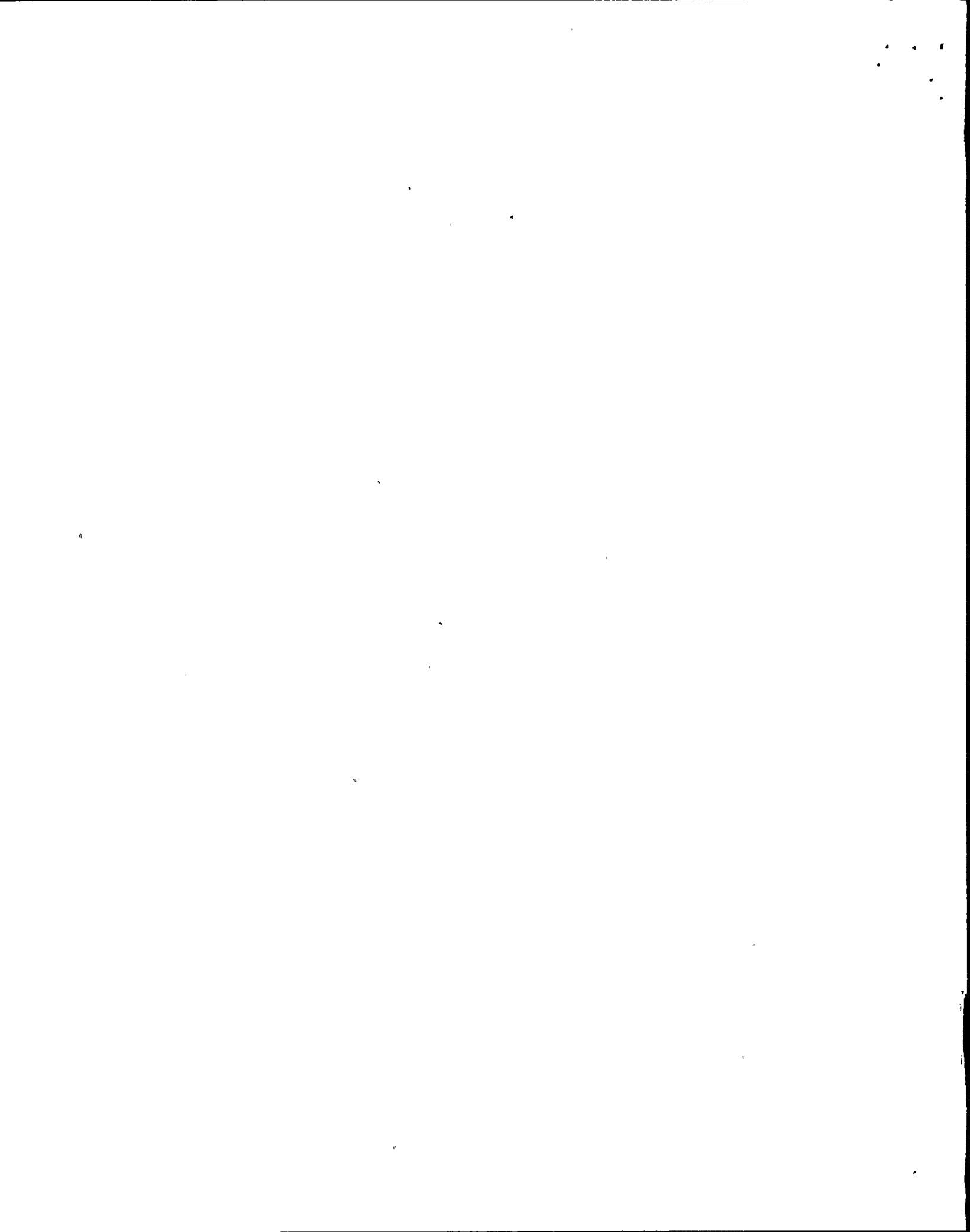
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performed by (Initials/Date): SUN /____/____ MON /____/____ TUES /____/____ WED /____/____ THUR /____/____ FRI /____/____ SAT /____/____

Remarks: _____

Reviewed by: _____ / _____
Asst. Maint.Supv. / Date

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Rev. 00



OUTDOOR TRANSFORMER INSPECTION LOG, 2MTX-XM1B

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C) (Should be < 75°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.4	Check Gas Volume Indicator (Should not be in red area)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Busing Oil Level using sight glass (Should be at least partially red)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.1	Record Lightning Arrestor Count (Monday Only)	XXXXXX XXXXXX		XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXXX XXXXXX	On Off	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXXX XXXXXX	SAT Unsat	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX

