



CURRENT TRANSFORMER PRIMARY INJECTION RATIO TEST



CUSTOMER SAMPLE FORMS COMPANY PAGE _____
 ADDRESS _____ JOB # FORMS-ALL
 USER SAMPLE FORMS COMPANY
 OWNER REPRESENTATIVE _____ TELEPHONE _____
 DATE 5/7/2008 TEMPERATURE _____ °F HUMIDITY _____ % EQPT. LOCATION _____
 SUBSTATION INSTRUMENT TRANSFORMERS POSITION GENERAL

NAMEPLATE DATA

MANUFACTURER _____ TYPE _____ STYLE/MODEL NO. _____
 VOLTAGE CLASS _____ FREQUENCY _____ HERTZ PART NO. _____
 CURRENT RATING _____ :5A PRIMARY CURRENT RATING _____ A SECONDARY CURRENT RATING _____ A
 BURDEN RATING _____ CURRENT TRANSFORMER TYPE: BAR TYPE
 ACCURACY CLASS _____ WINDOW: SOLID SPLIT CORE
 BASIC IMPULSE LEVEL _____ kV STYLE: ROUND RECTANGULAR

EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

CT IDENTIFICATION: _____ SERIAL NUMBER: _____ NAMEPLATE RATIO: _____

PRIMARY INJECTION TEST			INSULATION TEST			
	POINT 1	POINT 2			RDG.	20 °C
PRIMARY CURRENT APPLIED	_____ A	_____ A	PRIMARY - GROUND	@	kVDC	_____ MEGOHMS
TURN MULTIPLIER	_____	_____	SECONDARY - GROUND	@	1 kVDC	_____ MEGOHMS
SECONDARY CURRENT INDUCED	_____ A	_____ A	SECONDARY WIRING - GROUND	@	1 kVDC	_____ MEGOHMS
PANEL AMMETER READINGS	_____ A	_____ A				

CT IDENTIFICATION: _____ SERIAL NUMBER: _____ NAMEPLATE RATIO: _____

PRIMARY INJECTION TEST			INSULATION TEST			
	POINT 1	POINT 2			RDG.	20 °C
PRIMARY CURRENT APPLIED	_____ A	_____ A	PRIMARY - GROUND	@	kVDC	_____ MEGOHMS
TURN MULTIPLIER	_____	_____	SECONDARY - GROUND	@	1 kVDC	_____ MEGOHMS
SECONDARY CURRENT INDUCED	_____ A	_____ A	SECONDARY WIRING - GROUND	@	1 kVDC	_____ MEGOHMS
PANEL AMMETER READINGS	_____ A	_____ A				

CT IDENTIFICATION: _____ SERIAL NUMBER: _____ NAMEPLATE RATIO: _____

PRIMARY INJECTION TEST			INSULATION TEST			
	POINT 1	POINT 2			RDG.	20 °C
PRIMARY CURRENT APPLIED	_____ A	_____ A	PRIMARY - GROUND	@	kVDC	_____ MEGOHMS
TURN MULTIPLIER	_____	_____	SECONDARY - GROUND	@	1 kVDC	_____ MEGOHMS
SECONDARY CURRENT INDUCED	_____ A	_____ A	SECONDARY WIRING - GROUND	@	1 kVDC	_____ MEGOHMS
PANEL AMMETER READINGS	_____ A	_____ A				

DEVICES: RELAYS KWHR PANEL METERS TRANSDUCERS OTHER _____

COMMENTS: _____
 DEFICIENCIES: _____

EQPT. INVENTORY NO. _____ TESTED BY: _____



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NAMEPLATE DATA

MANUFACTURER _____ VOLTAGE RATING _____ VOLTS
 PHASE TYPE _____ STYLE _____ RATIO _____
 CT IDENTIFICATIONS PHASE A: _____ PHASE B: _____ PHASE C: _____

SATURATION											
VOLTAGES											CORE SATURATION VOLTAGE (VOLTS)
PHASE A (AMPERES)											
PHASE B (AMPERES)											
PHASE C (AMPERES)											

BURDEN							RATIO TEST (IN VOLTS)	CALCULATED RATIO
	LOAD		RELAY		MINIMUM CT VOLTAGE			
	VOLTAGE @ 1 AMPERE (VOLTS)	CALCULATED IMPEDANCE (OHMS)	MAXIMUM SETTING (AMPERES)	MAXIMUM RANGE (AMPERES)	IMPEDANCE X SETTING (VOLTS)			
PHASE A							PRIMARY	
							SECONDARY	
PHASE B							PRIMARY	
							SECONDARY	
PHASE C							PRIMARY	
							SECONDARY	

