



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-1147/493-95

Date: 16.04.2019

DET (PTCC), Western Zone,
Bharat Sanchar Nigam Limited (BSNL),
O/o DET(PTCC), QA & Inspection Circle,
3rd Floor, D-Wing, BSNL Admin Bldg.,
Juhu Tara Road, Santacruz (West),
Mumbai – 400054.

Subject: Induced Voltage calculation in respect of PTCC proposal of 220 kV D/C LILO line on existing 220 kV Jath – Mhaishal line for 400/220 kV Aikud S/S.

Ref: (i) BSNL letter no. IC/MBI/PTCC/MRA-2400/04 dated 16.01.2019
(ii) Central Railway letter no. N.153/PTCC/220kV/MAH-712 dated 08.01.2019
(iii) Defense letter no. B/46937/Sigs 7(b)/1381/ dated 11.02.2019

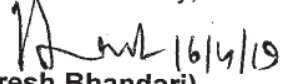
Sir,

The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above cited references (i) and (ii) respectively has been examined. The Soil Resistivity value has been taken as 30,000 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.(iii) for the line (a copy enclosed at Annex-III).

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

Encl.: As above

Yours faithfully,


(Naresh Bhandari)
Chief Engineer

Copy to:

- 1) Office of GM(S&T), Central Railway, Headquarters Office, S&T Branch, 3rd Floor, Annex Bldg, Mumbai CST (Annex – II only)
- 2) Chief Engineer (Projects Schemes), MAHA TRANSCO, "PRAKASHGANGA", Plot no. C-19, 'E' Block, Bandra – Kurla Complex, Bandra (East), Mumbai - 400051

ANNEXURE -I

Case No.: MRA-1147 Name of the Power line 220kV DC line, LILO on 220kV Mhaisal —Jath line for existing 400kV Alkud SS.		Map Scale : 1cm=500mts Total Length : 21.625 Km. S.R. Value : 30,000 Ohms-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

BSNL DETAILS

Ref. No: IC / MBI / PTCC / MRA -2400 / 04 DATED: 16-01-2019

1	Deshing Edge :-	
2	1) Edge to Shindawadi (50m)	3k
3	2) Edge to Banewadi (20m)	2.5
4	3) Edge to Haroli (100m)	1km
5	4) Edge to Terminal wadi (50m)	1k
6		
7	Shirdhona Edge :-	
8	1) Edge to Landgeewadi (20m)	1
9	2) — do — (100m)	500
10	3) Edge to Malayagan (50m)	0.5 k
11	4) Edge to Miraj Rd (50m)	1 k
12		
13	Bargaon Edge :-	
14	1) Bargaon edge to Miraj Rd (50m)	
15	2) edge to Malayagan Rd (50m)	
16	3) edge to TOWN area (50m)	
17		
18	Alkud (A) Edge :-	
19	1) Edge to Shirdhane Rd (100m)	
20	2) Edge to Kharshing Rd (50m)	
21		

← IV less than 430V →

← out of 115m →

← out of 115m →

← IV less than 430V →

नरेश भंडारी / NARESH BHANDAR
मुख्य अभियन्ता / Chief Engineer
केन्द्रीय विद्युत प्राधिकरण / C.E
विद्युत मंत्रालय / Ministry of Power
भारत सरकार / Govt of India

1/4

ANNEXURE - I


Case No.: MRA-1147 Name of the Power line 220kV DC line, LILO on 220kV Mhaisal —Jath line for existing 400kV Alkud SS.			Map Scale : 1cm=500mts Total Length : 21.625 Km. S.R. Value : 30,000 Ohms-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

BSNL DETAILS

Ref. No: IC / MBI / PTCC / MRA -2400 / 04 DATED: 16-01-2019

1	Kharsing Edge :-				
2	1) Edge to town area (100M)	} ← IV less than 430V →			
3	2) Edge to Alkud (M) Rd (50M)				
4					
5	Kerkoli Edge :-				
6	1) Edge to Kongnali Rd (50M)	} ← IV less than 430V →			
7	2) Edge to vaidgarwadi Rd (50M)				
8					
9	Kongnali Edge :-				
10	1) Edge to town area (100M)	} ← out side IV consideration zone			
11	2) Edge to Karali (RD) (100M)				
12					