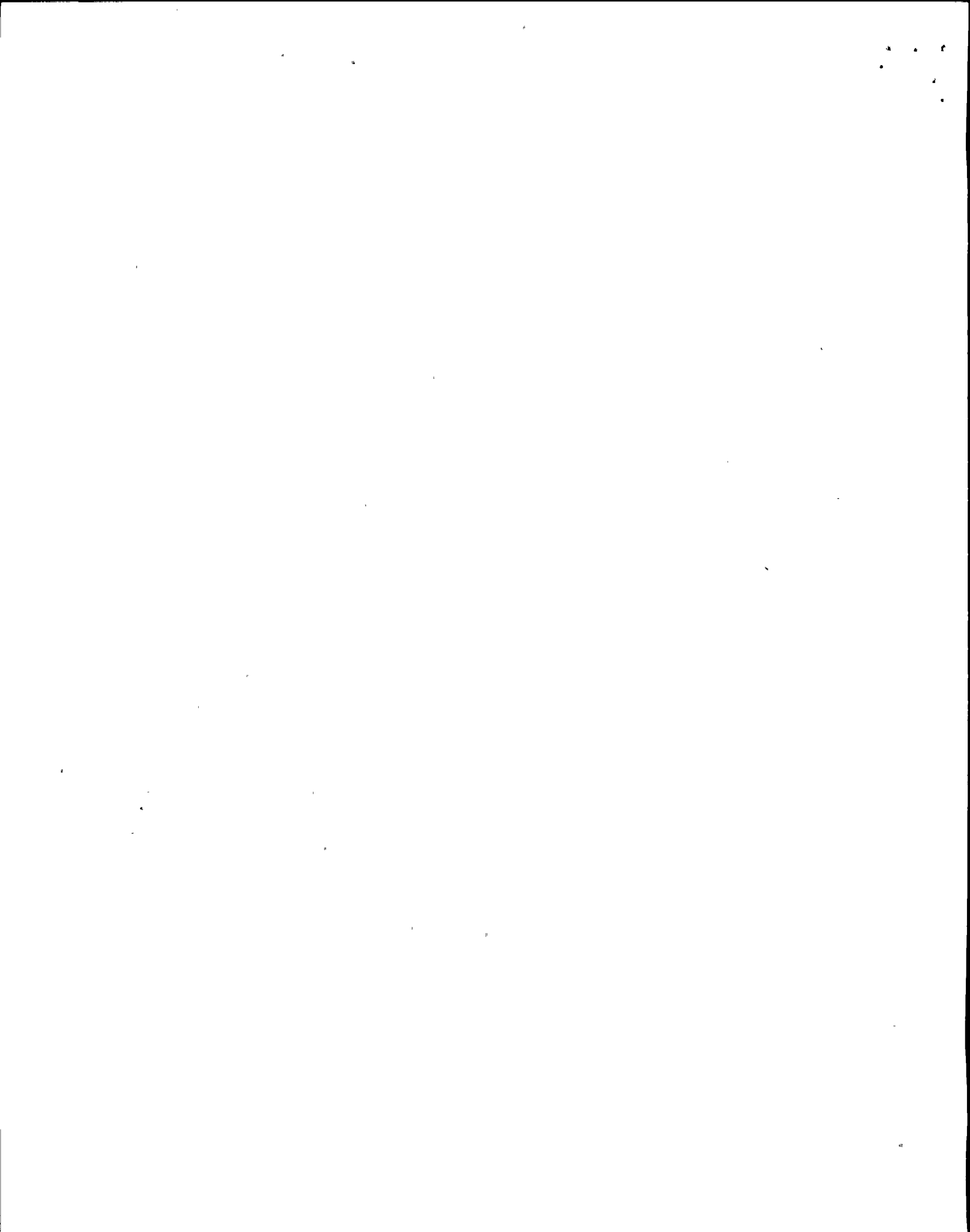
TCN- 3

Performed by (Initials/Date): _____ / _____
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OUTDOOR TRANSFORMER INSPECTION LOG, 2MTX-XM1C

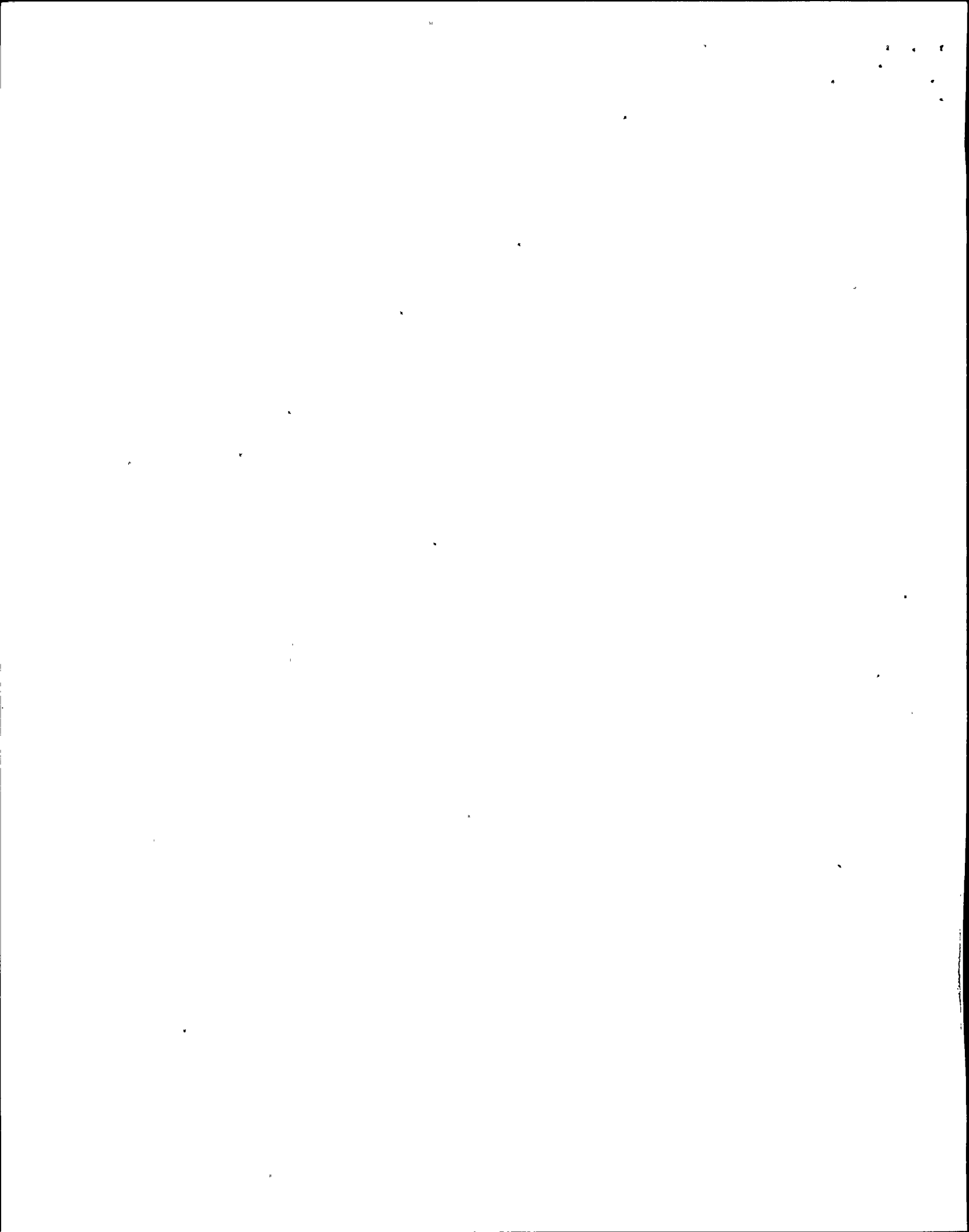
STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C) (Should be < 75°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.4	Check Gas Volume Indicator (Should not be in red area)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Busing Oil Level using sight glass (Should be at least partially red)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.1	Record Lightning Arrestor Count (Monday Only)	XXXXX XXXXX		XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

TCN- 3

performed by (Initials/Date): SUN /____/____ MON /____/____ TUES /____/____ WED /____/____ THUR /____/____ FRI /____/____ SAT /____/____