CT LOAD	
PHASE A	
PHASE B	
PHASE C	

POLARITY	<input type="radio"/> SUBTRACTIVE	<input type="radio"/> ADDITIVE
INSULATION RESISTANCE TEST AT _____ VOLTS DC	_____ MEGOHMS	
GROUND REPLACED		

COMMENTS: _____
 DEFICIENCIES: _____

EQPT. INVENTORY NO. _____ TESTED BY: _____



CURRENT TRANSFORMER RATIO SATURATION TEST



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NAMEPLATE DATA

MANUFACTURER _____ TYPE _____ STYLE / MODEL NO. _____
 VOLTAGE CLASS _____ FREQUENCY _____ HERTZ PART NO. _____
 BURDEN RATING _____ NAMEPLATE RATIO _____ : 5 SERIAL NO. _____
 ACCURACY CLASS _____ CURRENT TRANSFORMER TYPE: BAR TYPE
 BASIC IMPULSE LEVEL _____ kV WINDOW: SOLID SPLIT CORE
 OTHER _____ STYLE: ROUND RECTANGULAR

POSITION GENERAL

PHASE X Y Z N
 LINE SIDE LOAD SIDE

CT SET ID _____

NAMEPLATE RATIO _____ : 5

MEASURED RATIO _____ : 5

ERROR _____ %

POLARITY IN PHASE OUT OF PHASE

PHASE ANGLE _____ °

EXCITATION VOLTAGE _____

EXCITATION CURRENT _____

KNEE VOLTAGE _____

KNEE POINT TYPE _____

FILE NAME _____

