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Volume II Section TV

AP-S-IV-01

Standard of Annual Schedule of Distribution Activity

AS-P-IV-1: Standard of Annual Schedule of Distribution Activity

	SEASON			DRY	44				RAINY	<b>&gt;</b>			DRY	_
	MONTH		JAN	FEB	MAR	APR	MAY	NOU	JUL	AUG	SEP	OCT	NOV	DEC
OPERATION	DATA ANALYSYS													
	MEASUREMENT	SCHEDULED												
		IRREGULAR												
SCHEDULED OUTAGE	GE													
FAULT RESTORATION	NO													
MAINTENANCE	PATROL&INSPECTION													
	CUT/TRIM TREES													
	OUTSIDER NEGOTIATION													
	SPARE PARTS/TOOLS/FACILITY BOOK	LITY BOOK												
CUSTOMER'S REQUEST&CLAIM	JEST&CLAIM													
CONSTRUCTION	SCHEDULED													
	IRREGULAR											11-04		
CONTRACT ISSUE(METERING, etc.)	METERING, etc.)													

AS-P-IV-02 Standard of Monthly Schedule of Distribution Activity

AS-P-IV-2: Standard of Monthly Schedule of Distribution Activity

To the second se	WEEK		<u> </u>	-	<b>-</b>		-				73	-	<u> </u>							_ <u>_</u>		7		ļ			,
	UAY		-	2	4	2	9	8	6	9		12 13	3 14	15	16	17 1	18 19	9 20	21	22	23 24	25	56	27	28 2	30	3,
OPERATION	DATA ANALYSYS																	_									
	MEASUREMENT	SCHEDULED																									
		IRREGULAR																									
SCHEDULED OUTAGE	(GE												-								-	_				-	
FAULT RESTORATION	ION																4									-	-
MAINTENANCE	PATROL&INSPECTION WEEKLY	WEEKLY		-									-								-				-	-	-
		YEARLY																			-	ļ					
	CUT/TRIM TREES																										
	OUTSIDER NEGOTIATION	Z																									
	SPARE PARTS/TOOLS/F. BOOK	. BOOK																									
CUSTOMER'S REQUEST&CLAIM	UEST&CLAIM																										
CONSTRUCTION	SCHEDULED	The state of the s																			-						
	IRREGULAR																										
CONTRACT ISSUE METERING	METERING																				_					-	
	DERIVER INVOICE																										
	DISCONNECT/RECONNECT	≡ст																									

**Typical Usage of Measuring Instruments** AS-P-IV-03

AS-P-IV-3: Typical Usage of Measuring Instruments

Usage	Voltage Detector	Insulation Tester	n Tester	Clump Meter	Digital Mutti Meter	Power Quality Analyzer	Clump-On Power High	Power High Tester	Earth Registance
		10001	2500V				ester		lester
Inspection of Customers' Circuit									
Insulation Resistance		0							
Momentary Voltage		0		0	0				
Momentary Current				0					
Fluctuation of Voltage&Current						0	0		
Regular Measurement of LV Line									
Insulation Resistance		0							
Current Leakage	0			0					
Earth Resistance									0
Load of Transformer						0	0		
Fluctuation of Voltage						0	0		
Irregular Measurement of MV Line									
Insulation Resistance			×						
Operation Analisys of PS									
Harmonics&Flicker						0	0		
Checking Watt-hour Meter									
Watt-hour								С	

\* : Very Dangerous because of High Voltage. Never Use if You do not Understand the Manual Completely!

AS-P-IV-3

AP-S-IV-04 Sample Form of SCHEDULED OUTAGE REPORT

EDOLED OF	JTAGE REPORT  24-Feb-09	<u> </u>	
	Installation of 10kVA Trans		e
		tormer to On-Ou	10
	OR-066		
	To supply electricity to a		
	Mr. Noda, TOE		
From		mis P/S	
То	<u> </u>	al S/S F1	
	PMT01, PMT02,		
notification*         24-Feb-09           of notification         loudspeaker           PROCEDURE         Outage PMT         TIME           Scheduled         Result			
			Scheduled
	_		
<del> </del>	PMT01,PMT02,PMT03	13:00	13:05
	PMT01,PMT02,PMT03		
•	PMT01,PMT02,PMT03		
	PMT01,PMT02,PMT03		
	PMT01,PMT02,PMT03		
	PMT01,PMT02,PMT03		
ıllation	PMT01,PMT02,PMT03		
allation	PMT01,PMT02,PMT03		
g Tool	PMT01,PMT02,PMT03		
g Tool	PMT01,PMT02,PMT03		
	PMT01,PMT02,PMT03		
	-	16:00	15:30
Equipment	_		
	_		
	_		
			<del></del>
	PMT01		2:25
			2:25
	PMT03		2:25
-		PMT02	РМТ02

<sup>\*</sup> EAC Standard : At least 2 days before outage in case of outage of duration 1 hour or more \*\* EAC Standard : 12 hours or less

AP-S-IV-05

Sample Form of FAULT OUTAGE RECOVERY LOG SHEET (Distribution)

### AP-S-IV-5:

Sample Form of FAULT OUTAGE RECOVERY LOG SHEET (Distribution)

Date	Outage time		Weather		
3-Apr-09	13:10	0			Rain with thunder
Customer Report	Nam	е			<del>-</del>
	Date &	Time			
	Conte	nts			-
P/S Situation	O'Romis	P/S	V0=21kV, O	vercurrent, M	ICB Shutdown (60kW)
(Output	Diesel F	P/S	V0=22kV, V	0-Overvoltag	e (100kW)
before outage)	O'Moleng	P/S	Scheduled S	Stopping (OkW	()
Responsible Person	Order of O	peration			Mr.Kong Piseth
	Transmi	ssion			Mr. Savuth Sothea
	DG P	/S			Mr. Yeb Thav
Pro	cedure		Date	Time	Condition(P/S, Site)
Diesel P/S MCB		OFF	3-Apr	13:10	
District S/S F1,F2,F3		OFF	3-Apr	13:20	
Hospital S/S F1,F2,F3		OFF	3-Apr	13:25	
Diesel P/S MCB		ON	3-Apr	13:28	GOOD
Hospital S/S F1		ON	3-Apr	13:28	GOOD
Hospital S/S F2		ON	3-Apr	13:28	GOOD
Hospital S/S F3		ON	3-Apr	13:28	GOOD
District S/S F2		ON	3-Apr	13:34	GOOD
District S/S F3		ON	3-Apr	13:35	GOOD
District S/S F1		ON	3-Apr	13:36	GOOD
Inspection	· · · · · · · · · · · · · · · · · · ·	Date	From	То	Result
MV Line of O'Romis Side		3-Apr	13:50	15:00	GOOD
MV Line of O'Moleng Sid	e	3-Apr	13:50	15:00	GOOD
From OM108 to OM135		4-Apr	14:30	15:00	GOOD
Reason for Fault	· · · · · · · · · · · · · · · · · · ·				
Unkown — Probably the					
Comments by JICA adv					
radio, so that DG P/S In Distribution equipment's	dicator can be ob abnormal conditi	oserved an on.	d do the next	action quick	order operations to Distribution team lay if Distribution team finds some and the other is to go to District S/S.

\*EAC Standard : 60% within 6 hours, all case within 24 hours, except MV Cable

AP-S-IV-06 Trial Charge Pattern A: (From DG up to 300kW)

## AP-S-IV-6: Trial Charge Pattern A: (From DG up to 300kW)

\* To find Fault Point of MV Line, we have to charge each of MV-Line Section and detect abnormal indication at Diesel Power Station.

: Order & Confirm the result

**1** 

	<b>□</b>	: Action & Report	port		
	Responsible	Distribution	Diesel P/S	O'Romis P/S	O'Moleng P/S
A) Confirm Safety	The same	The second			TIPON I
1 To Comfirm that every staff is safe and keeping away from M/V line	1		1	1	
B) Separate Each Circuit					
2 To Open Main MCB in Diesel P/S	1		1		
3 To Open Main MCB in O'Romis P/S	1			1	
4 To Open Main MCB in O'Moleng P/S	1				
5 To Comfirm that LBS-1 is Open	1				
6 To Open F1 LBS in Hospital S/S	<b>†</b>	□ ↑			
7 To Open F2 LBS in Hospital S/S	<b>†</b>	<b>□</b>			
8 To Open F3 LBS in Hospital S/S	1	1			
9 To Open TR1 LBS in Hospital S/S	1	1			
10 To Open TR2 LBS in Hospital S/S	<b>1</b>	□ ↑			
11 To Open F1 LBS in District Office S/S	<b>↑</b>	<b>□</b>			
12 To Open F2 LBS in District Office S/S	<b>†</b>	1			
13 To Open F3 LBS in District Office S/S	1	1			
14 To Open TR1 LBS in District Office S/S	1	1			
15 To Open TR2 LBS in District Office S/S	1	1			
16 To Open LBS-2	1	1			
C) Start Diesel P/S					
17 To Stand by Diesel P/S	<b>1</b>		<b>□</b>		

