



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/MP-443/583-85

Date: 23.09.2020

Subject: Induced Voltage calculation in respect of PTCC proposal for LILO of 220 kV DCDS line from Indore-II (Jetpura) S/S to 220 kV Ujjain at proposed 765/400 S/S Indore (PGCIL).

Ref: (i) MPPTCL letter no. 04-01/PTCC/2583/TR-I/5682 dated 20.08.2018
(ii) BSNL letter No. IC/MBI/PTCC/MP-565 dated 20.02.2020
(iii) Western Railway letter no. SG. 158/28/10 (L-181) dated 22.01.2019
(iv) Defense letter no. B/46937/Sigs 7(b)/1253 dated 15.10.2018

MPPTCL submitted the subject proposal vide above cited Ref. (i). The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above cited references (ii) and (iii) respectively have been examined. The Soil Resistivity value has been taken as 15,000 Ohms-cm, as per data submitted by the 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. Further, 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.

(Upendra Kumar)
Chief Engineer

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

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Copy to:

1. GM(S&T), Western Railway, S&T Deptt., 5th Floor, Station Building, Churchgate, Mumbai - 400020 (with Annexure-II).
2. Chief Engineer (Procurement), MPPTCL, Block No. 3, Shakti Bhawan, Rampur, Jabalpur (M.P.) - 482008

(Annex-I)

CMA Office Case No.: MP-443		Map Scale: 1:50,000			
DET (PTCC) Office Case No.: IC/MBI/PTCC/MP-565		Route Length: 5.275 Kms			
Railway Office Case No.:		Average SR Value: 15000 Ohm cms			
Name of Power Line		LILO 220KV DCDS line from Indore-II (Jetpura S/s) to 220KV S/s Ujjain at proposed (765/400 S/s) Indore (PGCIL)			
S. No.	Name of Telecom Line/ Cable	Length of Parallelism in Kms.	Mutual Coupling in Ohms	Fault Current in Amps	Induce Voltage in Volts
	INDORE SSA				
	SDOP Sanwer				
	U/G cable from Location (1) to Location (2) at Sanwer - 2x400 Pair				- OUT OF IV CONSIDERATION ZONE
	U/G cable from Location (3) to Location (4) at Darji Karadia - 2x20 Pair				
	U/G cable from Location (4) to Location (5) at Darji Karadia - 100 Pair				
	U/G cable from Location (7) to Location (11) at Darampuri - 50 Pair				< 430 V
	U/G cable from Location (9) to Location (10) at Darampuri - 50 Pair				
	U/G cable from Location (7) to Location (8) at Darampuri - 100 Pair				

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TANUJ
Asst. Director-II / Asst. Director-II
केंद्रीय विद्युत प्राधिकरण / C.E.A.
विद्युत मंत्रालय / Ministry of Power
भारत सरकार / Govt. of India
नई दिल्ली / New Delhi-60

ANNEXURE – II

Case No.: MP-443 Name of the Power line: LILO of 220 kV DCDS line from Indore-II (Jetpura) S/S to 220 kV Ujjain at proposed 765/400 S/S Indore (PGCIL)			Map Scale : 1cm=500mts Total Length : 5.275 km S.R. Value : 15,000 Ohms-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

WESTERN RAILWAY letter no. SG.158/28/10 (L-181) dated 22.01.2019					
Affected Blocks & Telcom Circuits Details					
1.	Dewas – Barlai	Outside IV Consideration Zone			0
2.	Barlai - Mangaliyagaon				0

Director-II / Asstt. Director-II
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 Govt. of India
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