TEST NUMBER _____

CT DATA POINT	CURRENT IN AMPERES	VOLTAGE IN VOLTS	IMPEDANCE IN OHMS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

COMMENTS: _____
 DEFICIENCIES: _____

EQPT. INVENTORY NO. _____ TESTED BY: _____



CURRENT TRANSFORMER RATIO SATURATION TEST



PAGE _____

SUBSTATION _____ INSTRUMENT TRANSFORMERS _____ POSITION _____ GENERAL _____ JOB # FORMS-ALL _____

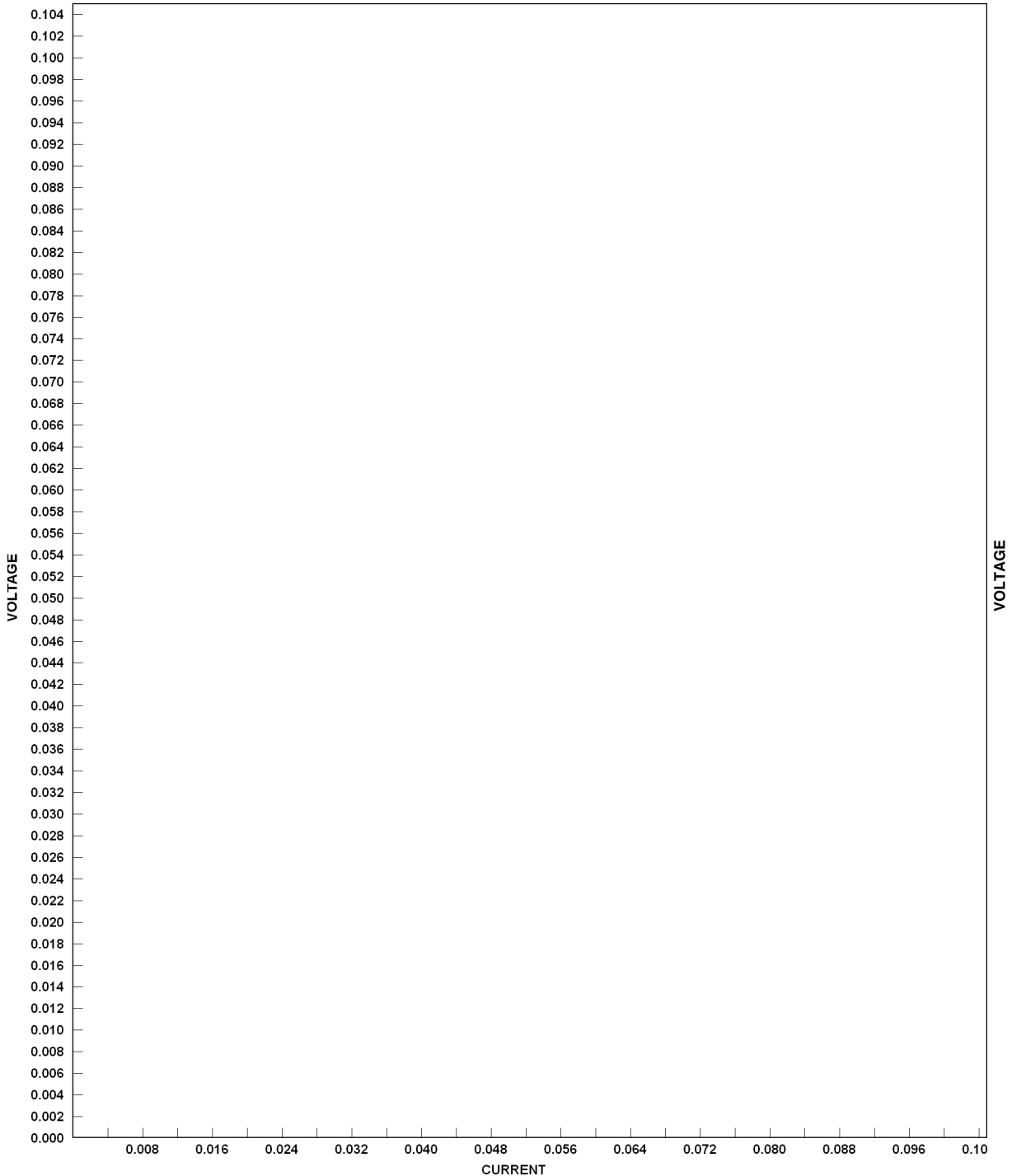
PHASE X Y Z N SERIAL NO. _____

CT SET ID _____ LINE SIDE LOAD SIDE NAMEPLATE RATIO _____ : 5

MEASURED RATIO _____ : 5

ERROR _____ %

CURRENT





CURRENT TRANSFORMER RATIO SATURATION TEST



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NAMEPLATE DATA

MANUFACTURER _____ TYPE _____ STYLE / MODEL NO. _____
 VOLTAGE CLASS _____ FREQUENCY _____ HERTZ PART NO. _____
 BURDEN RATING _____ NAMEPLATE RATIO _____ : 5 SERIAL NO. _____
 ACCURACY CLASS _____ CURRENT TRANSFORMER TYPE: BAR TYPE
 BASIC IMPULSE LEVEL _____ kV WINDOW: SOLID SPLIT CORE
 OTHER _____ STYLE: ROUND RECTANGULAR