## Trial Charge Pattern A: (From DG up to 300kW)

	<b>1</b>	: Order & Confirm : Action & Report	: Order & Confirm the result : Action & Report	<u>.</u>	
	Responsible	Distribution	Diesel P/S	O'Romis P/S	O'Moleng P/S
	Person	team	team	feam	team
D) Search Fault Circuit					
18 To Close Main MCB in Diesel P/S	<b>^</b>		1		
19 To Confirm that any indicator is normal in Diesel P/S	<b>^</b>		1		
>>If Not normal, Fault Circuit may be the "C13-DG Link Line"					
20 To Close F3 LBS in Hospital S/S	<b>†</b>	₽			
21 To Confirm that any indicator is normal in Diesel P/S	•		<b>□</b>		
>>ff Not normal, Fault Circuit may be the "Bus-Bar in Hospital SS"					
22 To Close F1 LBS in Hospital S/S	<b></b>	1			
23 To Confirm that any indicator is normal in Diesel P/S	<b></b>		1		
>>/f Not normal, Fault Circuit may be the "C11-O'Romis Line"					
24 To Close F2 LBS in Hospital S/S	1	1			
25 To Confirm that any indicator is normal in Diesel P/S	<b>†</b>		1		
>>if Not normal, Fault Circuit may be the "C12-North East Line"					
0/Q Later 1 DO 1 Later		ſ			
20 10 (1005) 111 LDS III TOSPIICI (2) C		7			
21 to Confirm that any indicator is normal in Diesel P/S	<b>†</b>		□ ↑		
>>if Not normal, Fault Circuit may be the "Hospital-TR1"					
28 To Close TR2 LBS in Hospital S/S	<b>^</b>	1			
29 To Confirm that any indicator is normal in Diesel P/S	<b>†</b>		1		
>>If Not normal, Fault Circuit may be the "Hospital-TR2"					

## Trial Charge Pattern A: (From DG up to 300kW)

Notest Line*   Responsible   Distribution   Dissel P/S   O'Romis P/S		↑ □ • ↑	: Order & Confirm : Action & Report	: Order & Confirm the result : Action & Report	#	
District Office SS"		Responsible	Distribution	Diesel P/S	O'Ramis P/S	O'Moleng P/S
District Office SS"		Person	team	team	team	team
n District Office SS"  oleng Line"  h Line"  h Line"  h Line"  h West Line"  h West Line"  h West Line"	30 To Close F2 LBS in District Office S/S	<b>†</b>	□ ↑			
n District Office SS"	31 To Confirm that any indicator is normal in Diesel P/S	<b>^</b>		1		
oleng Line"  h Line  h Mest Line  h West Line  h West Line  h West Line  h West Line	>>If Not normal, Fault Circuit may be the "Bus-Bar in District Office SS"					
oleng Line"  h Line"  h Line"  h Line"  h Line"  h West Line"  h West Line"						
oleng Line"  h Line  h Mest Line  h West Line  h West Line  h West Line  h West Line	32 To Close F1 LBS in District Office S/S	<b>†</b>	<b>□</b>			
oleng Line"  h Line"  h Line"  h Line"  h Line"  h Line"  h Mest Line"  h West Line"	33 To Confirm that any indicator is normal in Diesel P/S	1		1		
h Line."  h Line.  h Line.  ffice-TR1.*  ffice-TR2.*  h West Line.*	>>If Not normal, Fault Circuit may be the "C22-O'Moleng Line"					
# Line"  ##Ifice-TR1"  ##Ifice-TR2"  ##West Line"						
h Line"  h Line ## ## ## ## ## ## ## ## ## ## ## ## ##	34 To Close F3 LBS in District Office S/S	1	1			
h Line"  ##Ifice-TR1"  ##Ifice-TR2"  ##West Line"	35 To Confirm that any indicator is normal in Diesel P/S	1		1		
#fice-TR1"  #fice-TR2"  #West Line"	>>If Not normal, Fault Circuit may be the "C21-North Line"					
#fice-TR1"  #fice-TR2"  #West Line"						
#fice-TR1"  #fice-TR2"  #fice-TR2"  # West Line"	36 To Close TR1 LBS in District Office S/S	<b>†</b>	1			
ffice-TR1"  ffice-TR2"  ffice-TR2"  h West Line"	37 To Confirm that any indicator is normal in Diesel P/S	<b>1</b>		1		
#ffice-TR2"  #ffice-TR2"  ## West Line"	>>If Not normal, Fault Circuit may be the "District Office-TR1"					
#fice-TR2"  #fice-TR2"  ## West Line"						
ffice-TR2"  West Line"	38 To Close TR2 LBS in District Office S/S	1	1			
ffice-TR2"	39 To Confirm that any indicator is normal in Diesel P/S	Î		1		
h West Line*	>>If Not normal, Fault Circuit may be the "District Office-TR2"					
h West Line." →□						
h West Line*	40 To Close LBS2	1	1			
h West	41 To Confirm that any indicator is normal in Diesel P/S	<b>1</b>		1		
	>>If Not normal, Fault Circuit may be the "C23-North West Line"					

## Trial Charge Pattern A: (From DG up to 300kW)

\* To find Fault Point of MV Line, we have to charge each of MV-Line Section and detect abnormal indication at Diesel Power Station.

: Order & Confirm the result

O'Woleng Bam 4/4 O'Romis P/S Diesel P/S team □ † : Action & Report Distribution team 1 □ ↑ 1 ₽  $\Box$ ₽ □ ↑ ₽ ₽ Responsible Person † □ • † Î 1 1 1 1 1 1 1 1 1 1 1 1 >>if Not normal, Minimized Fault Circuit may be the "MV Line except PMTs in the Fault Circuit" 42 To Turn ON or OFF of All LBS to normal condition Except the Fault Circuit 50 To Charge 22kV voltage to MV Line Except the Minimized Fault Circuit 49 To Close 3 of FCOs of all PMTs except the Minimized Fault Circuit 47 To Close 3 of FCOs of each PMT sequently in the Fault Circuit 54 To Syncronize and Connect O' Moleng P/S to the 22kV Grid 51 To Stand by O' Romis P/S 52 To Syncronize and Connect O' Romis P/S to the 22kV Grid 44 To Charge 22kV voltage to MV Line Except the Fault Circuit >>if Not normal, Minimized Fault Circuit may be the "PMT" 45 To Charge 22kV voltage to MV Line Of the Fault Circuit 46 To Confirm that any indicator is normal in Diesel P/S 48 To Confirm that any indicator is normal in Diesel P/S 55 To Find the Fault Point in the Minimized Fault Circuit 43 To Open All FCOs of every PMT in the Fault Circuit F) Supply electricity except the Minimized Fault Range 57 To Charge 22kV voltage to all MV Line E) Search Fault Range in the Fault Circuit H) Supply electricity to all customers G) Find and Repair the Fault Point 53 To Stand by O' Moleng P/S 56 To Repair the Fault Point

AP-S-IV-07

Trial Charge Pattern B :(From DG from 300kW to 400kW)

1/4

### AP-S-IV-7: Trial Charge Pattern B: (From DG from 300kW to 400kW)

	<b>1</b>	: Order & Confirm the result	the result		
	1	: Action & Report			
	Responsible	Distribution	Diesel P/S	O'Romis P/S	O'Maleng P/S
A) Confirm Safatu	Ferson	team	Геаш	team	team
VOILINGTONIC CALCUL SHORT SANE IN CARCA CAN LONG FROM MALLine			Į	Trans.	
TO COMMITTE THAT OVERLY STATE TO SOLICE AND THE MAY HOTEL MAY HITE	1		Ť	7	7
B) Separate Each Circuit					
2 To Open Main MCB in Diesel P/S	1		1		
3 To Open Main MCB in O'Romis P/S	1			1	
4 To Open Main MCB in O'Moleng P/S	<b></b>				1
5 To Comfirm that LBS-1 is Open	•	1			
6 To Open F1 LBS in Hospital S/S	1	1			
7 To Open F2 LBS in Hospital S/S	1	Ť			
8 To Open F3 LBS in Hospital S/S	1	1			
9 To Open TR1 LBS in Hospital S/S	†	1			
10 To Open TR2 LBS in Hospital S/S	<b>†</b>	1			
11 To Open F1 LBS in District Office S/S	1	1			
12 To Open F2 LBS in District Office S/S	1	1			
13 To Open F3 LBS in District Office S/S	<b></b>	1			
14 To Open TR1 LBS in District Office S/S	<b></b>	1			
15 To Open TR2 LBS in District Office S/S	<b>1</b>	1			
16 To Open LBS-2	•	1			
C) Start Diesel P/S					
17 To Stand by Diesel P/S	Î		7		

