



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत संचार विकास प्रभाग

Power Communication Development Division

No. CEA/PCD/PTCC/MRA-1133/681-683

Date: 10.11.2020

Subject: Induced Voltage calculation in respect of PTCC proposal for 220 kV LILO on Paras – Balapur MC Line for 220 kV Malkapur DCDC line, length = 73.81 kms.

- Ref:** (i) MSETCL letter no. MSETCL/CO/Tr. Pr./S-1/PTCC/B-549/8620 dated 02.08.2017
(ii) BSNL letter no. IC/MBI/PTCC/MRA-2386/17 dated 31.08.2019
(iii) Central Railway letter no. N.153/PTCC/220kV/MAH-672 dated 24.08.2017
(iv) Defense letter no. B/46937/Sigs 7(b)/620 dated 28.08.2017

MSETCL submitted the subject proposal vide above cited reference (i). The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above cited references (ii) and (iii) respectively has been examined. The Soil Resistivity value has been taken as 12,000 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Cables and Railway Telecommunication circuits under single line to ground fault condition are enclosed at Annex-I&II respectively. The screening factors as applicable have been considered. Defense has accorded NOC vide above Ref.(iv) for the above line (a copy enclosed at Annex-III).

Taking above into consideration, take necessary action regarding issue of PTCC route approval.

Enclosures: As above.

Sh. Pany
PPS

To,

Divisional Engineer (PTCC), Inspection Circle,
Bharat Sanchar Nigam Limited (BSNL),
3rd Floor, D-Wing, BSNL Admin Building
Juhu Tara Road, Santa Cruz (West), Mumbai-400054

21/11/20
10.11.20
(Upendra Kumar)
Chief Engineer

M/C

Copy to:

1. GM(S&T), Central Railway, CSMT Mumbai, Headquarters Office, S&T Branch, 3rd Floor, Annex Bldg, Mumbai CST, Mumbai-400001 (with Annexure-II).
2. Chief Engineer(Project Schemes), MSETCL, Plot No. C-19, E-Block, Prakashganga, Bandra-Kurla Complex, Bandra (East), Mumbai – 400051.

CEA Office Case No.----- 1133		Map scale- 1 Cms = 500 Meters			
DET (PTCC) Office Case No. MRA-2386		Route Length- 73.81 KMS			
Railway Office Case No.		Soil Resistivity- 15,000 Ohm/CM			
Name of Power Line: 220 KV D/C LILO line on Paras- Balapur line for 220 KV Malkapur s/s.					
DETAILS FROM BSNL SIDE		DETAILS FROM POWER COMPANY			
Sl.No.	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts
A BALAPUR EXCHANGE					
1	Exge to Old exchange Pillar 1200 Prs	1.2 Kms.	}	}	}
2	Exge to Lalsawari Pillar 400 Prs	3.0 Kms.			
3	Exge to MSEB Sub Station 100 Prs	4.0 Kms			
B PARAS EXCHANGE					
1	Exge to Power Station 400 Prs.	1.2 Kms.	}	}	}
2	Exge to Market 400 Prs	2.7 Kms.			
C MALKAPUR EXCHANGE					
1	Exchange to Gokardhan 200 Pairs	2.5 Kms.	}	}	}
2	Exchange to Savaji House 200 Pairs	1.0 Kms.			
3	Exchange to Dharangaon 300 Pairs	3.0 Kms.			
4	Exchange to Ram Mandir 300 Pairs	2.5 Kms.			
D DASAKHED EXCHANGE					
1	Exchange to Vivara 100 Pairs	2.5 Kms.	}	}	}
2	Exchange to Benjochem 100 Pairs	0.5 Kms.			
E SHEGAON EXCHANGE					
1	Exge to Saibal Hospital Pillar 400 Prs.	1.0 Km.	}	}	}
2	Exge to Ban Pillar 800 Prs	2.5 Kms			
F NANDURA EXCHANGE					
1	Exchange to Rampur 50 Pairs	2.5 Kms	}	}	}
2	Exchange to Sangwa Wadi Road 100 Pairs	5.0 Kms.			
3	Exchange to Chimany Sugar Factory 100 Pairs	6.0 Kms			
4	Exchange To Dhanora Budruk 100 Pairs	4.0 Kms			
5	Exchange to Kharkhed 100 Pairs	2.0 Kms			

