o/c

भारत सरकार **Government of India**
विद्युत मंत्रालय **Ministry of Power**
केंद्रीय विद्युत प्राधिकरण **Central Electricity Authority**
क्षेत्रीय निरीक्षण संगठन (उत्तर) **Regional Inspectorial Organization(North)**
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संख्या :**NRIO/Misc-43/Accidents/2018/** 645-650 **Dated: 12-06-2018**

To,

Station House Officer,
Police Station – R.K. Puram,
Sec.-12, R.K. Puram, New Delhi.

Subject: - Inquiry report of fire accident occurred at House No. 742, Sector-12, R.K. Puram, New Delhi.

With reference to case FIR No. 188/2018 dated 06.06.2018 U/s 336/304A IPC P.S. R.K. Puram, New Delhi, a request from S.H.O., R.K. Puram for inspection of place of occurrence was received on 06.06.2018. It was mentioned in S.H.O. letter that on 06.06.2018, fire broke out at electricity meter and the two motor cycles parked there also caught fire due to which heavy toxic smoke produced and the persons in H. No. 742 which is just above the staircase fell unconscious and one of the child was declared brought dead in the Hospital. The undersigned visited the site and following observations are made hereunder:

1. It was observed that the electricity meter board where meters and cutout for four houses were placed by the electricity supplier was completely burnt out. These electricity meters were located under the staircase and were kept covered by wooden doors.
2. Two motor cycles were parked near the electricity meter board under the staircase which were also found completely burnt out.
3. The exact cause of initiation of fire could not be ascertained due to loss of evidence in the fire i.e. DP, cutout, joints, meter etc., however, the possible cause of fire due to electricity include the following:
   a). loose connections which led local heating and sparking
   b). short circuit due to loss of insulation in the wires in the meter board
   c). non functioning of isolating switchgears in case of overload
   d). improper rating of switchgears
4. The cause of rapid spreading of fire seems to be parking of two motor cycles near the electricity meter board which caught fire due to the presence of highly

inflammable petrol in their tanks and produced highly toxic gases which led to death of a child and three persons unconscious in the House No. 742.

5. The meter board of House no. 741-744 was completely burnt out, however, at the meter board of house No. 737-740 in nearby block, it was observed that DP located after meter was of rating 40 Amps for sanctioned household load of 2kW but at the distribution board of house No. 743 the MCB of rating 63 Amps was used which is highly overrated for 2kW sanctioned load. Further it was mentioned by CPWD person that 6 sqmm Cu wire has been used for house wiring. Since the Mains DP after meter is of 40 Amps and the MCB at house DB is 63 Amps is used, in case of overload 63 Amps MCB would not trip and overloading would persist which would cause insulation failure of wires due to heating leading to short circuit.

   It was also seen that at meter board no DP MCB was used after meter for connection to House No. 40 instead direct connection was given by making joints in the wires to the house DB. **Moreover, the meter boxes were seen poorly maintained. The photograph showing the same is enclosed herewith at Annex-I.** All the switchgears and wiring after meter is taken care by CPWD, therefore it is negligence of **CPWD for not providing protective switchgears having proper ratings in the electric circuit. CPWD shall provide the MCBs of proper ratings after meter to individual households according to the sanctioned load and do the periodic inspections.**

6. Further, it was seen that two ACs were installed in the house which would have lead to overloading the house wiring and it continued due to improper ratings of protective switchgears. Most of the households were having ACs and other electric load in the form of modern day household equipments; accordingly, **CPWD shall review the load assessment of households in the area and carry out the necessary changes required in the wiring and switchgears.**

7. It was seen that entry and exit to upper floor house is from a narrow staircase under which electric meter board was kept and in case of fire there is no escape route available for the upper floor residents. Further, the meter board is covered with wooden doors instead of metallic doors as mentioned in CPWD works manuals. **CPWD shall replace all the wooden doors at the meter board with metal doors with provision of air passage and no storage of any kind of material/ trash shall be allowed near the meter boxes by anyone.**

   Since the exit for upper floor residents is not available in case of fire in meter boards, CPWD shall provide Low Smoke Zero Halogen wires from meter boxes to House hold distribution board to every floor.