# Trial Charge Pattern B: (From DG from 300kW to 400kW)

	†	: Action & Report			
	Responsible	Distribution	Diesel P/S	O'Romis P/S	O'Moleng P/S
					11000
18 To Close Main MCB in Diesel P/S	1		1		
19 To Confirm that any indicator is normal in Diesel P/S	†		1		
>>If Not normal, Fault Circuit may be the "C13-DG Link Line"					
20 To Close F3 LBS in Hospital S/S	Î	ļ.			
21 To Confirm that any indicator is normal in Diesel P/S		]	<u></u>		
>>If Not normal, Fault Circuit may be the "Bus-Bar in Hospital SS"					
20 To Close E41 BS in Hosnital S/S					
12 Confirm that the foreign from a land to Discott Discott					
>>If Not normal, Fault Circuit may be the "C11-O'Romis Line"					
24 To Close F2 LBS in Hospital S/S	•	1			
25 To Confirm that any indicator is normal in Diesel P/S	1		1		
>>if Not normal, Fault Circuit may be the "C12-North East Line"					
26 To Close TR1 LBS in Hospital S/S	1	1			
27 To Confirm that any indicator is normal in Diesel P/S	1		Tr		
>>If Not normal, Fault Circuit may be the "Hospital-TR1"					
28 To Glose TR2 LBS in Hospital S/S	1	1			
29 To Confirm that any indicator is normal in Diesel P/S	•	]	1		
>>If Not normal, Fault Circuit may be the "Hospital-TR2"			<u>ן</u>		

# Trial Charge Pattern B: (From DG from 300kW to 400kW)

	↑ [	: Order & Confirm the result	the result		
	Responsible	Distribution	Diesel D/S	O'Romis P/S	O'Moleno P/S
	Person	- Essi	team	team	team
30 To Close F2 LBS in District Office S/S	<b></b>	1			
31 To Confirm that any indicator is normal in Diesel P/S	Î		□↑		
>>if Not normal, Fault Circuit may be the "Bus-Bar in District Office SS"					
33 To Chee E1 18S in District Office 8/8	đ	Ţ			
33 To Confirm that any indicator is normal in Diesel P/S	1	ן ו	1		
>>if Not normal, Fault Circuit may be the "C22-O'Moleng Line"	<b>.</b>				
0,0 10 - 10 - 10 - 10 - 10 - 10 - 10		Ę			
34 TO Close F3 LBS In District Office S/S		<b>1</b>			
35 To Confirm that any Indicator is normal in Diesel P/S	1		₽		
>>if Not normal, Fault Circuit may be the "C21-North Line"					
34 To Open F3 LBS in District Office S/S	<b>^</b>	1			
>>For preventing Overload-Shutdown					
36 To Close TR1 LBS in District Office S/S	<b>1</b>	1			
37 To Confirm that any indicator is normal in Diesel P/S	•		<b>□</b>		
>>If Not normal, Fault Circuit may be the "District Office-TR1"					
34 To Open TR1 LBS in District Office S/S	•	1			
>>For preventing Overload-Shutdown					
A 1	•	E			
38 To Close TR2 LBS in District Office S/S	\$	t	i		
39 To Confirm that any indicator is normal in Diesel P/S	Î		1		
>>If Not normal, Fault Circuit may be the "District Office-TR2"					
34 To Open TR2 LBS in District Office S/S	•	7			
>>For preventing Overload-Shutdown					
40 To Close LBS2	<b>^</b>	1			
41 To Confirm that any indicator is normal in Diesel P/S	<b>†</b>		7		
>>if Not normal, Fault Circuit may be the "C23-North West Line"					

# Trial Charge Pattern B: (From DG from 300kW to 400kW)

	† <b>□</b>	: Order & Confirm the result : Action & Report	the result		
	Responsible	Distribution	۵	O'Romis P/S	O'Moleng P/S
E) Search Fault Range in the Fault Circuit	Person	team	team	team	team
42 To Disconnect the Fault 22kV Circuit from the other 22kV Circuit by LBS	•	1			
43 To Open All FCOs of every PMT in the Fault Circuit	•	1			
44 To Charge 22kV voltage to MV Line Except the Eaut Circuit			C		
>>At first, Charge from DG or OM		1	1		
>>/f necessary, syncronize other P/S much enough					
45 To Charge 22kV voltage to MV Line Of the Fault Gircuit	t	1			
46 To Confirm that any indicator is normal in P/S	1		1		
>>If Not normal, Minimized Fault Circuit may be the "MV Line except PMTs in the Fault Circuit"					
	•				
41 TO Confirm that any indicator is normal in DVS	•	Ť	Land.		
>>If Not normal. Minimized Fault Circuit may be the "PMT"	†		<b>→</b>		
49 To Close 3 of FCOs of all PMTs except the Minimized Fault Circuit	<b>↑</b>	1			
F) Supply electricity except the Minimized Fault Range					
50 To Charge 22kV voltage to MV Line Except the Minimized Fault Circuit	<b>^</b>		1		
El To Stand by O' Damin D/O	•				
52 To Superprise and Connect O' Bornis D/S to the 20kV Gital				1	
				1	
53 To Stand by O' Moleng P/S	•				Ť
54 To Syncronize and Connect O' Moleng P/S to the 22kV Grid	4				1
(6) Find and Repair the Fault Point					
55 To Find the Fault Point in the Minimized Fault Circuit	<b>†</b>	□ ↑			
S. C. Donner, the Carlot Dains	(				
	<b>†</b>	1			
H) Supply electricity to all customers					
57 To Charge 22kV voltage to all MV Line	Î	1	- Company		
7.0					
EXC			***************************************		

AP-S-IV-08 Trial Charge Pattern C: (From OM up to 370kW)

### Trial Charge Pattern C: (From OM up to 370kW)

\* When Diesel station can not operate such as periodic inspection or trouble of diesel generator. We can start by Black starting method at O'Moleng P.S.

: Order & Confirm the result : Action & Report **↑** □

	Responsible	Distribution	Diesel P/S	O'Romis P/S	O'Molena P/S
manuscript and a second	Person	TEST	team	team	team
E) Start O'Romis P/S					
To start O'Romis P/S by normal starting	1			1	
To confirm operation and parallel in the 22kV Line (full 185kW, if possible)	<b>^</b>			1	
To confirm that any indicator is normal	<b>^</b>			1	
F) Stop O'Moleng P/S by Black start method					
To stop # 1 Switch OFF	1				1
To confirm stop O'Moleng P/S	<b>†</b>				1
To change 43BS ON to OFF position	1				1
G) Start normal operation in O'Moleng P/S					
To receive power from O'Romis line by 52-1 ON	1				     
To start normal operation and parallel in the 22kV line (full 185kW, if possible)	1				
The state of the s					
H) Charging 22kV Line by Substation					
24 To Close F2 LBS in Hospital S/S	•	1			
26 To Close TR1 LBS in Hospital S/S	1	1			
28 To Close TR2 LBS in Hospital S/S	•	1			
29 To Confirm that any indicator is normal	1		<b>□</b>	□ †	1
34 To Close F3 LBS in District Office S/S	1	1			
35 To Confirm that any indicator is normal	<b>†</b>		r	1	7
36 To Close TR11 BS in District Office S/S		1			
38 To Close TD2 I BS in District Office S/S		ם כ			
39 To Confirm that any indicator is normal			1		
	)		]		
40 To Close LBS2	1	1			
41 To Close NFB of PMT 19 and PMT 21	1	1			
To Confirm that any indicator is normal			1	î	
Charle standarity of all a setamona					
V. CALVINE OF THE VIBERTIES OF VIBERTIES OF THE VIBERTIES			1		1
1 1000 HITTO CLARKING TO ALKNY 400 V BILLINGS BITCH CLASSOFIERS	3	7	7	1	1

AP-S-IV-8

1/2

### AP-S-IV-8: Trial Charge Pattern C: (From OM up to 370kW)

\* When Diesel station can not operate such as periodic inspection or trouble of diesel generator. We can start by Black starting method at O'Moleng P.S.

●→ : Order & Confirm the result→□ : Action & Report

	Responsible	Distribution	Diesel P/S	O'Romis P/S	O'Moleng P/S
	Person	team	team	tham	team
A) Confirm Safety					
1 To Confirm that every staff is safe and keeping away from M/V line	•		1		Ť
2 To Confirm that each power station are stoppage. (all system Black out)	1		1	1	P
ministry of the state of the st					
B) To confirm and Separate Each Circuit					
2 To Open Main MCB in Diesel P/S	1		1		
3 To Open Main MCB in O'Romis P/S	•			1	
4 To Open Main MCB in O'Moleng P/S	•				7
5 To open NFB of PMT 19 and PMT 21	1	1			
6 To open LBS-2	•				
/ To Open F1 LBS in Hospital S/S	1	7			
8 TO Open F2 LBS in Hospital S/S	1	1			
9 to Open F3 LBS in Hospital S/S	<b>^</b>	₽			
10 To Open TR1 LBS in Hospital S/S	1	<b>□</b>			
11 To Open TR2 LBS in Hospital S/S	<b>^</b>	7			
12 To Open F11 BS in District Office S/S				***************************************	
13 To Open F2 LBS in District Office S/S	1	1			
14 To Open F3 LBS in District Office S/S	1	1 🗆			
15 To Open TR1 LBS in District Office S/S	1	1			
16 To Open TR2 LBS in District Office S/S	<b>†</b>	1			
C) Start O'Woleng P/S					
17 To start O'Moleng P/S by Black start method	•				1
18 To confirm operation in dummy load (full 185kW, if possible)	1				Ť
19 To connect 22kV line by 52-1 MCB (ON)	1				1
20 To confirm that any indicator is normal	1				1
D) Charging 22kV Line between O'Moleng and O'Romis P/S					
21 To Confirm that any indicator is normal in O'Moleng P/S	1				t
To Close F1 LBS in District Office S/S	1	1			
To Close F2 LBS in District Office S/S	1				
To Close F3 LBS in Hospital S/S	•	1			
To Close F1 LBS in Hospital S/S	1	1			
To Confirm that receiving power in O'Romis P/S	•			1	

