

#### भारत सरकार

## Government of India

विद्युत मंत्रालय

### Ministry of Power केन्द्रीय विद्युत प्राधिकरण

# Central Electricity Authority पावर कम्युनिकेशन डवलप्मेंट प्रभाग

## Power Communication Development Division

No. CEA/PCD/ PTCC/RAJ-618/484-86

Date:12.04.2019

DET (PTCC), Northern Zone, Bharat Sanchar Nigam Limited (BSNL), O/o PGM(N), Inspection Circle, CTS Compound, Netaji Nagar, New Delhi - 110023

Subject: Induced Voltage calculation in respect of PTCC proposal of 220 KV D/C LILO line of existing 220 kV S/C Jhalawar – Chhabra line to proposed 220 kV GSS Aklera.

Ref:(i) BSNL letter no. DET/PTCC/ND/DV-9413/Raj-1205/2018-19 dated 06.03.2019

- (ii) West Central Railway letter no. WCR/N-HQ/120/PTCC/T-50/III Caes-246 dated 05.02.2019
- (iii) Defense letter no. B/46937/Sigs 7(b)/1348/ dated 24.01.2019

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 7,500 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 above line.

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

Encl.: As above

(Naresh Bhandari) Chief Engineer

### Copy to:

- 1 GM(S&T), West Central Railway, 1<sup>st</sup> Floor, Annex II Building, Jabalpur-482068 (With Annex II only)
- 2 Executive Engineer (PTCC), RRVPNL, First Floor, Room no. 129, Vidyut Bhawan, Jyoti Nagar, Jaipur – 302005

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Case N	o.: RAJ-618			ANNEXUR	<u>(E~</u>
Name o	of the Power line: 220 KV LILO to Aklera (220 r- Chhabra Line	Map Scale : 1cm=500mts Total Length : 48.77 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.
	DETAIL DET / PTCC / ND / DV-9413 / Raj-1205/	2018-19 DATE	D: 06-03-2019		
	d Blocks & Telcom Circuits Details				
1 2 3 4 5 6	Aklera T. Exch to Salpura Road Aklera T. Exch to Jhalawar Teen Batti Aklera T. Exch to Bhopal Road Naka Aklera T. Exch to Manohar Thana Road Sarola T. Exch to Khanpur Road Sarola T. Exch to Aklera Road		IV less than	430 V	
7	Sarola T. Exch to Malanyasa	5.0	0.0272	8000	218
8	Taraj T. Exch to Aklera Road		IV less than	430 V	
			1		7.051
			नरेश भंडारी/५	RESH BHANDAR	
			विद्युत नंत्रालय/ भारत सरकार	प्राधिकरण/C.E.A. Ministry of Power /Govt. of India New Delhi 66	
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2005	lo - DA LOGO			ANNEXUR	E-11
Vame	lo.: RAJ-618 of the Power line: 220 KV LILO to Aklera (220 r- Chhabra Line	Map Scale : 1cm=500mts Total Length : 48.77 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.
WEST	CENTRAL RAILWAY				
	WCR / N-HQ / 120 /PTCC / T- 50 / III CAES - 24	46 Dated 05.02.	2019	* .	
1	Juna Khera - Ametha		-	0	
2	Ametha - Aklera	5.0	0.0032	8000	26
3	Aklera - Pachola	4.5	0.0018	8200	15
4	Pachola - Ghatoli		<u> </u>		0
5	Ghatoli - Naya Goan	outside	utside IV Consideration zone		
			11		×.
				1	
	:	-	नरेश भड़ाहर	ARESH BHANCAL	,
			केन्द्रीय विद्यत	ग्राटिकरण ⟨C.E.A	
			विद्युत मन्नालयः भारत सरका		
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