



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/GUJ-790/236-38

Date: 11.06.2020

Subject: - Induced voltage calculation in respect of 765 kV D/C Bhuj (PS) to Lakadia (PS)-Reg.

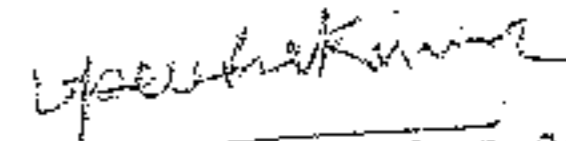
Reference: -

- | | |
|--|-------------------|
| (i) WRSS XXI (A) Transco Ltd. Ref. No. WRSS/2019-20/26 | Dated: 24.12.2019 |
| (ii) BSNL Ref. No. IC/MBI/PTCC/GUJ-2819 | Dated: 21.01.2020 |
| (iii) Western Railway Ref. No. SG.158/28/12 (1132) | Dated: 28.01.2020 |
| (iv) Defense Ref. No. 46937/Sigs 7(b)/1952 | Dated: 28.02.2020 |

The PTCC proposal submitted vide ref. (i) has been examined. The low frequency induction on BSNL Telecom Lines and Railway Block and Communication circuits as per details furnished vide above cited references (ii) and (iii) respectively has been examined. The Average Soil Resistivity value has been taken as 7,500 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Lines and Western Railway Block and Communication circuits under single line to ground fault condition are enclosed at Annex-I and Annex-II respectively. The screening factors as applicable have been considered. In addition, Defense has accorded NOC vide above ref. (iv) for this line (a copy enclosed at Annex-III).

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

Encl.: As above.


11.06.2020
(Upendra Kumar)
Chief Engineer

M/C

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

Contd.

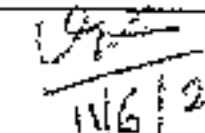
CEA Office Case No.-----		Map scale- 1 Cms = 500 Meters			
DET (PTCC) Office Case No. 2819		Route Length- 107.472 KMs			
Railway Office Case No.		Soil Resistivity- 52.74 Ohm/ M			
Name of Power Line : 765 KV D/C BHUJ (PS) to LAKADIA (PS) Transmission Line (HEXA ZEBRA ACSR).					
DETAILS FROM BSNL SIDE			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
1	NIRONA EXCHANGE				
1A	Nirona Ex-. Local 100x1+20x2P	}	Out of parallelism		
2A	Nirona Ex-. Local 50x1P				
3A	Nirona Ex-. Local 20x3P				
2	SUMRASAR EXCHANGE				
1B	Sumrasar Ex- Local 400x1P	}	IV less than 430V		
3	Sumrasar Ex- Local 50x2P				
1C	Sumrasar Ex- Local 20x2P				
3	LODAI EXCHANGE				
1C	Lodai Exch. - Local - 200*1 P	}	IV less than 430V		
2C	Lodai Exch. - Local - 100*1 P				
3C	Lodai Exch. - Local - 50*2 P				
4	DUDHAI EXCHANGE				
1D	Dudhai Exch.-Local - 100*1 P	}	IV less than 430V		
2D	Dudhai Exch.- Local- 50*1 P				
3D	Dudhai Exch.- Dhanakda - 50*1 P				
4D	Dudhai Exch.- Local- 20*1 P				
5D	Dudhai Exch.- Local- 50*1 P				
6D	Dudhai Exch.- Local- 50*1 P.				
5	BHACHAU EXCHANGE				
1E	Bhachau Exch. - Local--800*1 P	}	IV less than 430V		
2E	Bhachau Exch. - Local--800*1 P				
3E	Bhachau Exch. - Local--800*1 P				
4E	Bhachau Exch. - Local-- 100*1 P				
6	SAMAKHIYALI EXCHANGE				
1F	Samakhiyali Exch.- Local- 800*1 P	}	IV less than 430V		
1F	Samakhiyali Exch.- Local- 100*1 P				
3F	Samakhiyali Exch.- Local- 50*1 P				
7	LAKADIYA EXCHANGE				
1G	Lakadiya Exch. - Local--200*1 P	}	IV less than 430V		
2G	Lakadiya Exch. - Local--200*1 P				
3G	Lakadiya Exch. - Local--10*1 P				

11/6/20
 मुख्य अभियंता / Chief Engineer
 केंद्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

ANNEXURE - II

Case No.: GUJ-790 Name of the Power line 765 KV D/C Bhuj (PS) to Lakadiya (PS) transmission line.		Map Scale : 1cm=500mts Total Length : 107.472 Km. S.R. Value : 7,500 Ohms-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

WESTERN RAILWAY					
Ref. No: SG. 158 / 28 / 12 (1132) DATED: 28-01-2020					
Affected Blocks & Telcom Circuits Details					
1	Samakhiyali to Vondh	Outside IV consideration zone			0
2	Vondh to Bhachau	Outside IV consideration zone			0
3	Bhachau to Chirai	Outside IV consideration zone			0
4	Samakhiyali to Katariya	Outside IV consideration zone			0
5	Samakhiyali to Lakadiya	1.9	0.0004	18968	8
6	Lakadiya to Shivilakha	3.6	0.0006	19432	12
7	Shivilakha to Chitrod	Out of parallelism			0


 11/6/20
 मुख्य अभियंता/Chief Engineer
 केंद्रीय विद्युत प्राधिकरण/C.E.A.
 विद्युत विभाग/Ministry of Power
 भारत सरकार/Govt. of India
 नई दिल्ली/New Delhi

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

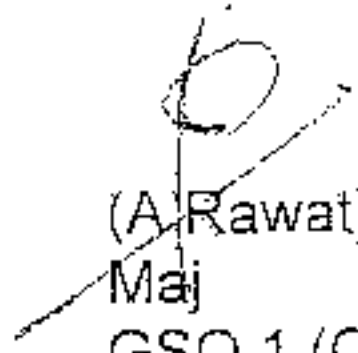
B/46937/Sigs 7(b)/1952/

Feb 2020

AGM -Projects
WRSS XXI(A) Transco Limited
House No. 22, Odhav Vandana-4,
Near MEWS School, Air Port Road,
Bhuj-370001, Gujarat, India

**REGARDING PTCC CLEARANCE FOR CONSTRUCTION OF 765KV D/C BHUJ (PS)-LAKADIA
(PS) TRANSMISSION LINE**

1. Ref your letter No WRSS/2019-20/26 dt 24 Dec 2019 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.


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

Enclosures : As above

Copy to :-

The Director (PTCC), CEA
Power Communication Development Division
NRPC Complex, 18-A Shaheed Jeet Singh Marg
Katwaria Sarai, New Delhi - 110016

Divisional Engineer Telegraph (PTCC)
O/o GM (North); BSNL, QA & Inspection Circle,
CTS Compound, Africa Avenue Road,
Netaji Nagar, New Delhi-110023

for information