AP-S-IV-09 Detail Check Items for Distribution Facilities' Inspection Detail Check Items for Distribution Facilities' Inspection

ead Pole Asse	mhly	·
Gene		<u> </u>
100.11	Concrete Pole	
	Surroundings	EDC Staff Easy to access
		Bucket Car Easy to access
		Easy to climb
		No dead animal around
ŀ		No trace of rusty water around
		No new building is near
		No new construction work is near
	Pole No.	MV Pole No. is clear
		LV Pole No. is clear
	Ground	Not flow up
		Not sink down
	Body of a pole	Not incline
		Not bent
	İ	Not cracked
		Not weathered
		Not broken
	Stepbar	Not remain
	TV cable	Attached appropriate
	Guy Wire	
	Height	Height over road
		Height over building
		Height over another place
- [	Clearance	Clearance to MV Lines, LV Lines OK
		Clearance to another Transmission equipment OK
		Clearance to a building OK
	Surroundings	No trace of rusty water around
- 1		No new building around
ł	ļ	No new construction work around
		No vine growing along
		Not Obstruct Traffic
	Ground	Not flow up
		Not sink down
		Anchor is Not shown
	Wire	Elemental wire is Not broken
ŀ	A Committee of the Comm	Not too rusty
ŀ		Tension is not too loose
	Coliier	Wire End is safe for public
	Conier	Installed firmly
		Not too rusty Not broken
	Parallel groove Clamp	Installed firmly
	raidici gioove Oidinp	Not too rusty
		Not broken
	Turnbuckle	Installed firmly
	1 5111115/54(5)	Not too rusty
		Not broken
	Guy Insulator	Not cracked
		Not broken
		Not dusty
		No trace of arc
	Rod	Not bent too much
		Not cracked too much
	]	Not broken
		Not too rusty
	Guy Wire Cover	Attached at necessary place
	1	Not detached
1 1	[	Not broken

-S-IV-9 : erhead		30/MAR/09 JICA Study Leam
Pole Assemb	h.	
Genera		, , , , , , , , , , , , , , , , , , ,
	ross Arm	
	Cross Arm & Arm Tie	Not Incline
	Closs and a valle lie	Not bent
		Not broken
		Not too rusty
	Bolt & Nut	Not disappeared
	DON 04 1400	Not broken
		Not too rusty
		Not loose
		Not bent
	Obstacles	No nest of birds
		No other obstacles
l lin	sulator	140 Onlos obbasico
	Porcelain	Not broken
		Not cracked
		Not dusty
		No trace of arc
1   1	Bolt & Nut	Not disappeared
		Not broken
•		Not too rusty
		Not loose
		Not bent
E	arthing Wire	· · · · · · · · · · · · · · · · · · ·
j	General	Earth Resistance Good ※Need to measure
1 1 1	Ground	Not flow up
		Not sink down
		Earthing Rod is Not shown
	Earthing wire	Protected enough by pipe
		Pipe not broken
		Pipe not cracked
		Pipe height enough
1		Conductor is Not shown
		Insulating Cover Not broken
		Insulating Cover Not cracked
		Insulating Cover Not melt
	Joint to equipment(Transformer e	
	1	Not too rusty
		Wire stripping Not too much

AP-S-IV-9

P-S-IV-9 :		30/MAR/09 JICA Study Team
verhead		
Pole Assembly		
Transform	er Assembly	
Tran	sformer	
	Body outside	Height is enough
		Not incline
		Not bent
		Not dent
		Not bulge
		Not too rusty
		No trace of arc
		No oil leak
		Spray Coating Not coming off
		No abnormal noise
		Not heated too much
		Fixed tightly
	Bolt & Nut	Not disappeared
		Not broken
	[	Not too rusty
		Not loose
		Not bent
	Insulation Resistance ※If Discharge	Insulation Resistance is enough
	Body Inside ※If Open & Discharge	Color of Oil is Clean
1 1 1		Tap Position is appropriate
		Tap tightly fixed
	Terminal(Primary/Secondary)	firmly fixed to Lead Wire & Cable
	· · · · · ·	Joint Not too rusty
		Bolt & Nut Not disappeared
		Bott & Nut Not broken
		Bolt & Nut Not loose
		Bolt & Nut Not bent
		No Tension to Joint Point
		Not heated too much
	3	Not melt
		Porcelain Not broken
		Porcelain Not cracked
		Porcelain Not dusty
		Porcelain No trace of arc
	Lead Wire to FCO	Insulating Cover Not broken
		Insulating Cover Not cracked
		Insulating Cover Not melt
	ŀ	No trace of arc
		Wire Tension is not too loose
		Wire Tension is not too tight
		Clearance enough to other objectives
	Joint of Lead Wire	firmly fixed to Transformer and FCO
		Joint Not too rusty
		Bolt & Nut Not disappeared
		Bolt & Nut Not broken
		Boit & Nut Not loose
		Bolt & Nut Not bent
		No Tension to Joint Point
		Not heated too much
		Not melt
	1	Wire stripping Not too much
	Earthing Terminal	Jointed tightly to earthing wire
		Not too rusty
		Wire stripping Not too much

head		SUNIARIUS SICA SILUY FEATII
Pole Assembly		
Transformer Asse	mbly	
Fuse Cutout	Switch	
P	rimary Cutout Switch	firmly fixed to Cross Arm
	-	firmly fixed to Lead Wire
		Joint Not too rusty
		Bolt & Nut Not disappeared
		Bolt & Nut Not broken
		Bolt & Nut Not loose
		Bolt & Nut Not bent
		No Tension to Joint Point
		Not heated too much
		Not melt
		Porcelain Not broken
		Porcelain Not cracked
		Porcelain Not dusty
		Porcelain No trace of arc
		Fuse Size Appropriate
Le	ead Wire to MV Line	Insulating Cover Not broken
		Insulating Cover Not cracked
		Insulating Cover Not melt
		No trace of arc
		Wire Tension is not too loose
		Wire Tension is not too tight
		Clearance enough to other objectives
Jo	oint of Lead Wire	firmly fixed to MV Line and FCO
		Joint Not too rusty
		Bolt & Nut Not disappeared
		Bolt & Nut Not broken
		Bolt & Nut Not loose
		Boit & Nut Not bent
		No Tension to Joint Point
		Not heated too much
		Not melt
		Wire stripping Not too much

rhead	
Pole Assembly	
Transformer Assembly	
Lightning Arrester	
Body	firmly fixed to Cross Arm
	firmly fixed to Lead Wire
	Joint Not too rusty
	Bolt & Nut Not disappeared
	Bolt & Nut Not broken
	Bolt & Nut Not loose
	Bolt & Nut Not bent
	No Tension to Joint Point
	Not heated too much
	Not melt
	Porcelain Not broken
	Porcelain Not cracked
	Porcelain Not dusty
	Porcelain No trace of arc
	Fuse Size Appropriate
Lead Wire to MV Line	Insulating Cover Not broken
	Insulating Cover Not cracked
	Insulating Cover Not melt
	No trace of arc
	Wire Tension is not too loose
	Wire Tension is not too tight
	Clearance enough to other objectives
Joint of Lead Wire	firmly fixed to MV Line
	Joint Not too rusty
	Bolt & Nut Not disappeared
	Bolt & Nut Not broken
	Boit & Nut Not loose
	Bolt & Nut Not bent
	No Tension to Joint Point
	Not heated too much
	Not melt
	Wire stripping Not too much
Earthing Terminal	Jointed tightly to earthing wire
	Not too rusty
	Wire stripping Not too much

P-S-IV-9 :			30/MAR/09 JICA Study Team
erhead			
Pole Ass	embly		
Tran	nsformer a	Assembly	
	LV Dist	rubution Board	
		ody	
1 1		Body	Height is appropreate
		,	Easy to access for Reading meters
1 1			Case is Not Charged
1	1 1		Front Glass Not Foggy
			Front Glass Not Dirty
			Locked
			Fixed tightly
			Not broken
			Not incline
		Lead Cable to Transformer	Insulating Cover Not broken
			Insulating Cover Not cracked
	1 1		Insulating Cover Not melt
			No trace of arc
			Fixed firmly to the Pole
	W	att-Hour Meter	
1		Watt-Hour Meter	Fixed firmly to the Box
			Not broken
			Not incline
			Not too rusty
1 1			Front Glass Not Foggy
		1	Front Glass Not Dirty
			No trace of arc
			Not Burned Inside
			Disk Rotate is smooth
1			No abnormal noise
]	1 1		Terminal Cover is Not Charged
1		i	Terminal Cover is Fixed firmly
			Wire Fixed to Terminal firmly
			Terminal Voltage is appropriate
			Wires connected to correct phase or neutral
		O.T.	Not heated too much
		СТ	Appropreate Combination to Watt-Hour Meter
	1 1		Fixed firmly to the Box
			Not broken
1 1	1 1		Not incline
			Not too rusty
			Not Burned
			No trace of arc
			No abnormal noise
			Wire Fixed to Terminal firmly
		1	Wires connected to correct phase
			Not heated too much
	M	CCB	
		Magneting Switch	Turn On & Off Smoothly
	1 1		Fixed firmly to the Box
	1 1	Betalende	Not broken
			Not incline
			Not too rusty
			Not Burned
			No trace of arc
			No abnormal noise
			Wire Fixed to Terminal firmly
		1	· · · · · · · · · · · · · · · · · · ·
			Wires connected to correct phase
1	1 L	1	Not heated too much