Faraz

10/11/2020

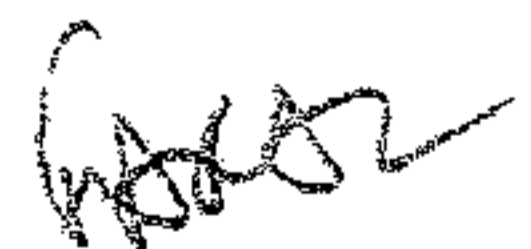
फ़राज़/FARAZ

उप निदेशक/Deputy Director
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.
 विद्युत मंत्रालय/Min. of Power
 भारत सरकार/Govt. of India
 नई दिल्ली/New Delhi-66

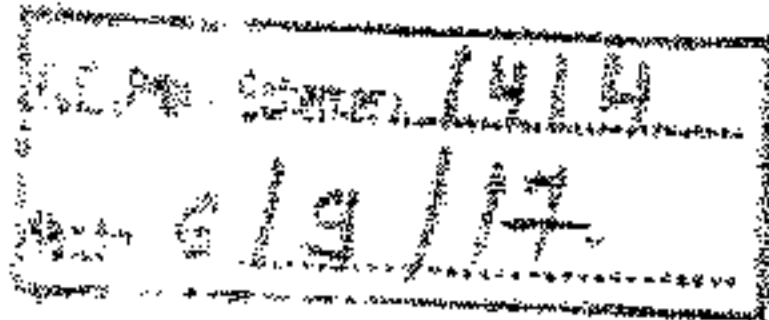
ANNEXURE - II

Case No.: MRA-1133 Name of the Power line: 220 kV LILO on Paras – Balapur M/C Line for 220 kV Malkapur DCDC Line, length = 73.81 kms.			Map Scale : 1cm=500mts Total Length : 73.81 kms S.R. Value : 12,000 Ohms-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

CENTRAL RAILWAY					
letter no. N.153/PTCC/220kV/MAH-672 dated 24.08.2017					
Affected Blocks & Telcom Circuits Details					
1.	Khamked – Gaigaon Sections:				
a.	Khamkhed - Malkapur	Out of IV Consideration Zone			0
b.	Malkapur - Wadoda	9.0	0.00208	10000	21
c.	Wadoda – Biswa Br.	5.4	0.005	8500	42
d.	Biswa Br. - Khumgaonbuoti	5.8	0.0076	7948	61
e.	Khumgaonbuoti - Nandura	7.7	0.0081	7162	58
f.	Nandura - Jalamb	11.2	0.0117	6000	70
g.	Jalamb - Shegaon	8.5	0.00512	5500	28
h.	Shegaon – Shri Ksetranagjhari	Out of IV Consideration Zone			0
i.	Shri Ksetranagjhari - Paras	4.5	0.001178	10000	12
j.	Paras - Gaigaon	Out of IV Consideration Zone			0
2.	Jalamb - Khamgaon	05 Volts			


 10/11/2020
 प्र.प. / PARAZ
 उप निदेशक / Deputy Director
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Min. of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi-66

Tele : 23019743



MKA 1133

Directorate General of Signals
Signals 7
General Staff Branch
Integrated HQ of MoD, (Army)
DHQ PO, New Delhi - 110011

B/48937/Sigs 7(b)/820/

28 Aug 2017

✓ Chief Engineer (Projects & Schemes)
"PRAKASHGANGA", Plot No C-19,
'E' Block, Bandra, Kurla Complex,
Bandra (East), Mumbai - 400051

**PTCC PROPOSAL FOR 220KV LILO ON PARAS - BALAPUR MC LINE FOR 220KV
MALKAPUR DCDC LINE. LENGTH = 73.81 Kms**

1. Reference your letter No MSETCL/CO/Tr.Pr./S-I/PTCC/B-549/ dt 02 Aug 2017.
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(AV ^{VJ} Umdekar)
Lt Col
GSO 1 (Comm)
for SO-in-C

Enclosures (As above)

Copy to :-

Chief Engineer, (PTCC), CEA,
NRPC Complex
18-A, Shaheed Jeet Singh Marg,
Katawaria Sarai, New Delhi - 110016

: for info and necessary action.

SE (Schemes I)

CVS
6/9

EE (MERC)
23/8/17