

BIHAR STATE POWER TRANSMISSION CO. LTD

(Registered office:-Vidyut Bhawan, Bailey road, Patna.)

Office Order No. T-I/Misc-Duties & function-59009 /2014 672 Patna, Dated: 20-09-2014

In order to ensure effective monitoring and expeditious & timely execution of works of various wings of Central Relay and Instrument Testing Lab (CRITL) taken up by BSPTCL, the following Administrative set-up, duties & functions are framed:-

(1) ADMINISTRATIVE SET UP

In light of the above necessity, the Administrative set up is restructured in the following manner :

Total Manpower Strength :-

- (i) ESE - 01
- (ii) EEE - 04
- (iii) AEE - 09
- (iv) JEE - 18

The administrative set-up is detailed at **Annexure - 'A'**.

(2) AREA OF OPERATION

The area of operation will be as follows :-

- (A) ESE - He will be overall incharge of CRITL under whose order all team will operate.
- (B) EEE-1 - He will be responsible for attending the problems arising in Grid Sub-Stations of Transmission Circle, Patna & Transmission Circle, Biharsharif. He will also be incharge of CRITL Lab.
- (C) EEE- 2- He will be responsible for attending the problems arising in Grid Sub-Stations of Transmission Circle, Gaya & Transmission Circle, Dehri-on Sone.
- (D) EEE-3- He will be responsible for attending the problems arising in Grid Sub-Stations of Transmission Circle, Bhagalpur & Transmission Circle, Purnea.
- (E) EEE-4- He will be responsible for attending the problems arising in Grid Sub-Stations of Transmission Circle, Muzaffarpur.

(3) DUTIES AND RESPONSIBILITY.

CRITL will be performing the following responsibilities :-

- (i) Testing and Commissioning of New 220/132/33KV GSS & 100 MVA, 150MVA, 160 MVA Power Transformer.
- (ii) Testing and Commissioning of New 132/33KV GSS & 50MVA, 20MVA, 10MVA Power Transformers.

- (iii) Testing and charging of running transformers which tripped on major faults such as differential, Bucholz, OSR, PRV etc.
- (iv) Testing and Commissioning of all voltage level Current Transformer (CT) , Potential Transformer (PT) ,Capacitive Voltage Transformer(CVT), Lightning Arrestors (LA's) etc.
- (v) Testing and Commissioning of all voltage level SF6 circuit breakers or vacuum circuit breakers.
- (vi) Testing and commissioning of all types of protective trip and auxiliary relays, such as differential relay, distance relay, O/C relay, E/F relay, tripping relay, over voltage relay, under frequency relays, auxiliary relays etc.
- (vii) Attending Problem arising in Grid Sub-station such as relays transformers, breakers and all other equipments installed in Grid Sub-stations.
- (viii) Testing and commissioning of Control & Relay panel of transformers and lines.
- (ix) To carry out routine inspection of Grid Sub-station falling under their jurisdiction as per Roaster.
- (x) To maintain CRITL lab with all necessary infrastructure including testing infrastructures, tools & Plants.
- (xi) Testing of relays in lab for training & demonstration purpose as well as checking the healthiness of the relays.

(4) Required testing instruments and T & P for field testing (for each mobile team headed by EEE)

(a) Testing Instruments :

- (i) Primary Injection set - 1 set.
- (ii) Transformer ratio meter -1 set
- (iii) Winding resistance meter -1 set
- (iv) Secondary injection kit along with software loaded laptop -1set
- (v) Fault analyser -1 set
- (vi) Earth resistance tester -1 set
- (vii) DC earth fault locator -1 set
- (viii) Tan delta test kit (5 Kv) -1 set
- (ix) CT Polarity tester -1 set
- (x) Motorized Megger (5 KV) -1 no.
- (xi) Hand megger (1 KV) - 1 no.
- (xii) Multimeter (Digital) - 2 nos.
- (xiii) Tong Tester (0-200mAmp) - 2 nos.
- (xiv) Tong Tester (0-1000Amp) - 2 nos.



(b) **T & P**

- (i) Champion set -1 set
- (ii) Box spanner set -1 set
- (iii) Wire cutter -1 set
- (iv) Line tester - 2 nos.
- (v) Allen key - 1 set
- (vi) Cutting Plier- 6" & 8" -1 each
- (vii) Notch Plier - 6" -1 no.
- (viii) Slide wrench- 6" -1 no.
- (ix) Torch & cell -1 no.
- (x) Tata sumo AC -1 no.

(5) **CRITL LABORATORY**

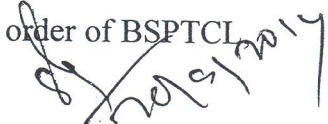
(A) **Presently following facilities are available in CRITL lab:**

- (i) Secondary Injection set for testing of different types of relays.
- (ii) Primary Injection set for testing the CT ratio.
- (iii) Transformer Ratio meter for testing the primary and secondary voltage ratio of the transformer.
- (iv) Winding Resistance meter for measurement of winding resistance of HV & LV winding of transformer.
- (v) Earth Resistance meter for measurement of earthing resistance of GSS.
- (vi) Motorised Meggar (5 KV) for measurement of insulation resistance of equipments.
- (vii) Multi meter for measurement of current & voltage.
- (viii) Tongue Tester for measurement of current in protection circuit cables.
- (ix) AC 3 phase source & AC to DC rectifier for DC source.
- (x) Necessary T&P as detailed 4(b) is also available in CRITL lab.

(B) **One each Distance Protection relay, Differential Protection relay, over current and earth fault relay of following manufactures is required for relay setting & training demo to CRITL and T&C Engineers.**

- (a) ABB
- (b) Areva
- (c) Easun Rey Rolle
- (d) General Electric.

By order of BSPTCL


(K. B. K. Sahani)
DGM (HR& Adm.)

Memo No. 710.....

Patna, Dated 20/9/2014

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[Signature]
(K. B. K. Sahani)
DGM (HR & Adm.)

Memo No. 710.....

Patna, Dated 20/9/2014

Copy forwarded to Director (Projects)/All GM-cum-CE/All C.E./ All FC/All GM (HR & Adm.)/ Sr. Law Advisor-cum-Addl. Secty./All ESE/All DGM/ All DGM (HR & Adm.)/ DGM (IT)/ DGM (F&A)/All Sr. Manager/ Sr. Manager(F&A)/ Law Advisor/All OSD (HR & Adm.)/ All US/Company Secretary/DGM (PR), BSPHCL/ All EEE/All JEE/ All ADO/All AO/All AO(Estt.)/ All ADO/ All SO, BSPTCL for information and necessary action.

[Signature]
(K. B. K. Sahani)
DGM (HR & Adm.)

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DGM (IT)