Remarks: _____

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Asst. Maint.Supv. Date



OUTDOOR TRANSFORMER INSPECTION LOG, 2MTX-XM1D

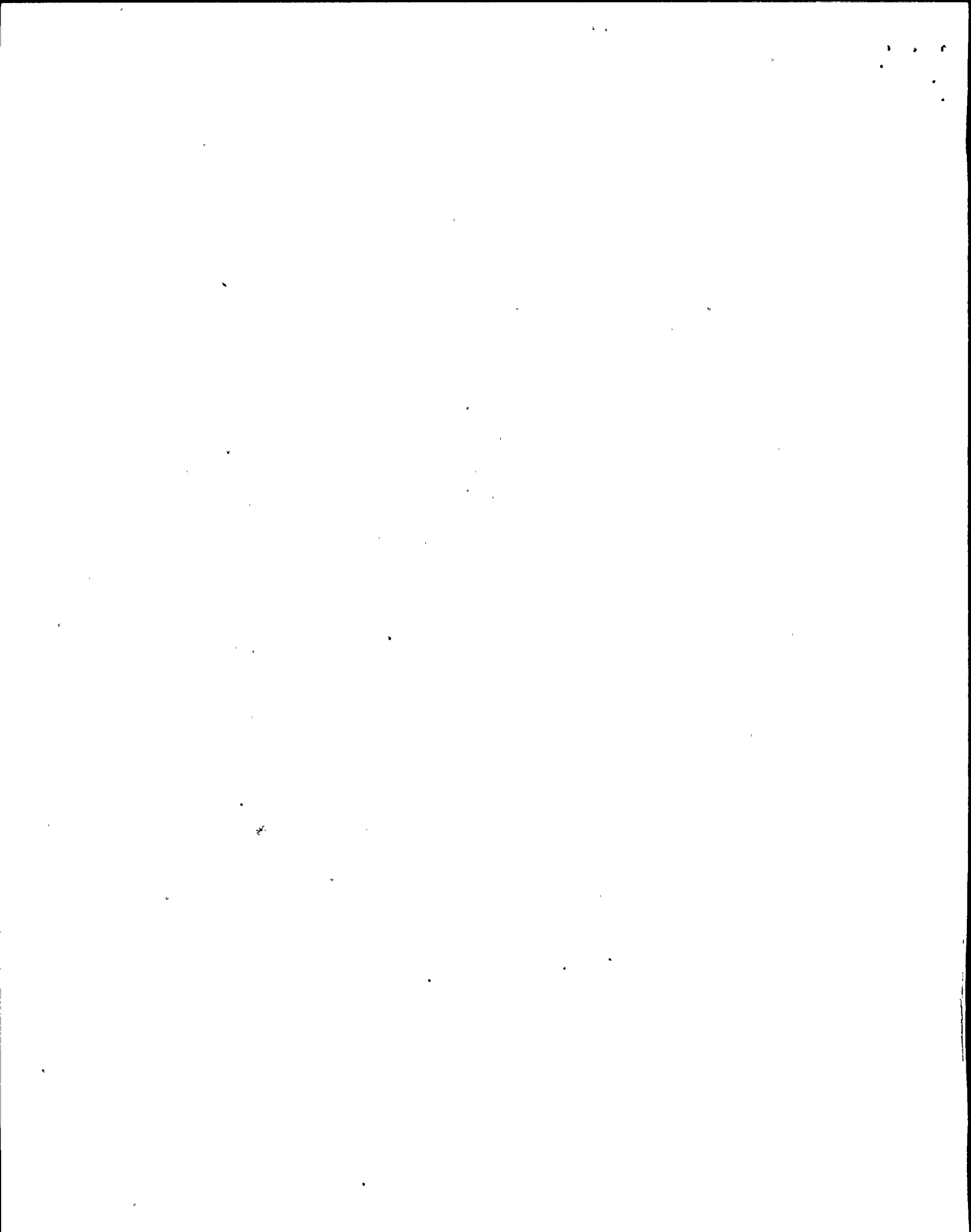
STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C) (Should be < 75°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.4	Check Gas Volume Indicator (Should not be in red area)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Busing Oil Level using sight glass (Should be at least partially red)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.1	Record Lightning Arrestor Count (Monday Only)	XXXXX XXXXX		XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

TCN- 3

Performed by (Initials/Date): _____ / _____
 SUN / _____ MON / _____ TUES / _____ WED / _____ THUR / _____ FRI / _____ SAT / _____

Remarks: _____

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OUTDOOR TRANSFORMER INSPECTION LOG, 2STX-XNS1

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Phase A Winding Temp (°C) (Should be < 105°C)							
7.2.1	Record Phase B Winding Temp (°C) (Should be < 105°C)							
7.2.1	Record Phase C Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C) (Should be < 75°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.5	Record Gas Pressure Indicator Reading * (Should read positive pressure)							
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.8	Check Tap Changer Oil Level (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 3 4 OFF	1 2 3 4 OFF	1 2 3 4 OFF	1 2 3 4 OFF	1 2 3 4 OFF	1 2 3 4 OFF	1 2 3 4 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.2	Record Tap changer Control Cabinet Heater Status (Monday Only)	XXXXXX XXXXXX	On Off	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXXX XXXXXX	On Off	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXXX XXXXXX	SAT Unsat	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX	XXXXXX XXXXXX

TCN- 3

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Performed by (Initials/Date): _____ / _____ / _____ / _____ / _____ / _____ / _____

Remarks: _____

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See note at Step 7.2.5 for exception

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OUTDOOR TRANSFORMER INSPECTION LOG, 2RTX-XSR1A

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Phase A Winding Temp (°C) (Should be < 105°C)							
7.2.1	Record Phase B Winding Temp (°C) (Should be < 105°C)							
7.2.1	Record Phase C Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.5	Record Gas Pressure Indicator Reading (Should read positive pressure) *							
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Busing Oil Level using sight glass	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.8	Check Tap Changer Oil Level (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.2	Record Tap changer Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

TCN- 3

TCN- 3

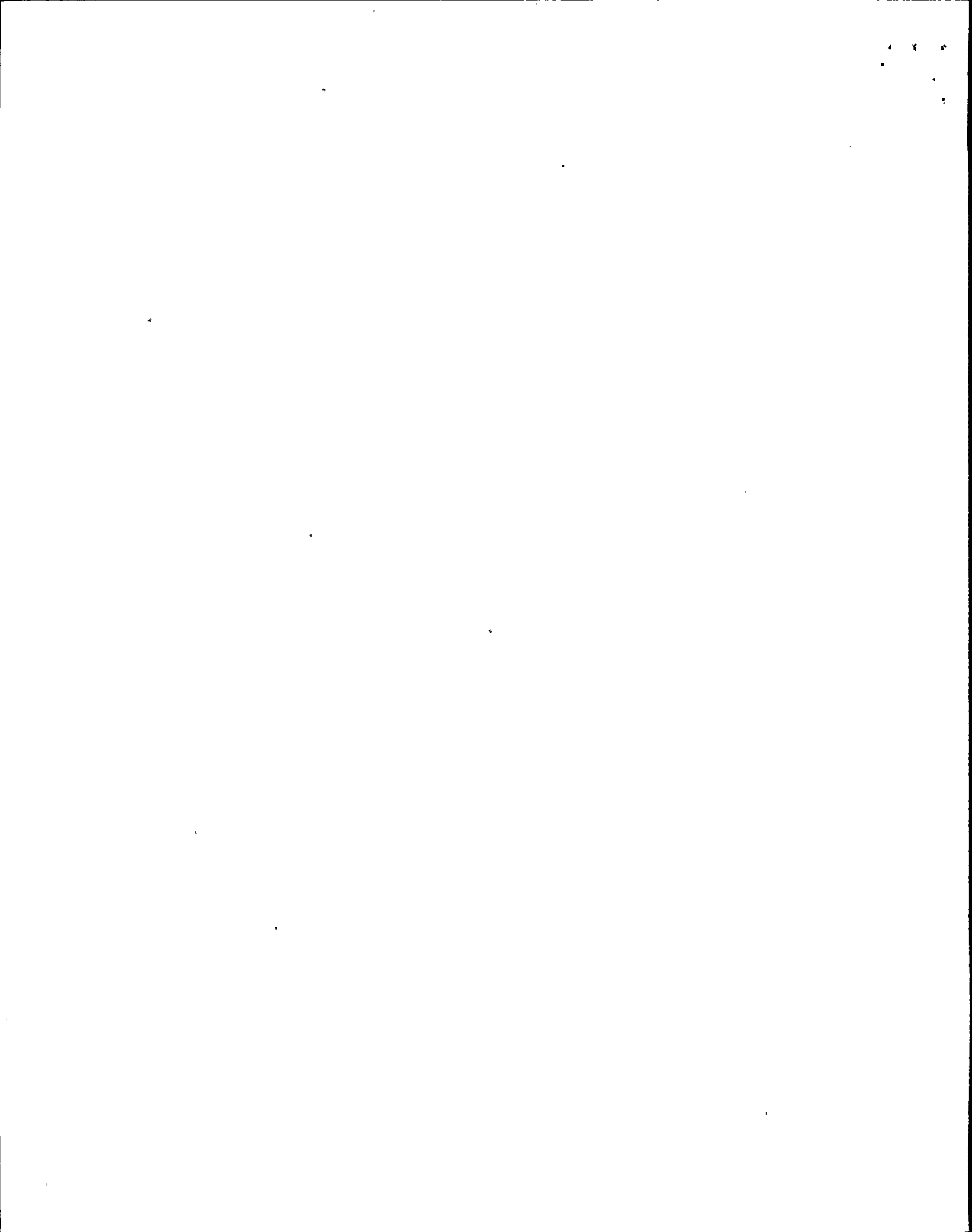
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Performed by (Initials/Date): _____ / _____ / _____ / _____ / _____ / _____ / _____