POSITION GENERAL

PHASE X Y Z N
 LINE SIDE LOAD SIDE

CT SET ID _____

NAMEPLATE RATIO _____ : 5

MEASURED RATIO _____ : 5

ERROR _____ %

POLARITY IN PHASE OUT OF PHASE

PHASE ANGLE _____ °

EXCITATION VOLTAGE _____

EXCITATION CURRENT _____

KNEE VOLTAGE _____

KNEE POINT TYPE _____

FILE NAME _____

TEST NUMBER _____

CT DATA POINT	CURRENT IN AMPERES	VOLTAGE IN VOLTS	IMPEDANCE IN OHMS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

COMMENTS: _____
 DEFICIENCIES: _____

EQPT. INVENTORY NO. _____ TESTED BY: _____



CURRENT TRANSFORMER RATIO SATURATION TEST



PAGE _____

SUBSTATION _____ INSTRUMENT TRANSFORMERS _____ POSITION _____ GENERAL _____ JOB # FORMS-ALL _____

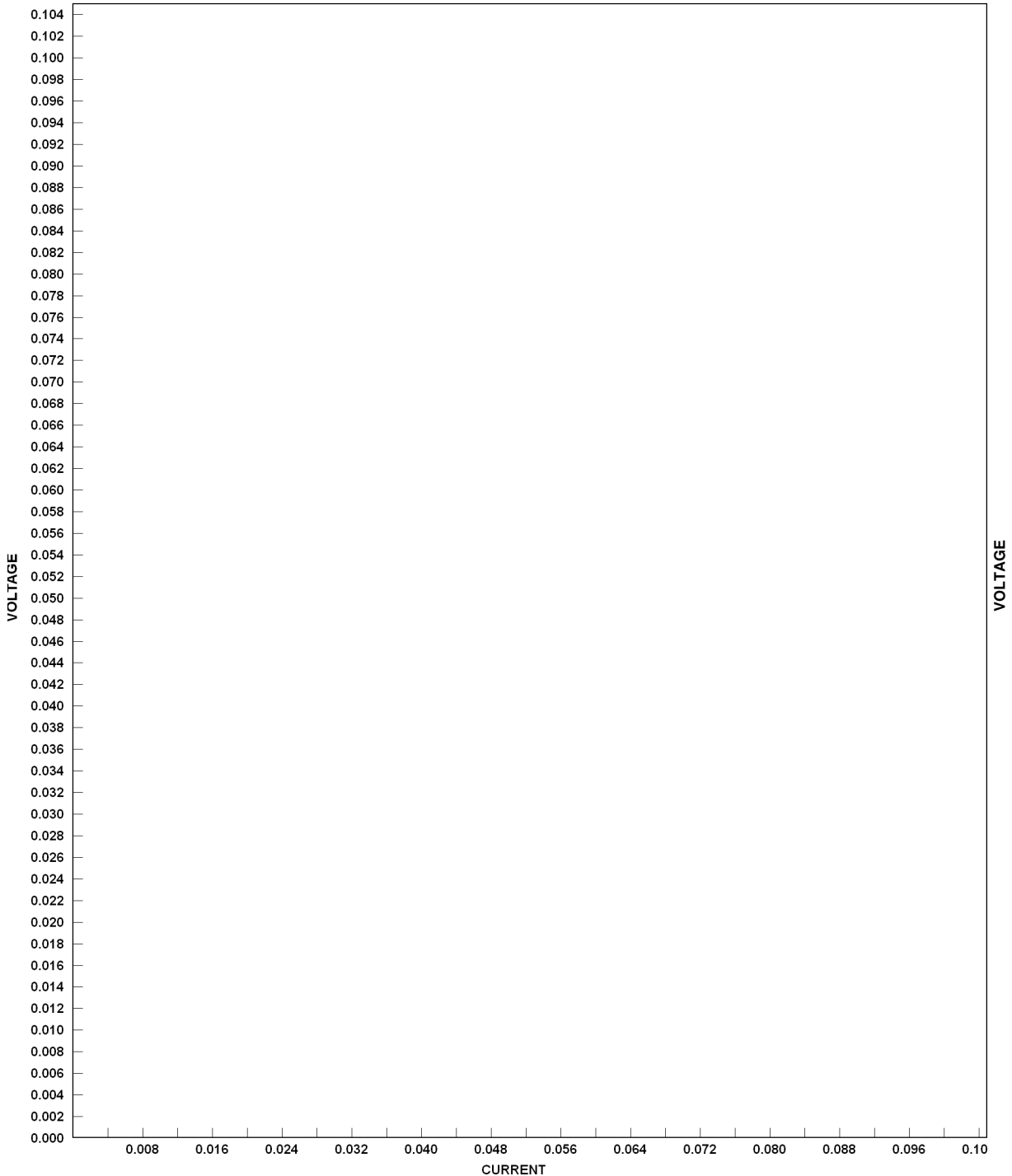
PHASE X Y Z N SERIAL NO. _____

CT SET ID _____ LINE SIDE LOAD SIDE NAMEPLATE RATIO _____ : 5

MEASURED RATIO _____ : 5

ERROR _____ %

CURRENT





VOLTAGE TRANSFORMER TEST



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NAMEPLATE DATA

MANUFACTURER _____ CATALOG NO. _____ TYPE _____ NAMEPLATE RATIO _____ : _____
 PRIMARY VOLTAGE _____ SECONDARY VOLTAGE _____ KVA _____ CLASS _____
 OTHER _____
 PRIMARY FUSE: MANUFACTURER _____ TYPE _____ SIZE _____ NO. _____
 SECONDARY FUSE: MANUFACTURER _____ TYPE _____ SIZE _____ NO. _____

EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

VT IDENTIFICATION:**SERIAL NUMBER:**

TURNS RATIO TEST					INSULATION TEST				
					RDG.	20°C			
CALCULATED TURNS RATIO	_____				PRI - SEC @	KVDC	_____	_____	MEGOHMS
MEASURED TURNS RATIO	_____				PRI - GRD @	KVDC	_____	_____	MEGOHMS
CONNECTIONS	H ₁	H ₂	X	X	SEC - GRD @	KVDC	_____	_____	MEGOHMS
POLARITY	_____		ERROR	_____ %					