Pole Asser		Assembly	
		rubution Board	
		reet Light Control Circuit with Timer	<u></u>
		Timer	Time Acculate(Yes/No)
	ŀ		Switch Turn On & Off smoothly
			Fixed firmly to the Box
	Ì		Not broken
			Not incline
			Not too rusty
		ļ	Not Burned
			No trace of arc
			No abnormal noise
			Wire Fixed to Terminal firmly
			Wires connected to correct phase
			Not heated too much
i	W	ires Inside	
		Wires Inside	No Abnormal Pressure from outside
	: 1	ł	Fixed to the Box firmly
			Not heated too much
			Insulating Cover Not broken
			Insulating Cover Not cracked
	1		Insulating Cover Not melt
			No trace of arc
			Wire Tension is not too loose
	ŀ		Wire Tension is not too tight
	F	Joint of Wires	firmly fixed to Watt-Hour Meter etc.
	ļ		Joint Not too rusty
			Bolt & Nut Not disappeared
			Bolt & Nut Not broken
			Bolt & Nut Not loose
			Bolt & Nut Not bent
		Territoria de la constanta de	No Tension to Joint Point
			Not heated too much
			Not melt
			Wire stripping Not too much
		Earthing Terminal	Jointed tightly to earthing wire
4	- 1	1	Not too rusty

s-iv-9:	SO/MANUS SIGA Study Feath
Pole Assembly	
LV Assembly	
Aggregating Meter Box	
Body	
Body	Height is appropreate
	Easy to access for Reading meters
	Case is Not Charged
	Front Glass Not Foggy
	Front Glass Not Dirty
	Locked
	Fixed tightly
	Not broken
	Not incline
Watt-Hour Meter	
Watt-Hour Meter	Fixed firmly to the Box
	Not broken
	Not incline
	Not too rusty
	Front Glass Not Foggy
	Front Glass Not Dirty
	No trace of arc
	Not Burned Inside
	Disk Rotate is smooth
	No abnormal noise
	Terminal Cover is Not Charged
	Terminal Cover is Fixed firmly
	Wire Fixed to Terminal firmly
	Terminal Voltage is appropriate
	Wires connected to correct phase or neutral
	Not heated too much
CB	
CB	Turn On & Off Smoothly
	Fixed firmly to the Box
	Not broken
	Not incline
1 1 1 1	Not too rusty
	Not Burned
	No trace of arc
	No abnormal noise
	Wire Fixed to Terminal firmly
	Wires connected to correct phase
	Not heated too much

rhead		
Pole Assembly		
LV Assem		
Agg	regating Meter Box	
	Wires Inside	
	Wires Inside	No Abnormal Pressure from outside
		Fixed to the Box firmly
		Not heated too much
		Insulating Cover Not broken
		Insulating Cover Not cracked
		Insulating Cover Not melt
		No trace of arc
		Wire Tension is not too loose
		Wire Tension is not too tight
	Joint of Wires	firmly fixed to Watt-Hour Meter etc.
		Joint Not too rusty
		Bolt & Nut Not disappeared
		Bolt & Nut Not broken
		Bolt & Nut Not loose
		Bolt & Nut Not bent
		No Tension to Joint Point
		Not heated too much
		Not melt
		Wire stripping Not too much
	Earthing Terminal	Jointed tightly to earthing wire
		Not too rusty
		Wire stripping Not too much
Stre	et Light	
	Body	Not Incline
		Not bent
		Not broken
		Not too rusty
	Bolt & Nut	Not disappeared
		Not broken
		Not too rusty
	Manage of the state of the stat	Not loose
		Not bent
	Circuit	Connection is correct
		Bulb Not Broken
		Glow Lamp Not Broken



rhead		
Pole Assembly		
Underground Connectin		
MV/LV Termination	on	
Location	n	Easy to climb
Termina	ation	Fixed firmly to the Pole
		No Compound Leakage
		Each Termination Not Touched
		Each Termination Not too close
		Phase Plate Not Detached
		No Tracking
		Winding Tape Not loose
T-initial		Not broken
l Maria		Not cracked
		Not dusty
Lead W	/ire to MV Line	Insulating Cover Not broken
ale de la constant de		Insulating Cover Not cracked
		Insulating Cover Not melt
		No trace of arc
		Wire Tension is not too loose
		Wire Tension is not too tight
		Clearance enough to other objectives
Joint of	Lead Wire	firmly fixed to MV Line
		Joint Not too rusty
		Bolt & Nut Not disappeared
		Bolt & Nut Not broken
		Bolt & Nut Not loose
		Boft & Nut Not bent
		No Tension to Joint Point
		Not heated too much
		Not melt
		Wire stripping Not too much
Cable along the P	ole	
Lead C	able along the Pole	Insulating Cover Not broken
		Insulating Cover Not cracked
		Insulating Cover Not melt
		No trace of arc
		Causion: If Finding abnormal condition, Check electric
		Leakage by MV Voltage Detector AT FIRST before
		approrching
Pipe along the Po	le	
	ong the Pole	Height is appropreate
	<del>-</del>	Fixed fightly to the Pole
		Not broken
		Not incline

-S-IV-9 :	30/MAR/09 JICA Study Team
erhead	
Pole Assembly	
Underground Connecting Assembly	
Lightning Arrester	
Body	firmly fixed to Cross Arm
	firmly fixed to Lead Wire
	Joint Not too rusty
	Bolt & Nut Not disappeared
	Bolt & Nut Not broken
1 1 1	Boit & Nut Not loose
	Boit & Nut Not bent
	No Tension to Joint Point
	Not heated too much
	Not melt
	Porcelain Not broken
	Porcelain Not cracked
	Porcelain Not dusty
	Porcelain No trace of arc
	Fuse Size Appropriate
Lead Wire to MV Line	Insulating Cover Not broken
	Insulating Cover Not cracked
	Insulating Cover Not melt
	No trace of arc
	Wire Tension is not too loose
	Wire Tension is not too tight
	Clearance enough to other objectives
Joint of Lead Wire	firmly fixed to MV Line
	Joint Not too rusty
	Bolt & Nut Not disappeared
	Bolt & Nut Not broken
	Boit & Nut Not loose
	Boft & Nut Not bent
	No Tension to Joint Point
	Not heated too much
	Not melt
	Wire stripping Not too much
Earthing Terminal	Jointed tightly to earthing wire
	Not too rusty
	Wire stripping Not too much

Ground Wir		
Grou	nd Wire	Total and the Market in an analysis
	Clearance	Clearance to MV lines is enough.
	Sag	Not Unbalanced
	Wire	Not too loose
	vvire	No Kink
		Elemental Wire is not Broken
	1	No Obstacle on the Wire
	Near the pole	*Kite, Branch, etc. Fixed firmly to the Cross Arm
	Earthing Terminal	Jointed fightly to earthing wire
	Calumy Termina	Not too rusty
		Wire stripping Not too much
MV Wire		Free on party for too interin
MV V	lire .	Maria
	Clearance	Height is enough.
		Clearance to other things is enough.
		Clearance to Construction Work is enough.
		Public cannot touch easily.
	Neighbor	Burned Trees near a wire
		Dead Animal by electrical shock
		No Obstacle near the Wire
		*Inclined TV Anntena or Tree
		*Tin Roof easy to fly toward, etc
	Sag	Not Unbalanced
		Not too loose
	Wire	No Kink
		Insulating Cover is not Cracked
		Insulating Cover is not Broken
		No trace of arc on the Insulating Cover
		Insulating Cover is not burned.
		No Obstacle on the Wire
		*Kite, Branch, etc.
	Near the pole	Elemental Wire is not Broken
		Binding Wire to an Insulator is not Detached
		Binding Wire to an Insulator is not Loose
		Bare Conductor is not Touched to other things.
_V Cable	41	
LV C		
	Clearance	Height is enough.
		Clearance to other things is enough.
		Clearance to Construction Work is enough.  Public cannot touch easily.
	Neighbor	Burned Trees near a wire
	Lizeiði Indi	Dead Animal by electrical shock
		No Obstacle near the Wire
		*Inclined TV Anntena or Tree
	1	*Tin Roof easy to fly toward, etc
	Sag	Not Unbalanced
	- ag	Not too loose
	Wire	No Kink
	1-3-10	Insulating Cover is not Cracked
	Value of the state	Insulating Cover is not Gracked
		No trace of arc on the Insulating Cover
		Insulating Cover is not burned.
		No Obstacle on the Wire
		*Kite, Branch, etc.