Remarks: _____

Reviewed by: _____ / _____
Asst. Maint.Supv. Date

See note at Step 7.2.5 for exception



OUTDOOR TRANSFORMER INSPECTION LOG, 2RTX-XSR1B

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Phase A Winding Temp (°C) (Should be < 105°C)							
7.2.1	Record Phase B Winding Temp (°C) (Should be < 105°C)							
7.2.1	Record Phase C Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.5	Record Gas Pressure Indicator Reading (Should read positive pressure) *							
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Busing Oil Level using sight glass	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.8	Check Tap Changer Oil Level (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.2.11	Oil Pump Status - Using flow meters, verify oil flow to operating fan banks. (N/A if pumps are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.2	Record Tap changer Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

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TCN-3

TCN-3

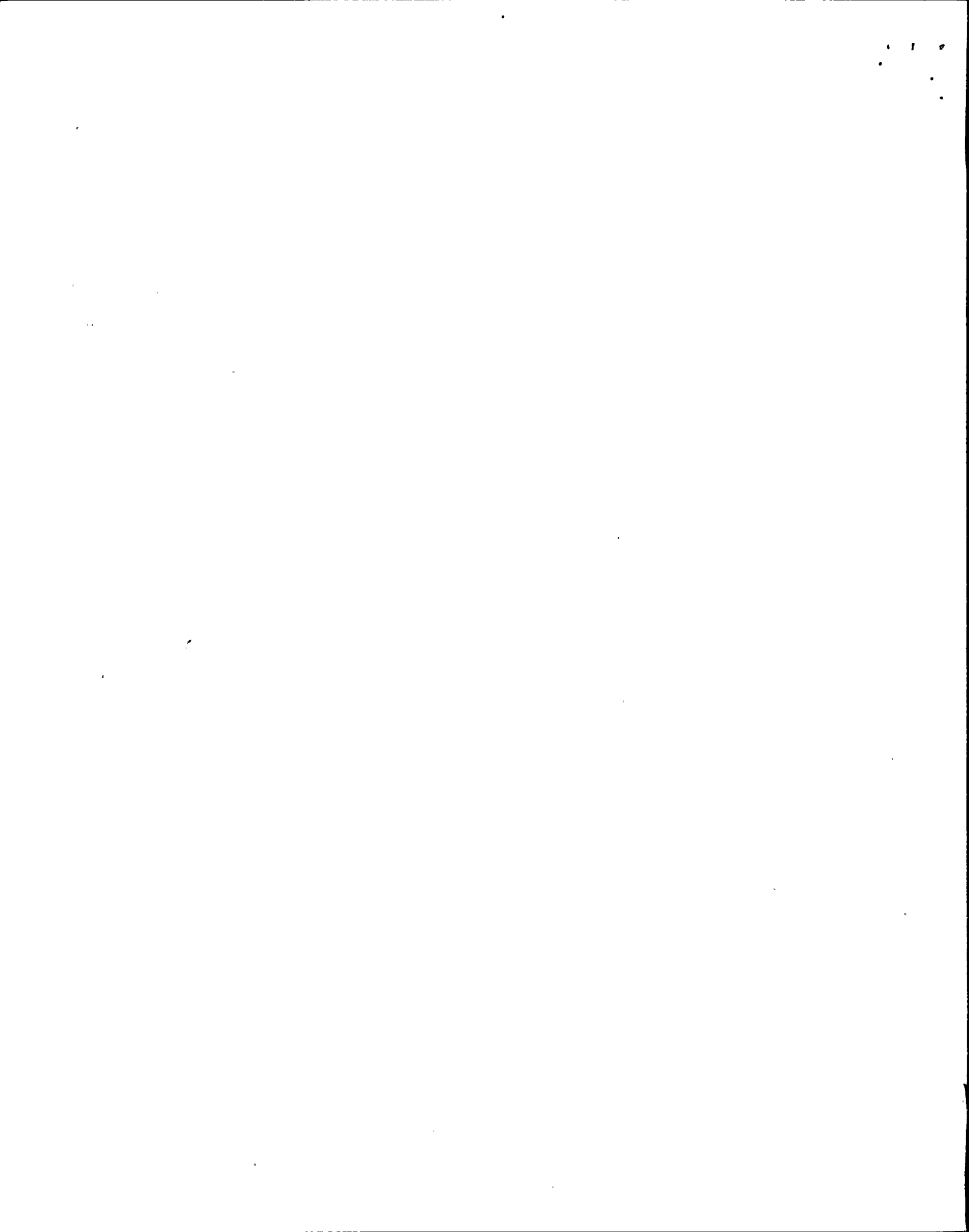
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Remarks: _____

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See note at Step 7.2.5 for exception

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OUTDOOR TRANSFORMER INSPECTION LOG, 2ATX-XS1

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Oil Temp (°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.5	Record Gas Pressure Indicator Reading* (Should read positive pressure)							
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