VT IDENTIFICATION:**SERIAL NUMBER:**

TURNS RATIO TEST					INSULATION TEST				
					RDG.	20°C			
CALCULATED TURNS RATIO	_____				PRI - SEC @	KVDC	_____	_____	MEGOHMS
MEASURED TURNS RATIO	_____				PRI - GRD @	KVDC	_____	_____	MEGOHMS
CONNECTIONS	H ₁	H ₂	X	X	SEC - GRD @	KVDC	_____	_____	MEGOHMS
POLARITY	_____		ERROR	_____ %					

VT IDENTIFICATION:**SERIAL NUMBER:**

TURNS RATIO TEST					INSULATION TEST				
					RDG.	20°C			
CALCULATED TURNS RATIO	_____				PRI - SEC @	KVDC	_____	_____	MEGOHMS
MEASURED TURNS RATIO	_____				PRI - GRD @	KVDC	_____	_____	MEGOHMS
CONNECTIONS	H ₁	H ₂	X	X	SEC - GRD @	KVDC	_____	_____	MEGOHMS
POLARITY	_____		ERROR	_____ %					

VT CONNECTION: 1 PHASE 3 PHASE PRIMARY: WYE DELTA SECONDARY: WYE DELTA

COMMENTS: _____
 DEFICIENCIES: _____

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CONTROL POWER TRANSFORMER TEST



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NAMEPLATE DATA

MANUFACTURER _____ CATALOG NO. _____ TYPE _____ NAMEPLATE RATIO _____ : 1.000
 PRIMARY VOLTAGE _____ SECONDARY VOLTAGE _____ / _____ kVA _____ CLASS _____
 OTHER _____
 PRIMARY FUSE: MANUFACTURER _____ TYPE _____ SIZE _____ NO. _____
 SECONDARY FUSE: MANUFACTURER _____ TYPE _____ SIZE _____ NO. _____

EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

IDENTIFICATION: _____

SERIAL NUMBER: _____

TURNS RATIO TEST				INSULATION TESTS			
TEST CONNECTIONS	CALCULATED RATIO	MEASURED RATIO	% ERROR		RDG.	20°C	
X ₁ X ₃	_____	_____	_____	PRI - SEC @	kVDC	_____	_____ MEGOHMS
H ₁ H ₂ X ₂ X ₄	_____	_____	_____	PRI - GRD @	kVDC	_____	_____ MEGOHMS
X ₁ X ₄	_____	_____	_____	SEC - GRD @ 1.0	kVDC	_____	_____ MEGOHMS
POLARITY _____							

IDENTIFICATION: _____

SERIAL NUMBER: _____

TURNS RATIO TEST				INSULATION TESTS			
TEST CONNECTIONS	CALCULATED RATIO	MEASURED RATIO	% ERROR		RDG.	20°C	
X ₁ X ₃	_____	_____	_____	PRI - SEC @	kVDC	_____	_____ MEGOHMS
H ₁ H ₂ X ₂ X ₄	_____	_____	_____	PRI - GRD @	kVDC	_____	_____ MEGOHMS
X ₁ X ₄	_____	_____	_____	SEC - GRD @ 1.0	kVDC	_____	_____ MEGOHMS
POLARITY _____							

COMMENTS: _____
 DEFICIENCIES: _____

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NAMEPLATE DATA

MANUFACTURER _____ CATALOG NO. _____ TYPE _____ NAMEPLATE RATIO _____ : 1.000
 PRIMARY VOLTAGE _____ / _____ SECONDARY VOLTAGE _____ kVA _____ CLASS _____
 OTHER _____
 PRIMARY FUSE: MANUFACTURER _____ TYPE _____ SIZE _____ NO. _____
 SECONDARY FUSE: MANUFACTURER _____ TYPE _____ SIZE _____ NO. _____

EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

IDENTIFICATION: _____

SERIAL NUMBER: _____

TURNS RATIO TEST				INSULATION TEST				
TEST CONNECTIONS	CALCULATED RATIO	MEASURED RATIO	% ERROR			RDG.	20°C	
H ₁ H ₃	_____	_____	_____	PRIMARY - SECONDARY	@	kVDC	_____	MEGOHMS
H ₂ H ₄ X ₁ X ₂	_____	_____	_____	PRIMARY - GROUND	@	kVDC	_____	MEGOHMS
H ₁ H ₄	_____	_____	_____	SECONDARY - GROUND	@	1.0 kVDC	_____	MEGOHMS
POLARITY _____								