8. It was seen that no earth leakage protective devices i.e. RCCB / ELCB have been provided in the household supply by CPWD for prevention of electric shock to residents. Whereas, as per Regulation 42 of CEA (Measures relating to Safety and Electric Supply), 2010(as amended) the electric supply to every installation shall be controlled by an earth leakage protective device of 30 milliamps in case of domestic connection where the sanctioned load is 2kW and above. Therefore, **CPWD shall provide RCCB /ELCB to every household where the sanctioned load is 2kW and above.**

9. Further it was observed that in the feeder pillar of BSES Rajdhani Power Ltd. HRC fuses were not used in the incomer as well as outgoing cables. Instead of HRC fuses, a wire with unknown capacity was rigidly provided across fuse terminals to avoid blown off of the fuses defeating its purpose. **It is negligence of BSES Rajdhani Power Ltd. The photograph of the feeder pillar showing the same is attached herewith as Annex-II. BSES Rajdhani Power Ltd. shall replace all such fuse connections with HRC fuses with proper ratings and keep the receptacle in a lock and key arrangement.**

10. It is advised that CPWD shall provide fire extinguishers at each floor of the building and also at suitable location near to the meter box in each block for emergency use of the residents.

Encl: As above.

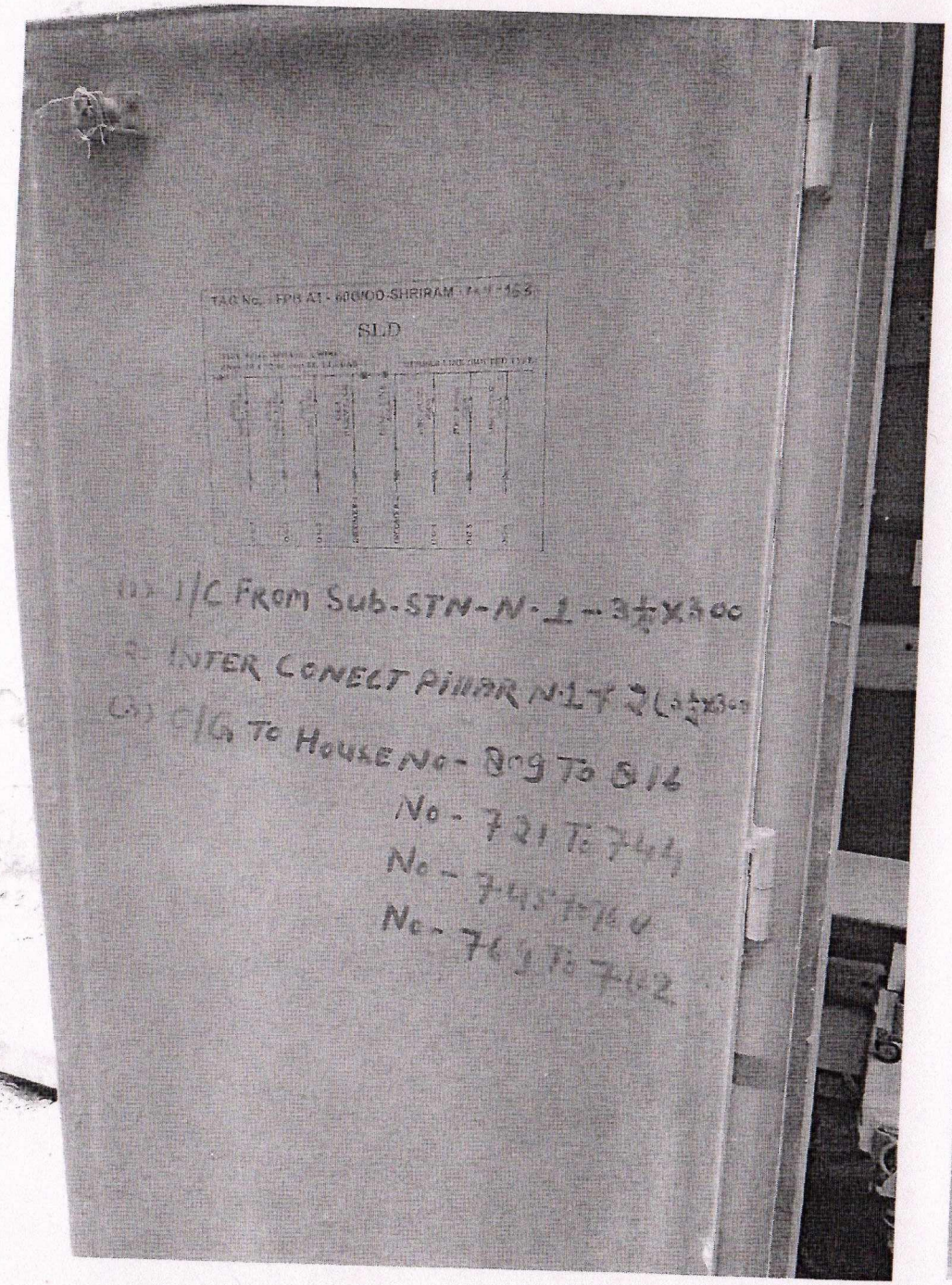
o/c P. Khichi 12/6/18

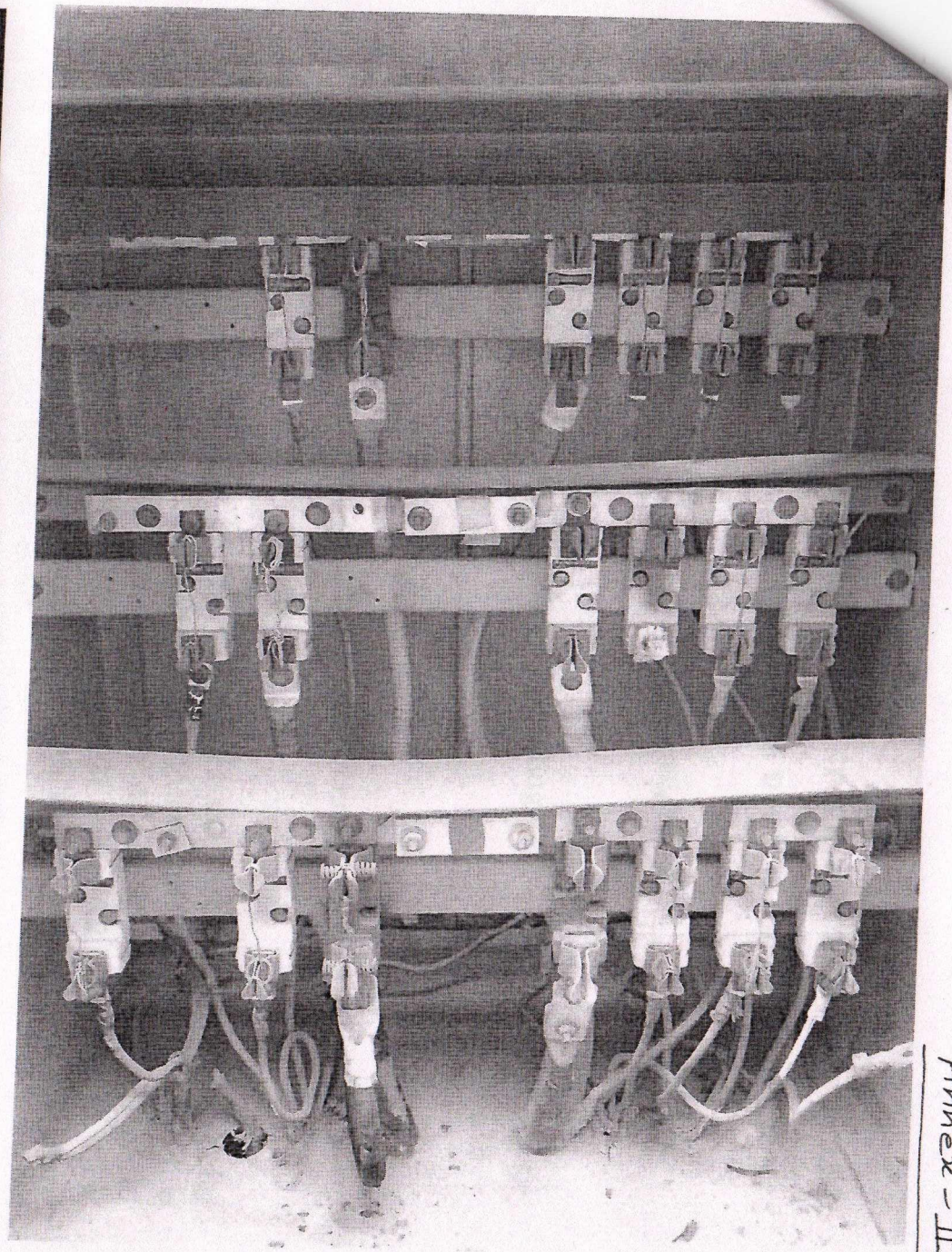
(Prakash Khichi)
Superintending Engineer
& Electrical Inspector
to the Govt. of India

Copy to:

1. PPS to Member (Power System), CEA
2. Chief Engineer, Chief Electrical Inspectorate Division, CEA
3. Chief Engineer, (NDZ-III), CPWD, Sewa Bhawan, New Delhi
4. Executive Engineer, ED-9, CPWD, East Block-I, Level-II, R. K. Puram, New Delhi
5. DGM(O&M), BSES Rajdhani Power Ltd., Sector-9, R.K. Puram, New Delhi

Annex - I


SLD
1/C FROM Sub-STN-N-1 - 3½X300
INTER CONECT PILLAR N-1 T 2 (3½X300
C/G TO HOUSE No - 809 TO 816
No - 721 TO 744
No - 745 TO 760
No - 761 TO 782



Annex - II