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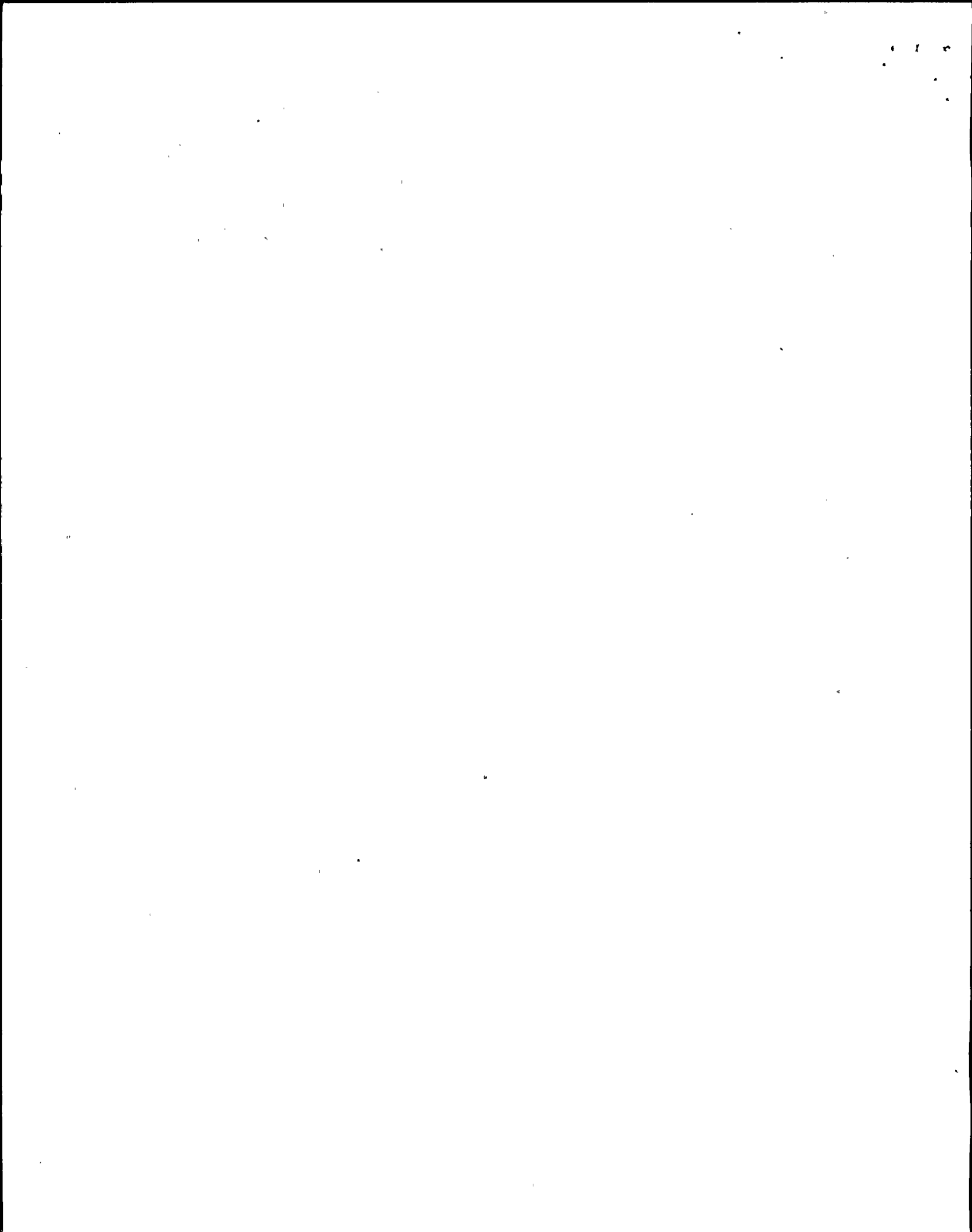
Performed by (Initials/Date): SUN / / MON / / TUES / / WED / / THUR / / FRI / / SAT / /

Remarks: _____

Reviewed by: _____ / _____
Asst. Maint.Supv. Date

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See note at Step 7.2.5 for exception



OUTDOOR TRANSFORMER INSPECTION LOG, 2ATX-XS3

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Winding Temp (°C) (Should be < 105°C)							
7.2.2	Record Transformer Oil Temp (°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.5	Record Gas Pressure Indicator Reading* (Should read positive pressure)							
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	On Off	On Off	On Off	On Off	On Off	On Off	On Off
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX XXXXX	On Off	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX XXXXX	SAT Unsat	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX

TCN- 3

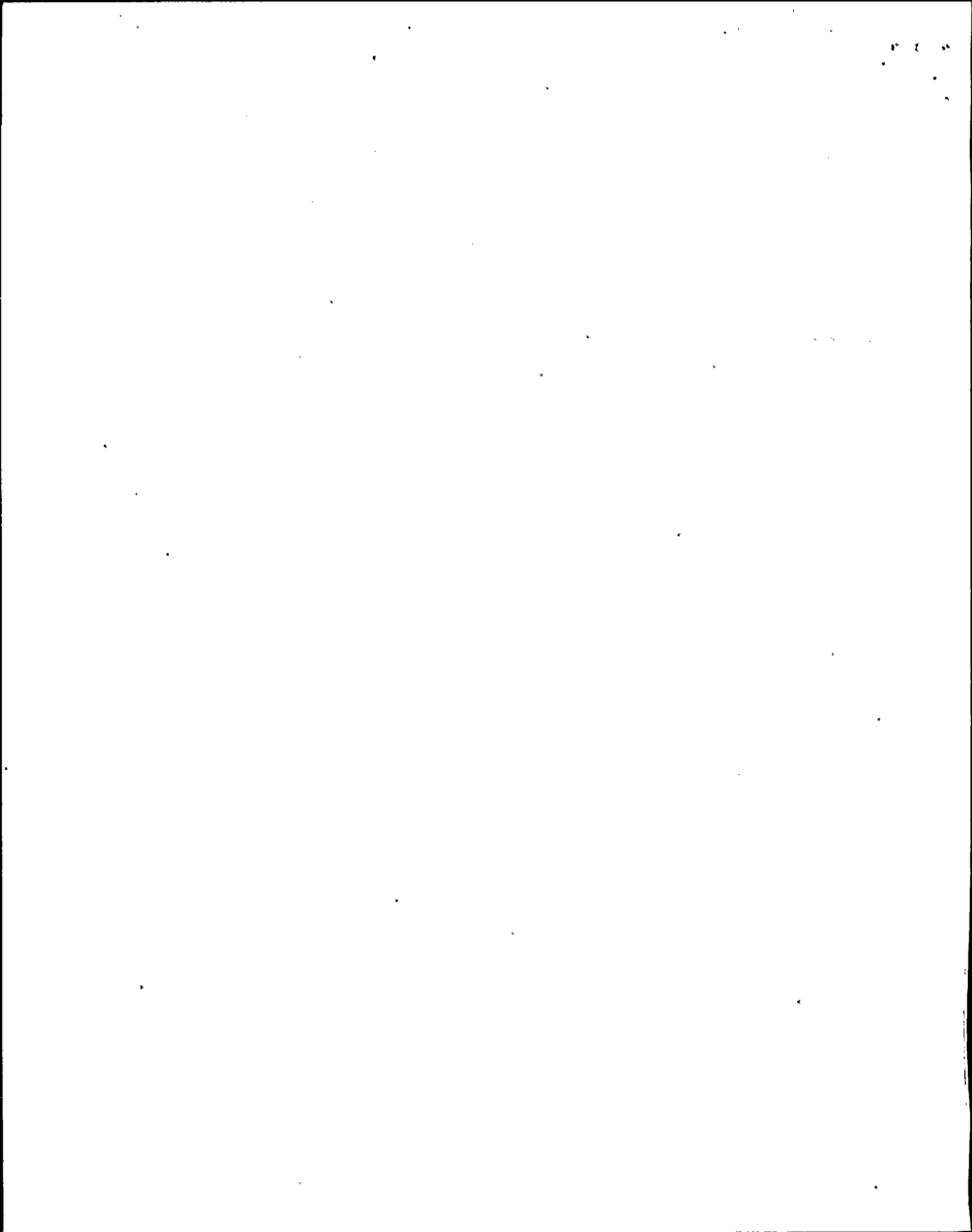
Performed by (Initials/Date): SUN / / MON / / TUES / / WED / / THUR / / FRI / / SAT / /