bicle Cubicle		
Cubic	le .	
Oubi	Location	EDC Staff Easy to access
		No dead animal around
		No new building is near
		No digging construction work is near
1 1	Foundation	Not sink
		Anchor Bolt is not Loose
		No Crack
		Not Broken
		Fixed to the Case
1		Not incline
		Not Slide
		Not Collapse
<b>!</b>	Case	Not broken
		Not Dent
		Not bulge
		Not bent
		Not too rusty
		Easy to read Name Plate
		Spray Coating Coming Off(Yes/No)
	Door	Locked
		Easily Open and Close
		Door Stopper works well
		Gasket of the Door is good
1		Ventilation Opening is not Blocked
	Panel	Easy to read Switch Number and symbol
		No abnormal noise
		No trace of entering water
		No trace of animal
		No Condensation
		Not too dirt
	Earthing wire	Earth Resistance Good ※Need to measure
		Insulating Cover Not broken
		Insulating Cover Not cracked
] [		Insulating Cover Not melt
1		Joint is tight
		Joint is Not too rusty
		Wire stripping Not too much
	Operation	Smooth to turn ON/OFF
	Switch	Blade does not Bent
		Blade is not too rusty
	1	Blade is not dirty
		Charged part is covered well
1 1	1	Not Broken inside
		No trace of arc
	Terminal	firmly fixed to MV Line
		Joint Not too rusty
		Bolt & Nut Not disappeared
	<u> </u>	Bolt & Nut Not broken
	İ	Bolt & Nut Not loose
	1	Bolt & Nut Not bent
		No Tension to Joint Point
		Not heated too much
1 1		Not melt
		Wire stripping Not too much
e		
Cable		
Cable		
1 1	Location Cable	No digging construction work is along the route Insulating Resistance Good ※Need to measure

AP-S-IV-10 Transformer Station Check Sheet

## AP-S-IV-10 : Transformer Station Check Sheet

## Transformerstation Outline

Photo.-1: Photograph of Sample transformer power station (PMT-19)

,	-	-	
	6	(5	18
11	7	-	1
The same	# 1		/
3	1		/>
	99.45	1	1
	1	10/2	
-	1	TOP !	1
/	The.	10.1	2
-	11	Val.	. 48
	A.Javille	THE STATE OF	300
6	177	1 1	1
(			
W. S		. 1	
		Aller a	1
		HH B	
100		18	
	10	A CALL HOLD AND	100

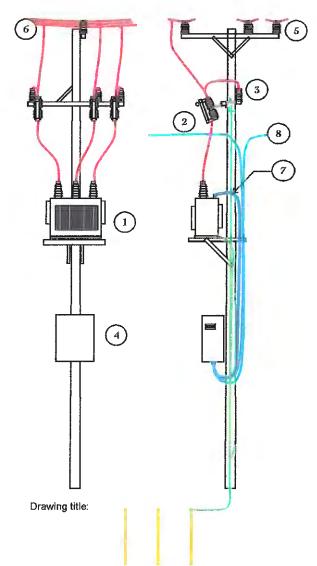
Visit place

Commune

Village

PMT-

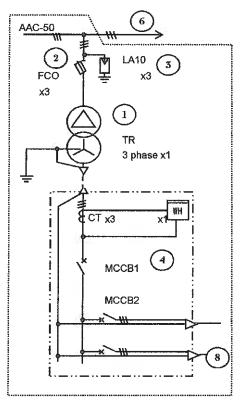
Fig.-1: Tipical construction figure of transformer station



Field	check note:	
		Opened Fuse Cutout
		монто по противника на применения выдам и и и и и и и и и и и и и и и и и и и
		укиминичностичностичностичностичностичностичностичностичностичностичностичностичностичностичностичностичности
	-	
	1	***************************************
		<u>камининуминикуминикиминикамирацияналаруунаналууунаналууунаналуучаларуу катаматаруу</u>
	1 7	

-IV-10

Fig.-2: Single line diagram of Typical Distribution Transformer Station



The symbols in the single line diagram above are followed IEC.

	1: Installed	l device table (This table follo	ws the Fig	1-1)
Indicati No	Dev.No.	Device Name	Q' ty Unit	Specfication
1)	TR	TRANSFORMER	1 Pcs	22 ± 2 x 2.5 % /0.4 kV
				10.4 KV
	·			Δ-Yn Dyn-11
				22kV,2.5kA
2	FCO	FUSE CUTOUT SWITCH	3 sets	
3	LA10	Lightning ARRESTER	3 Pcs	
4	DB	Distribution Box	1 set	
⑤		INSULATOR	3 Pcs	
6		MV CONDUCTOR	3 Lines	
7		LV CABLE	Lines	
8		FEEDER LV CABLE	Lines	
9		GROUNDING WIRE	sets	
10		GROUNDING SYSTEM	1 set	
10		CROSS ARM FOR PHASE INSULATOR	1 set	
(3)		CROSS ARM FOR FUSE AND ARRESTOR	1 set	
<b>(4)</b>		TRANSFORMER FOUNDATION	1 Pcs	
<b>(15)</b>		CENTRIFUGAL CONCRETE POLE	1 Pcs	
	MCCB1		1 Pcs	
	MCCB2		1 Pcs	
	мссв3	LV Feeder Molded	1 Pcs	
	MCCB4	circuit Breaker	1 Pcs	
	MCCB5		1 Pcs	
	MCCB6		1 Pcs	

							,.,.,.,.,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	**********	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*********	******		.,,		,	.,,.		
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AP-S-IV-11 Sample Form of SPARE PARTS LIST OF DISTRIBUTION

	End of	30-Mai	ar	-	31-Mar	-	1-Anr	14	Cuarrity	2 Any	-	2 0 000	ŀ	*	νγ	-	4	
	last week		-		Tile		Poly	, T		147	-	5 5 5		ŧ,	4-40		Q V	
	Remain	Add	e Remain	in Add	Г	Remain	Add lise	Remain	Add	Т	Pomain Add	-	Domein	Ada .			L	-
1 24kV Conductor AAC 55sq.mm	m 200		1	1.	Т		╁	+	3	1		200	OUG.	+	200	Newser Add	e S	Leman
2 24kV Conductor Anneal Cu. 35sq.mm	_											-	202	+	4	3		4
24kV Covered conductor AAAC 55sq.mm	m 200		200			200		200			200		200		6	200	-	000
4 GWS Conductor 38sq.mm	E												2			3		3
	sets					-						-			+			+
6 Hard ware for GWS	sets					-						-			-			+
7 Concrete pole T-S (12m -19-3.5)	pole 2		2			2		2			6		6			6	-	ļ°
8 Concrete pole T-A (12m -19-5)	pole 2		2			2		•		l	2	-	26			10		1 0
9 Concrete pole T-T (12m -19-9)			2								2	-	40			7 6	-	7 6
10 Concrete pole T-T (14m -21,7-9)						•		J		+	7	-	,		1	7		1
11 Crossarm- Pin insulator	Sets		-		Ī							-		1				1
	sets						+			+	1	-						$\downarrow$
13 Crossarm - LA	2440		-							+		+			+			1
14 Crossarm - Dist. Tr. Upto 50kVA	0,40		1		1			1		+		-			+			+
15 Crossarm - Dist Tr 100ld/A LA and cutout	440									+					+			
48 Craesarm Diet Tr OROMA	2000		+			-						_			1			-
12 Change Dist. 11. Conver	sers			_														
Crossern - List, IT, 400KVA	sets																	
I o Crossarm - LA and curour	sets																	L
19 Crossarm - LA and cutout for 250 &400kVA Tr.	sets																	
20 Support for LV Distr. Board (A & B)	sets																	L
21 Collier for crossarm	sets													-				-
Crossarm for Load break switch	sets																-	-
23 24kV Pine type insulator set	sets 20		50			20		20			20		20		-	6	-	F
24 24kV Tension type insulator set	sets 20		ಜ			22		50	-		20		20			0	-	2
24kV Lightning arrester 10kA	sets 5	-	ß	L		ıo		ග			ı,		ıv			£C.		u.
24kV Load break switch	sets																-	1
Anchor block with guy wire	sets														<u> </u>			
Transformer 10kVA (22/0.4kV)	nos. 1		Y			-		F			-		-	-		-		-  -
29 Transformer 25kVA (22/0.4kV)	nos.		-			-		-					-		  -	<u> </u>		-
30 Transformer 50kVA (22/0.4kV)	nos. 1		-			-		-	-				-	l				-
Transformer 100kVA (22/0,4kV)	nos.							-					-	<u> </u>				_
Transformer 250kVA (22/0.4kV)	nos.		-			+		-						-			_	+
33 Transformer 400kVA (22/0.4kV)	nos.		_														ļ	_
34 24kV FCO 6.3A for 10, 25 & 50kVA Tr.	sets														-		ļ	-
35 24kV FCO 16A for 250kVA Tr.(hydro)	sets					_			-								-	-
36 24kV FCO 25A for 400kVA Tr.(DG)	sets					_				-								-
24kV FCO Operation Rods, 1.58m	sets														+	 	_	-
38 LV DB-BOX Type A-1 (for district ss)	nos.		_							_						  -		-
39 LV DB-BOX Type A-2 (for district & hospital ss)	nos.									-						<u> </u>	-	_
LV DB-BOX Type A-3 (for hospital ss)	nos.														-		-	-
41 LV DB-BOX Type B-1 (for 10kVA Transformer)	nas,																	-
LV DB-BOX Type B-2 (for 25kVA Transformer)	nos.						-							-			-	-
LV DB-BOX Type B-3 (for 50kVA Transformer)	nas.															<u> </u>	-	-
44 22kV SF6 Feeder Switch 630Ax3 + 200A x 2	nos.														-		-	
45 22kV Outdoor Type Kiosk	nos.	_													-			L
46 22kV XLPE Cable 3c x 95sq.mm	E																-	-
47 Cable Termination 3c x 95sq.mm (Indoor)	nos, 2		7			2		2		-	2		2			2	-	-
48 Cable Termination 3c x 95sq.mm (Outdoor)	nos, 2		2			5		2		-	2		2			2		2
49 22kV Bracket for Cable head	nos.																-	-
11 4 11 1 11 11 11 11 11 11																		

