



सत्यमेव जयते

भारत सरकार  
Government of India  
विद्युत मंत्रालय  
Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण  
Central Electricity Authority  
पावर कम्युनिकेशन डवलपमेंट प्रभाग  
Power Communication Development Division

No. CEA/PCD/PTCC/MRA 1035/ 2521-2523

Date:05/ 12/2018

Divisional Engineer (PTCC), Inspection Circle,  
Bharat Sanchar Nigam Limited (BSNL),  
3<sup>rd</sup> Floor, D-Wing, BSNL Admin Building  
Juhu Tara Road, Santacruz (West)  
Mumbai (Maharashtra)-400054

**Subject:** IV calculation for PTCC Route Approval for upgradation of existing 220kV Kharghar-Kalwa line from Double circuit to Multi circuit.

**Ref:** i) BSNL Letter No. TM/PTCC/RA-1/MRA-2110, Dated-18/04/2018.

ii) Central Railway AESTE/TELE/HQ,Ltr.No. 153/PTCC/220kV/MAH-392 Dated 15/01/2014.

Sir,

The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above cited references (i), (ii) and (ii) respectively has been examined. The Average Soil Resistivity value has been taken as 20,000 Ohms-cm, as per data submitted by Power Authority i.e MSETCL. Voltages likely to be induced on paralleling BSNL 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.

As the power Authority had submitted the instant case before the decision of consideration of Defense, the requirement Defense Telecom details may be waived.

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

Encl: As above

Yours faithfully,

(Naresh Bhandari) 9/12  
Chief Engineer

**Copy to:**

1. AESTE, Central Railway, Headquarters Office (S&T Branch) 3rd Floor, Annex Building, CST Mumbai-400001 (Annexure-II only)
2. The Superintending Engineer(Schemes & Coordination), Prakashganga,Plot No.C-19, E Block,Bandra(East),Mumbai-400051.



## ANNEXURE - II

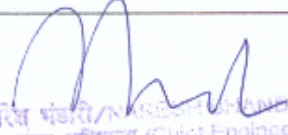
Case No.: MRA 1035		मानचित्र स्केल : 1 सेमी=500 मीटर कुल लम्बाई : 21.873 कि.मी. एस. आर. मान : 20,000 ओम- सेमी			
Name of the Power Line: 220kV KHARGHAR-KALWA LINE FROM DC to MC					
क्रम संख्या	टेलीकाम विवरण	समानांतरिय लम्बाई (कि.मी) में	न्युचुअल कप्लिंग (ओम) में	प्रभावी फाल्ट करंट ( एम्पियर) में	प्रेरण वोल्टेज ( वोल्ट) में

CENTRAL RAILWAY Ref: No.N. 153/PTCC/220kV/MAH-392 DATED 15-01-2014					
<b>Affected Blocks &amp; Telecom Circuits.</b>					
<b>KURLA- KALYAN SECTION</b>					
1	Kurla-Vidyavihar	Out of IV consideration zone			0
2	Vidyavihar- Ghatkopar	Out of IV consideration zone			0
3	Ghatkopar-Vikhroli	Out of IV consideration zone			0
4	Vikhroli-Kanjumarg	Out of IV consideration zone			0
5	Kanjurmarg-Bandup	Out of IV consideration zone			0
6.	Bandup-Nahur	.8	.00015	10000	2
7.	Nahur-Mulund	.6	.00012	9500	1
8.	Mulund-Thane	Out of parallelism			0
9.	Thane-Kalwa				0
10.	Kalwa-Mumbra	1	.0003	10000	3
11	Mumbra-Diva	Out of parallelism			0
12	Diva-Kopar	Out of parallelism			0
13.	Kopar-Dombivili	Out of parallelism			0
14.	Dombivili-Thakurli	Out of IV consideration zone			0
15.	Thakurli-Kalyan	Out of IV consideration zone			0
<b>KURLA-PANVEL SECTION</b>					
1	Kurla-Tilaknagar				0
2	Tilaknagar-Chembur				0
3	Chembur-Govandi				0
4	Govandi Mankurd	Out of IV consideration zone			0
5	Mankurd-Vashi				0
6	Vashi Sanpada				0
7	Sanpada-Juinagar				0
8	Juinagar-Nerul	1.4	.0016	7440	12
9	Nerul-Seawood	.3	.00036	8215	3
10	Seawood-Belapur	1.6	.00186	8400	15
11	Belapur-Khargar	1	.0043	9130	39
12	Khargar-Mansarovar				0
13	Mansarovar-Khandeshwar	Out of IV consideration zone			0
14	Khandeshwar-Panwel				0
<b>THANE- VASHI SECTION</b>					
1	Thane-Airoli	1.2	.008	10000	80
2	Airoli-Ghansoli	4	.0131	7720	101
3	Ghansoli-Koparhairane	1.5	.0049	5485	27
4	Koparhairane-Turbne	3	.0098	4890	48
5	Turbne-Sanpada	1	.00328	6350	20
6.	Sanpada-Vashi.	Out of parallelism			0

## ANNEXURE - II

Case No.: MRA 1035		मानचित्र स्केल : 1 सेमी=500 मीटर कुल लम्बाई : 21.873 कि.मी. एस. आर. मान : 20,000 ओम- सेमी			
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CENTRAL RAILWAY Ref: No.N. 153/PTCC/220kV/MAH-392 DATED 15-01-2014					
<b>Affected Blocks &amp; Telecom Circuits.</b>					
<b>BHIVANDI-SOMATNE SECTION</b>					
1	Bhavandi-Ulhas Br.	Out of IV consideration zone			0
2	Ulhas Br-Kopar	Out of parallelism			0
3	Kopar-Dativali	Out of parallelism			0
4	Dativali-Nilaje	1.8	.00017	7632	2
5	Nilaje-Taloje	8.7	.0009	7630	7
6.	Taloje-Navade	2.6	.0003	6843	2
7.	Navade-Kalomboli	Out of parallelism			0
8.	Kalamboli-Panvel	Out of parallelism			0
9.	Panvel -Somatne	Out of parallelism			0
<b>PANVEL-CHIKHALE SECTION</b>					
1	Panvel-Chikhale	Out of Iv consideration zone			0
<b>PANVEL-JASAI SECTION</b>					
1.	Panvel-Dapoli	Out of Iv consideration zone			0
2.	Dapoli-Jasai				0

  
 मुख्य अभियंता/Chief Engineer  
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.  
 विद्युत मंत्रालय/Ministry of Power  
 भारत सरकार/Govt. of India  
 नई दिल्ली/New Delhi-110019