Remarks: _____

Reviewed by: _____ / _____
Asst. Maint.Supv. Date

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See note at Step 7.2.5 for exception



OUTDOOR TRANSFORMER INSPECTION LOG, 2ABS-X1

STEP No	DESCRIPTION	SUN	MON	TUES	WED	THUR	FRI	SAT
7.2.1	Record Phase H Winding Temp (°C) (Should be < 117°C)							
7.2.1	Record Phase X Winding Temp (°C) (Should be < 117°C)							
7.2.1	Record Phase Y Winding Temp (°C) (Should be < 117°C)							
7.2.2	Record Oil Temp (°C)							
7.2.3	Check X-former Oil Level Indicator (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.5	Record Gas Pressure Indicator Reading (Should read positive pressure) *							
7.2.6	Pressure Relief Device Inspection (Note below if reset)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.7	Check Bushing Oil Level Using gauge. (Should not read high or low)	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat	SAT Unsat
7.2.9	Cooling Fan Inspection - Circle which bank(s) are operating	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF	1 2 OFF
7.2.10	Cooling Fan Inspecting - Verify no single fan failures in operating bank(s) (N/A if fans are off)	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A	SAT Unsat N/A
7.3.3	Record Control Cabinet Heater Status (Monday Only)	XXXXX	On Off	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
7.3.4	Insp Cont. Cabinets for signs of dirt and moisture. Clean as needed (Monday Only)	XXXXX	SAT Unsat	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX

| TCN- 3

Performed by (Initials/Date): SUN / / MON / / TUES / / WED / / THUR / / FRI / / SAT / /

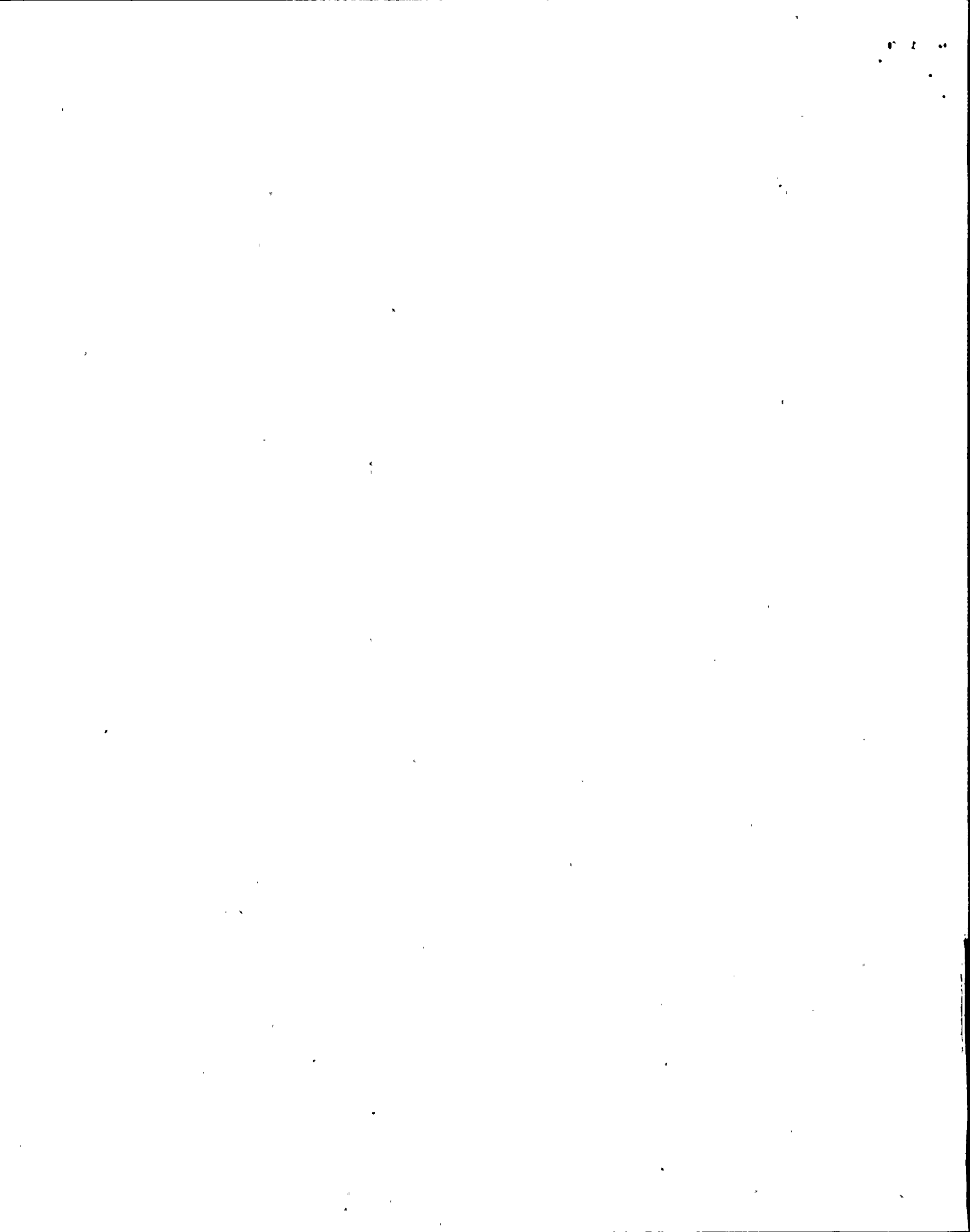
Remarks: _____

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SWITCHYARD INSPECTION LOG

STEP NO.	DESCRIPTION	SUN	MON	TUES	WED	THURS	FRI	SAT
7.4.1	Visually inspect switchyard bus, switchers, disconnects, etc. for unusual conditions.	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat
7.4.2	Verify switcher low gas pressure indicators sight glass color to be grey (Not Red).	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat
7.4.3	Verify interrupter trip indicators sight glass color to be grey (Not Yellow).	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat
7.4.4	Verify potential transformer liquid level indicators color to be white (Not Red).	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat	Sat Unsat
7.4.5	Verify control cabinet heaters operating for motor operated switches. (Monday Only)	XXX XXX	Sat Unsat	XXX XXX	XXX XXX	XXX XXX	XXX XXX	XXX XXX
7.4.6	Inspect motor operated switch control cabinets for dirty and moisture. Clean as needed. (Monday Only)	XXX XXX	Sat Unsat	XXX XXX	XXX XXX	XXX XXX	XXX XXX	XXX XXX