	_	Endo		30-Mar	F	(4)	31-Mar	L	1-Anr	,	Cualiting	2.Anr		e	Anr		AAA			A A A
		last week			ľ		1		Wed			<u>1</u> 2	-	3	2 15		Sat			in and
71177		Remain	Add	1	Remain	Add		Remain Add	H	Remain	Add		Remain A	Add U	Use Remain	nain Add	es O	Remain	Add	Use Remain
51   Underground Cable 0.6/1 kV	Ē																			
52 Underground Cable 0.6/1 kV	E							-							-					
53 Underground Cable 0.6/1 kV	E														+		<u> </u>			
54 Concrete Pole Type - S (9m - 2kN)	pole	2			2	-	2		-	2			6	+	1	1		6		1
55 Concrete Pole Type - A (9m - 5kN)	pole	2			2		2			2			2	-	2			2 2		t
58 Concrete Pole Type - T (9m - 8kN)	pole	2			2		7			2			~		2			2		
57 ABC Cable 3x70+1x70+2x16sq.mm	£				-															
58 ABC Cable 3x50+1x50sq.mm	Œ																			
59 ABC Cable 4x35sq.mm	ш			-			_								-					
60 ABC Cable 2x25sq.mm	٤																			
61 IV cable (PVC) 35sq.mm. green	E					-		-								1		1		T
					+	+		+							-	+				†
62 (Type SC-A)	sets																			
, 3 x 70sq.mm+ 1x 70sq.mm+ 2x 16sq.mm																				
							_													
63. (Type SC-A) . 3 x 50sa mm+ 1x 50sa mm	sets																			
LV Hardware for Suspension assembly					-	+				-				-	+	+				$\dagger$
64 (Type SC-A) 4 x 35sg mm	sets				-								•				•			
LV Hardware for Dead end assembly						-	+		-							+	1			
65 (Type DEC-C)	sets																			
3 x 70sq.mm+ 1x 70sq.mm+ 2x 16sq.mm	-					+														
LV halloware for Dead end assembly (Type DEC-C)	o to																			
	3		-																	
																	-			
6/ (Type DEC-C)	sers																			
68 LV Straight Joint 3x70+1x70+2x16sq.mm	hos			+	-		+													
69 LV Straight Joint 3x50+1x55sq.mm	nos.														+		-			+
70 LV Connector 70sq.mm, etc.	nos.						-	_							-					
71 LV Cable End Cap 70sq.mm, etc.	108.																			
72 Neutral Earthing (PG Clamp 55-35)	nos.		1	+				-	-											
24 Start in the contract of th	nos.		+	+				_						$\frac{1}{1}$		-				
74 Motor Boy for Shalo Motor	nos.			+	+	-	+			-					1					
76 Meter Box for Three Meters	900					+		+							+	+	-	1		1
77 Meter Box for Five Meters	908			$\dagger$	T		+			-							_			1
78 Meter Box for Three Phases Meter						<u> </u>							1					1		
79 Watt-hour Meter Single Phase 230V 10/30A	nos.	88			8		8			8			8		8			8		
80 Watt-hour meter Three Phases 400V 20/60A	nos.	10			10		5			2			10		2			10		ľ
81 MCB 2P 6A	nos.																_			
82 MCB 2P 10A	nos,	8			8	-	8			8			80		8			8		-
65 MCB 2P 2UA	nos.						+													
SE MOD 2D 20A	nos.			$\dagger$		-	-			;				+						
MCB 3P 40A	.soc	3			8	-	2		_	22			22	+	20			8		
87 MAD 40 83A	ė	_				-											_			

Sample Form of TOOLS LIST OF DISTRIBUTION IN WAREHOUSE

Description	Quantity										Check										
		1 2	3 4	5 6	7	6	10 11	12	13	14 15	9.	17	18 19	20	21 22	23	24	25 26	27	28	29 30
1 Lineman tools(drivers, knife,adjastable spanner)	5	0	0	0	0				-	_			_		-	-		-		+	-
2 Lineman safety belt, working bag	9	0	0		0							-			-	_					-
3 Voltage Detector 22kV	6	0	0	0 0	0								_		-			<u> </u>		-	-
4 Earthing tool (30mm diamm conductors, 15m leads)	6	0	0	0	o				_			-	_					_		-	-
5 insulation Tester 2500V	2	0	0	0	0							-			-					ļ	_
6 Earth Resistance tester (leads, spikes)	2	0 0	0		0						Ĺ	$\vdash$	-		-						-
7 AC, DC Current Gamp meter 1000A	8	0	0	0	0	_			-			-			-			-		-	-
8 Erectric Drill (max 36mm bit)	-	0	0	<u> </u>	0				-	ļ					-	ļ.		-		-	-
9 Drills bits for steel 6mm to 16mm each	01	0	0	0	0		-											<del> </del>			-
10 Drills bits for wood 8mm to 32mm each	18	0	0	0	0	_							-			-		<del> </del>		-	
11 Electric Chain saw 230V, 13m/s, 350mm effective cut	2	0	0	0	0	-						<del> </del>	<u> </u>		-	-		├-			-
12 Shovel	3	0	0	0	0													-			
13 Shovel Round Type	3	0	0	0	0					ļ					-	-		-			-
14 Peoker and Handle	က	0	0	<u> </u>	0					_					-			-			-
15 Steel Leveler 1,5m	3	0	0	0	0					<u> </u>		ļ	_		-						_
16 Cord Reel 230, 15A, 30m	8	0	0	0	0								-								ļ
17 Crimper for pre-insulated lugs 0.5mm2 to 6mm2	'G	0	0 0		Ö					ļ		-				_					
18 Compression Crimper, built—in des, hexagonal	61	0	0	0	0										_	_					
19 Connector crimper with built-in des	2	0	0		0				ļ				_		<u></u>					_	_
20 Ratchet type cable outter (Φ40mm max)	2	0	0 0	0	0											_					
21 Hydraulic cable cutter	2	0	0		0																
22 Spanner (6 pieces set.)	2	0	0	0	0				<u> </u>				-			_					
23 Cable pulling grip (Ф50mm max, 1600kg)	6	0	0		0		 					-	L		-			-			_
24 Cable roller (alminium)	9	0	0	0	0		<u> </u>		<u> </u>						-	-					-
25 Tension meter 1.5 ton	1	0 0	0	0	0								_			ļ					-
26 Tension meter 5 ton, and Pulling ratchet hoist 4 ton		0	0	0	0					<u>-</u>								-		-	
27 Two Sections Ladder (for pole climbing)	2	0	0	0	0								ļ			ļ					
28 Telescopic Ladder 5m	2	0 0	0	0	0													ļ			
29 Tool Bucket (diamm 260mm, depth 340mm)	ю	0	0	0	0	_			<u> </u>				-					_			_
30 Tool Bucket (damm 200mm, depth 200mm)	3	0 0	0	0	0				<u> </u>	ļ											_
31 Double sling wire 10mm, 1m length	2	0	0		0				-			-			-			-			ļ
32 Double sling wire 12mm, 1m length	2	0	0 0	0	0													-		-	_
33 Nylon Rope 12mm, 30m length	m	0	0		0								_					_			
34 Snatch Block 2 ton hook type	Di	0	0		0	·								_							
35 Measuring Tape (100m, polythylene)	2	0	0 0		0																
38 Jig Saw 18mm stroke (6 blades set)	1	0	0		0																
37 Aerial Platform	2	0	0	0	0																
										-		1	-	†	-						