2/4


 नरेश भंडारी / NARESH BHANDARI
 मुख्य अभियन्ता / Chief Engineer
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi-66

ANNEXURE -I

Case No.: MRA-1147 Name of the Power line 220kV DC line, LILO on 220kV Mhaisal - Jath line for existing 400kV Alkud SS.		Map Scale : 1cm=500mts Total Length : 21.625 Km. S.R. Value : 30,000 Ohms-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

BSNL DETAILS

Ref. No: IC / MBI / PTCC / MRA -2400 / 04 DATED: 16-01-2019

1	A Arag Exge to Lingnoor Rd. 50P	} ← IV less than 430V →			
2	to Bedag Rd. 50P				
3	to Belanki Rd 50P				
4					
5	B Lingnoor Exge to Khatav. 50P	} ← IV less than 430V →			
6	to Arag Rd. 50P				
7	to Shipur Rd 20P				
8	to Belanki Rd. 20P				
9					
10	C Belanki Exge to Shipur Rd. 20P	2.7	0.0982	6350	623
11	to Salgare Rd. 30P	} ← IV less than 430V →			
12	to Lingnoor Rd 12P				
13	to Santoshnadi 20P				
14					
15	D Salgare Exge to Belanki Rd 50P	} ← IV less than 430V →			
16	to Chabukawat Rd. 20P				
17	to Komnoli Rd. 50P				
18					
19	E Shipur Exge to Vyankodi wadi 50P	} ← IV less than 430V →			
20	to Erandoli Rd - 50P				
21	to Belanki Rd - 20P				
	to Limasara Rd - 20P	1.6	0.0566	6490	367
		} ← IV less than 430V →			

नरेश भंडारी / NARESH BHANDARI
मुख्य अभियन्ता / Chief Engineer
केन्द्रीय विद्युत प्राधिकरण / C.E.A.
विद्युत मंत्रालय / Ministry of Power

ANNEXURE - I

Case No.: MRA-1147 Name of the Power line 220kV DC line, LILO on 220kV Mhaisal —Jath line for existing 400kV Alkud SS.		Map Scale : 1cm=500mts Total Length : 21.625 Km. S.R. Value : 30,000 Ohms-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.


BSNL DETAILS

Ref. No: IC / MBI / PTCC / MRA -2400 / 04 DATED: 16-01-2019

1	F Erandoli Exge to Khanderajun Rd - 50P
2	to Gundewadi Rd - 20P
3	to Malhewadi Rd - 20P
4	
5	G Khanderajun Exge to Kulkoti Rd - 20P
6	to Dongarwadi Rd - 20P
7	to Jayappa Chawadi Rd - 20P
8	to Gundewadi Rd - 20P
9	
10	H Gundewadi Exge to Erandoli Rd - 20P
11	to Khanderajun Rd - 20P
12	to Malgaon Rd - 50P
13	
14	I Bhare Exge to Sori Rd - 50P
15	to Miraj Rd (main) - 50P
16	to Yallamma Market - 20P
17	
18	J Sori Exge to Karoli (M) - 50P
19	to Dhalgaon Rd - 20P
20	to Patgaon Rd - 20P
21	to Bhare Rd - 50P

← IV less than 430V →

← out of 11 sm →


 नरेश भंडारी / NARESH BHANDARI
 मुख्य अभियन्ता / Chief Engineer
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi-66

MRA-1147

ANNEX-III

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

81/

11 Feb 2019

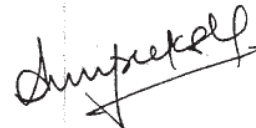
gineer,
partment
ectricity Transmission Co. Ltd
No C-19, 'E' Block,
lex, Bandra (East),

AL FOR 220KV DC LINE, LILO ON 220KV MHAISAL-JATH LINE FOR
EXISTING 400KV ALKUD S/S, LENGTH=21.625KMS

r No MSETCL/CO/PS/S-I/PTCC/B-559/No 12538 dt 01 Dec 2018 (copy att).

Certificate (NOC) is accorded based on inputs provided vide Map sheets
letter mentioned above.

ongwith map sheets (in original) are forwarded herewith for your further



(A Rawat)
Maj
GSO 1 (Comn)
for SO-in-C

ve

CEA
n Development Division

for information.