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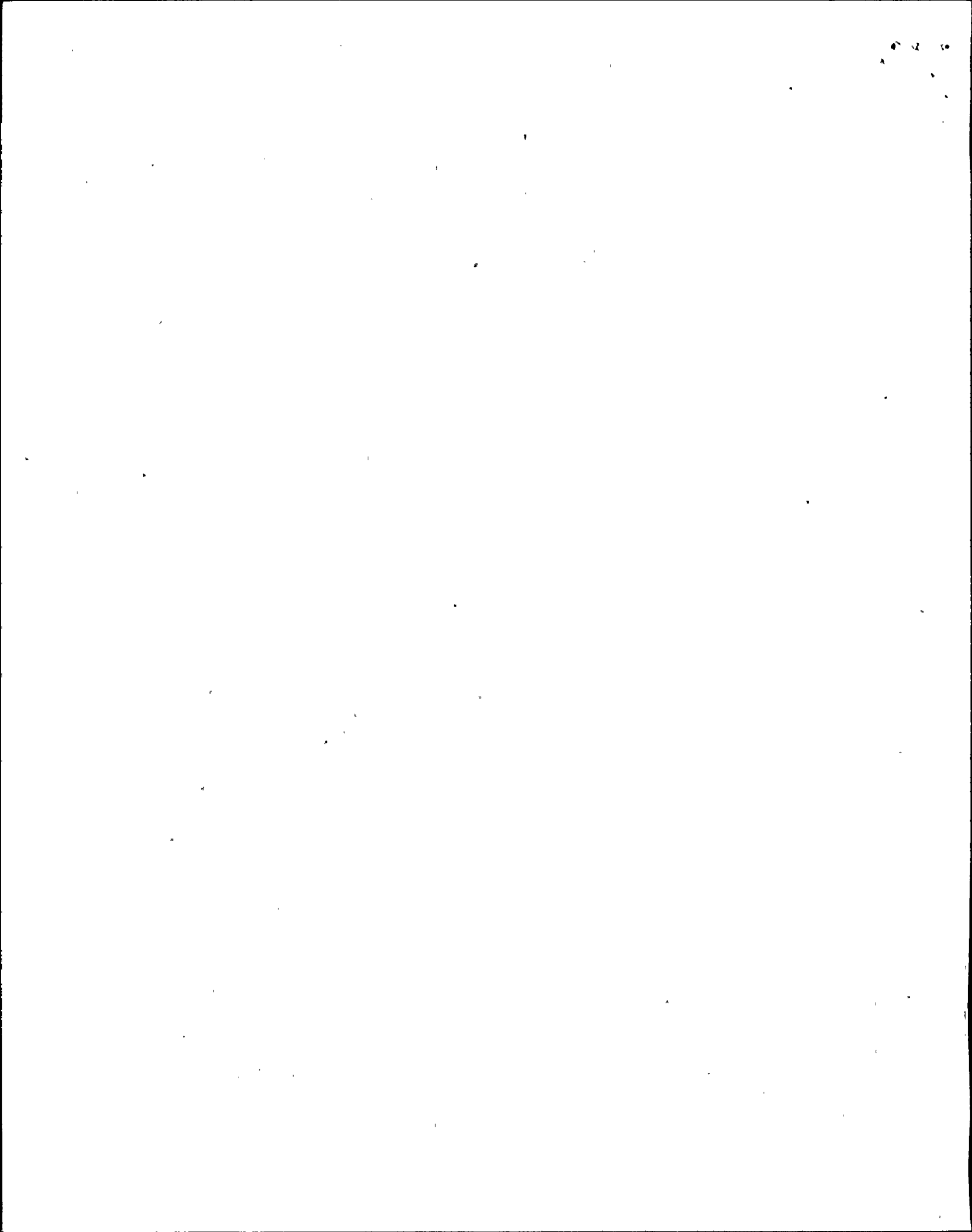
Performed by (Initials/Date): _____ / _____ / _____ / _____ / _____ / _____ / _____
 SUN MON TUES WED THURS FRI SAT

Remarks: _____

Reviewed By: _____ / _____
 Asst. Maint. Supv. Date

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ATTACHMENT 4

MANHOLE INSPECTION LOG

7.6 Maintenance Inspection of Manholes

Section N/A, Manhole inspection not performed.

() _____

	7.6.1 Mounting HARDWARE Unbolted	7.6.2 Missile Shields Removed	7.6.3 Manhole Cover Removed	7.6.4 MH Ck For Water	7.6.5 MH Ck For Debris	7.6.6 Replace MH Cover	7.6.7 Missile Shields Replaced	7.6.8 Mounting Hardware Bolted	Init/Date
MH #1 *									/
MH #2	N/A	N/A					N/A	N/A	/
MH #3 *									/
MH #5	N/A	N/A					N/A	N/A	/
MH #6	N/A	N/A					N/A	N/A	/
MH #7	N/A	N/A					N/A	N/A	/
MH #8	N/A	N/A					N/A	N/A	/
MH #11	N/A	N/A					N/A	N/A	/
MH #12	N/A	N/A					N/A	N/A	/
MH #13	N/A	N/A					N/A	N/A	/
MH #14	N/A	N/A					N/A	N/A	/

SMH #1	N/A	N/A					N/A	N/A	/
SMH #2	N/A	N/A					N/A	N/A	/
SMH #3	N/A	N/A					N/A	N/A	/
SMH #4	N/A	N/A					N/A	N/A	/
SMH #5	N/A	N/A					N/A	N/A	/
SMH #6	N/A	N/A					N/A	N/A	/
SMH #7	N/A	N/A					N/A	N/A	/
SMH #8	N/A	N/A					N/A	N/A	/
SMH #9	N/A	N/A					N/A	N/A	/
SMH #10	N/A	N/A					N/A	N/A	/
SMH #11	N/A	N/A					N/A	N/A	/
SMH #12	N/A	N/A					N/A	N/A	/
SMH #13	N/A	N/A					N/A	N/A	/
SMH #13A	N/A	N/A					N/A	N/A	/
SMH #13B	N/A	N/A					N/A	N/A	/

* Safety Related- (Protected by missile shield)