Sample Form of TOOLS LIST OF
DISTRIBUTION IN BUCKET
CAR

nescription	Gheak
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 18 19 20 21 22 23 24 25 28 27 28 29 30
1 Lineman toois(drivers, knife,adjastable spanner)	
2 Lineman safety belt, working bag	
3 Voltage Detector 22kV	
4 Earthing tool (30mm diamm conductors, 15m leads)	000000
5 Insulation Tester 2500V	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6 Earth Resistance tester (leads, spikes)	000000000000000000000000000000000000000
7 AC, DC Current Clamp meter 1000A	000000
8 Erectric Drill (max 38mm bit)	<b>!</b>
9 Drills bits for steel 8mm to 18mm each	—
10 Drills bits for wood 6mm to 32mm each	0 0 0 0 0 0
11 Electric Chain saw 230V, 13m/s, 350mm effective cut	0
12 Shovel	000000000000000000000000000000000000000
13 Shovel Round Type	0 0 0 0
14 Pecker and Handle	
15 Steel Leveler 1.5m	
16 Cord Reel 230, 15A, 30m	0 0 0
17 Crimper for pre-insulated lugs 0.5mm2 to 8mm2	0 0 0 0 0 0 0
18 Compression Crimper, built-in dies, hexagonal	<u> </u>
19 Connector crimper with built-in dies	0 0 0 0 0 0
20 Ratchet type cable outter ( \$40mm max)	
21 Hydraulic cable cutter	0 0 0 0
22 Spanner (8 pieces set)	0 0 0 0 0 0 0
23 Cable puling grip (Ф50mm max, 1600kg)	000000
24 Cable roller (alminium)	
25 Tension meter 1.5 ton	00000
26 Tension meter 5 ton, and Pulling ratchet hoist 4 ton	0 0 0 0
27 Two Sections Ladder (for pole climbing)	0 0 0 0 0 0 0 0 0
28 Telescopic Ladder 5m	200000000000000000000000000000000000000
29 Tool Bucket (diamm 260mm, depth 340mm)	000000000000000000000000000000000000000
30 Too! Buoket (diamm 200mm, depth 200mm)	<u> </u>
31 Double sling wire 10mm, 1m length	0 0 0 0 0 0 0 0
32 Double sling wire 12mm, 1m length	200000000
33 Nylon Rope 12mm, 30m length	000000
34 Snatch Block 2 ton hook type	200000000000000000000000000000000000000
35 Measuring Tape (100m, polythylene)	0 0 0
36 Jig Saw 18mm stroke (6 blades set)	
37 Aerial Platform	000000000000000000000000000000000000000

Sample Form of COMPLAINTS ON VOLTAGE RECORD

RECORD	
VOL TAGE	
F COMPLAINTS ON VOLTAGE RECORD	
F COMPL	
AP-S-IV-14: Sample Form of COMPLAINTS ON VOLTAGE R	
5-S-IV-14:	
₹	-

				Complain	Complaint Received						Inves	Investigation				**	Resolve
	Date	Name of Customer	# #	Meter Serial #	Type	Phase	Nature of Complaint	Date*		Voltage	at the p	Voltage at the point of service	rvice		Reason	Date**	Method
	- 1								A-B	B-C	C-A	N-N	B-N	<u>ج</u> ن			
1 12	12-Feb M	Mr. Chin Sokhun	P-11-101	12345	Business	3phase	Light too dark	13~Feb		3477	355V	-	196V	1947	Joint Loose	14-Feb	Repair Joint
2											l						
m																	
4							A SECTION AND ASSESSMENT ASSESSME										
EC.																	
9																	
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œ													-				
6																	
0							Annual Control of the										
11							The statement of the st										
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13							The second secon									***************************************	
14							Andreas of the first of the fir										
15													-				
16		-															, and a second s
17																	
8							the state of the s										
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50														-			
21							Annual Control of the					-					
22											<b> </b>	-					
23													<u> </u>				
24																	
25		25															
*FAC Sta	ndard w	ithin 10 working days at	Rer complaint						1								

\*EAC Standard : within 10 working days after complaint \*\*EAC Standard : 60% within 6 months after complaint

Sample Form of COMPLAINTS ON INCORRECT METER READING RECORD

AP-S-IV-15: Sample Form of COMPLAINTS ON INCORRECT METER READING RECORD

Phase         Nature of Complaint         Date         Mater Reading         Judgement         Date           Sphase         Jamuary Invoice too expensive         13-Feb         12345         13456         misreaded last time         14-Feb		5	Complaint Received		Complaint	Complaint Received					Investigation			Constant
12-45   Mr. Ohin Solutura   P-11-101   12345   Bautress   3phases   Juruary Invoice too expensive   13-76   12345   right-seaded last time   14-76   1244		Date	Name of Customer	Pole #	Meter Carriel #	Type	Phase	Nature of Complaint	Date	Meter	Reading	Judgement	Date	Method
12-Feb M. Chila Sobrium         P-11-101         12346         Business         3-hase         Juntuery Invoice too expendition         13-Feb M. Chila Sobrium					±					Current	Last time			
2           4           5           6           6           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           2           3           4           4           5           6           6	-		Mr. Chin Sokhun	P-11-101	12345	Business		January Invoice too expensive	13-Feb		13456	misreaded last time	14-Feb	
4           6           7           8           9           9           9           1           10           11           12           13           14           15           16           17           18           19           11           10           11           12           13           14           15           16           17           18           19           10           11           12           13           14           15           16           17           18           19           10           11           12           13           14           15           16           17           18           19           10           10           11           12<	2													The state of the s
4           5           1           1           2           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           2	က													
6         1	4							Therefore the transfer of the						The state of the s
1           2           3           4           4	ഹ													
1 1           1 2           1 2           1 3           1 4           1 5           1 5           1 6           1 7           1 8           1 8           2 1           2 2           2 3           2 4           2 5           2 4           2 5           2 6           2 7           2 8           2 8           2 8           2 8           2 8           2 8           2 8           2 8           2 8	8							And the second s						
10   10   10   10   10   10   10   10	7													
10           10           11           11           12           14           15           16           17           18           19           10           11           12           13           14           15           16           17           18           19           20           21           22           23           24           25           26	တ							The state of the s						
11         1	ශ													
11           12           13           14           15           16           17           18           19           10           20           21           22           23           24           25           26           27           28           29           24	2													
12       13       14       15       16       17       18       19       10       10       11       12       20       21       22       23       24       25       26       27       28       29       20       20       21       22       23       24       25       26       27       28       29       20       20       21       22       23       24       25       26       27       28       29       20       20       21       22       23       24       25       26       27       28       29       20       20       20       21       22       23       24       25       26       27       28 <td>Ξ</td> <td></td>	Ξ													
13         14         14         15         16         17         18         20         21         22         23         24         25         26         27         28         29         24         25         26         27         28         29         20         21         22         23         24         25         26         27         28         29         20         21         22         23         24         25         26         27         28         29         20         20         21         22         23         24         25         26         27         28         29         20	12													
14           15           16	13													
15         16         17         18         19         20         21         22         23         24         25         26         27         28         29         24         25         26         27         28         29         20         24         25	14													
16       16       17         17       18       19       10 <t< td=""><td>55</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	55													
17           18           18           19           20           21           22           23           24           25           26           27           28           29           24           25           26           27           28           29           24           25           26           27           28           29           20           20           21           22           23           24           25	16													
18         19         20         21         22         23         24         25         24         25         26         26         26         26         26         26	17													
19         20         21         22         23         24         25         26         27         28         29         24         25         26         26         27         28         29         24         25         26	18													
20         21         22         23         24         25         24         25         26         27         28         29         24         25         26         27         28         29         24         25	19													
21         22         23         24         25         26         26         27         28         29         26	20													
22       23       24       25	21							And the property of the proper						
23       24       25	22													
25	g											A COLUMN TO THE PROPERTY OF TH		A STATE OF THE PROPERTY OF THE
52	24			_										
	25							Addition and the second				Market Andrews		The same of the same and the same and the same and the same and the same and the same and the same and the same

\*EAC Standard: within 10 working days after complaint

REPLACEMENT OF DEFECTIVE METER RECORD

RECORD	
METER	
DEFECTIVE	
T OF	
LACEMENT	
REP	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE OW
-IV-16	
AP-S	

				Find to be	Find to be detective				Replacement	nent	
	Date	Name of Customer	Pole #	Meter Serial #	Type	Phase	How to find	Date*	Old Meter	New Meter	leter
$\dashv$			-						Reading	Serial#	Reading
-	20-Feb	Mr. Chin Sokhun	P-11-101	12345	Business	3phase	EUMP Staff found at meter reading	14-Feb	23456	67890	0
7											
ო											
4											
D.											
9							the state of the s				
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œ											
6											
9											
=			Apparatus de la calendar de la calen								
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15									White the state of		
16											
17											
∞											
6											
20											
21											
22											
23											
24											
25		25									
ÉAC	Standard :	within 30 days after com	plaint				The state of the s				

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Sample Form of TESTING OF METER RECORD

AP-S-IV-17: Sample Form of TESTING OF METER RECORD

2					_	,			Constitution of the second	Ď,	Sering		Report to	Report to Customer	Repla	Replace to Original Meter	Meter
- Cata	Name of Customer	Pole #	Meter Serial #	Type	Phase	Receive	Date	Original Meter	Temp. Meter	Meter	Date	Result	Date*	Document#	Date	Temp. Meter Original Meter	Original Meter
			t B			Date		Reading	Serial#	Reading						Reading	Reading
1 20-Feb	Mr. Chin Sokhun	P-11-101	12345	Business	3phase	20-Feb	14-Feb	23456	67890	0	14-Feb Good	poo	14-Feb		14~Feb	23456	23456
2																	
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