IDENTIFICATION: _____

SERIAL NUMBER: _____

TURNS RATIO TEST				INSULATION TEST				
TEST CONNECTIONS	CALCULATED RATIO	MEASURED RATIO	% ERROR			RDG.	20°C	
H ₁ H ₃	_____	_____	_____	PRIMARY - SECONDARY	@	kVDC	_____	MEGOHMS
H ₂ H ₄ X ₁ X ₂	_____	_____	_____	PRIMARY - GROUND	@	kVDC	_____	MEGOHMS
H ₁ H ₄	_____	_____	_____	SECONDARY - GROUND	@	1.0 kVDC	_____	MEGOHMS
POLARITY _____								

COMMENTS: _____
 DEFICIENCIES: _____

EQPT. INVENTORY NO. _____ TESTED BY: _____



POTENTIAL TRANSFORMER



CUSTOMER SAMPLE FORMS COMPANY PAGE _____
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MFR _____ YEAR _____ REASON _____ CLASS _____
 CATALOG/STYLE _____ WEATHER _____ TANK TEMP. _____ °C kV _____
 IMPEDANCE _____ % OIL VOL. _____ GAL WEIGHT _____ LB VA RATING _____
 INSULATION TYPE _____ BIL _____ kV TYPE _____

TRANSFORMER OVERALL TESTS														
TEST NO.	INSULATION TESTED	TEST MODE	TEST CONNECTIONS BUSHING				TEST kV	CAPACITANCE C (PF)	% POWER FACTOR			EQUIV		IR
			ENG	GND	GAR	UST			MEAS.	20° C	CORR.	mA	WATTS	
1		GND	H1,H2	X1,Y1										
2		GAR	H1	X1,Y1	H2									
3		GAR	H2	X1,Y1	H1									
4		UST	H1	X1,Y1		H2								
5		UST	H2	X1,Y1		H1								
6		GND	H1,H2	X1,Y1	@2kV									

SUPPLEMENTAL TESTS														
TEST NO.	INSULATION TESTED	TEST MODE	TEST CONNECTIONS (WINDINGS)				TEST kV	CAPACITANCE C (PF)	% POWER FACTOR			EQUIV		INSUL-
			ENG	GND	GAR	UST			MEAS.	20° C	CORR.	mA	WATTS	
7		UST	H1,H2	Y1		X1								
8		UST	H1,H2	X1		Y1								
9		GAR	H1		H2,X1,Y1									
10		GAR	H2		H1,X1,Y1									

BUSHING TESTS													
TEST NO.	BUSHING SERIAL NO.		NAMEPLATE		TEST kV	CAPACITANCE C (PF)	MEAS.	20° C	CORR.	mA	WATTS	IR	
			POWER FACTOR	CAPACITANCE									
C1	11		UST										
	12		UST										
C2	13		GRD										
	14		GRD										

COMMENTS: _____
 DEFICIENCIES: _____

EQPT. INVENTORY NO. _____ TESTED BY: _____



POTENTIAL TRANSFORMER



PAGE _____

HOT COLLAR TESTS								
	Term ID	ID	TEST MODE	SKIRT #	TEST kV	mA	WATTS	IR
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								



CURRENT TRANSFORMER



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 SUBSTATION INSTRUMENT TRANSFORMERS POSITION GENERAL

MFR _____ YEAR _____ REASON _____ CLASS _____
 CATALOG/STYLE _____ WEATHER _____ TANK TEMP. _____ °C kV _____
 IMPEDANCE _____ % OIL VOL. _____ GAL WEIGHT _____ LB Amps _____
 INSULATION TYPE _____ BIL _____ kV TYPE _____ Secondary Ohms _____
 C1 % Power Factor _____ C1 Capacitance _____
 C2 % Power Factor _____ C2 Capacitance _____

CURRENT RATIOS							

TRANSFORMER OVERALL TESTS														
TEST NO.	INSULATION TESTED	TEST MODE	TEST CONNECTIONS BUSHING				TEST kV	CAPACITANCE C (PF)	% POWER FACTOR			EQUIV		IR
			ENG	GND	GAR	UST			MEAS.	20° C	CORR.	mA	WATTS	
1		GND	H1,H2											
2		UST	H1,H2			TAP								
3		GAR	TAP			H1,H2								
4		GND	H1,H2			@2kV								
5		Misc. Test 1												
6		Misc. Test 2												

HOT COLLAR TESTS							
Term ID	ID	SKIRT #	TEST MODE	TEST kV	mA	WATTS	
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

COMMENTS: _____
 DEFICIENCIES: _____

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