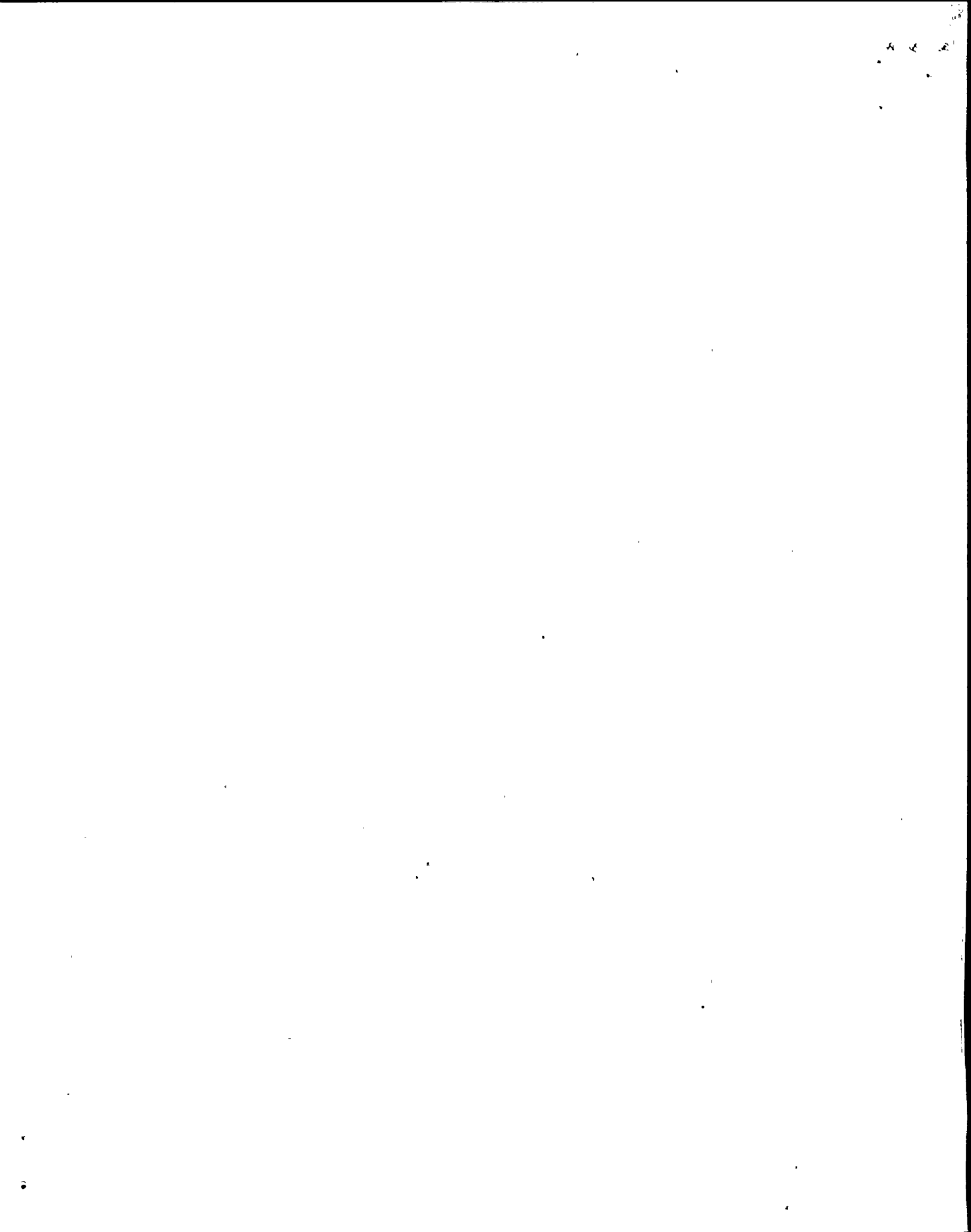
Remarks: _____

Reviewed By: _____ / _____

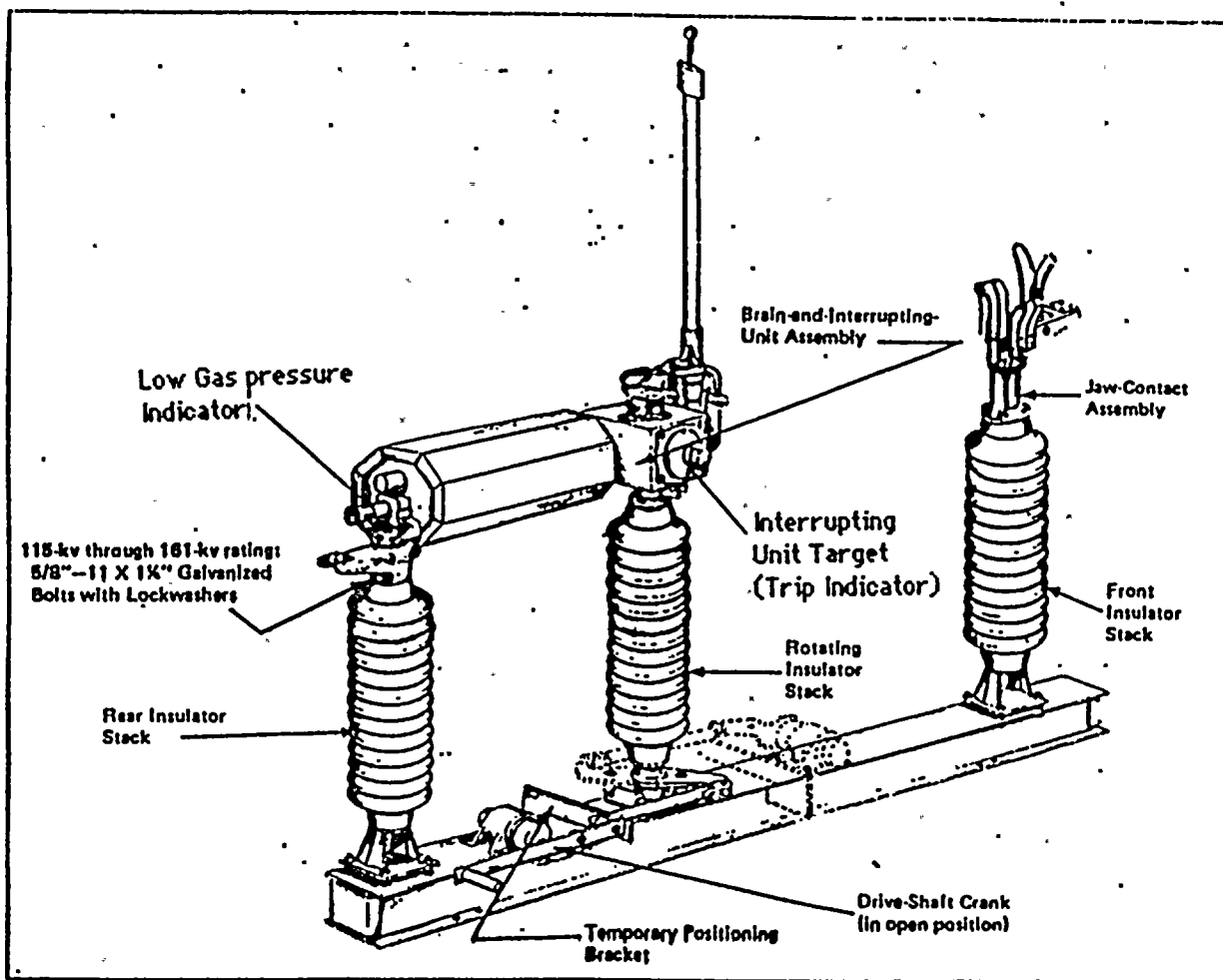
Asst. Maint. Supv.

Date

*5



CIRCUIT SWITCHER INDICATORS



*1

