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JOINT INSPECTION REPORT

We, the undersigned have jointly inspected proposed **Tundah-II Hydro Electric Project (24 MW)** on dated **08/09/2020** the areas earmarked by IPP **M/s. Sai Engineering Foundation, Sai Bhawan, Sector-4, New Shimla-171009 (H.P.)** for setting up of **Tundah-II HEP** over **Tundah Stream** (a tributary of Ravi River) situated in Tehsil Bharmour, District Chamba, Himachal Pradesh.

The user agency presented three different Alignments / Alternates No-I, II & III of the proposed project before the Joint Inspection Committee and deliberated in detail for their consideration. The joint inspection team examined all these alternatives with a view to avoid / minimize the use of forest land and other aspects to make this project environment friendly.

Alternative -1 As per this alternate / alignment, proposed project is becoming technically feasible, environmental friendly, cost effective and barest minimum forestland measuring **13.3082 hectares** is involved which cannot be escaped. As per this alignment, approximately 1 kms. long approach road is to be constructed up to proposed Power House site and approximately 1.25 kms. long 33 KV Double Circuit transmission line is to be erected / constructed upto interfacing point at Lahal Sub Station. **Hence, this alternate is selected.**

Alternative -2 As per this alternate / alignment, power house and some other components are not coming in the safe locations due to which project is not technically feasible and project is becoming un-viable. As per this alignment, approximately 4-5 kms. long approach road up to Power House site shall be constructed to transport the heavy machinery and approximated 3-4 kms. long 33 KV double circuit transmission line shall be erected / constructed upto interfacing point at Lahal and approximately forestland measuring **19.86 hectares** is involved. **Hence, this alternate is rejected.**

Alternative -3 As per this alternate / alignment, power house and other components are not coming in the safe locations due to which project is not technically feasible, cost effective and becoming un-viable. As per this alignment, approximately 5-6 kms. long approach road up to Power House site shall be constructed to transport the heavy machinery and approximated 4-5 kms. long 33 KV double circuit transmission line shall be constructed upto interfacing point at Lahal and approximately forestland measuring **21.99 hectares** is involved. **Hence, this alternate is rejected.**

The following land is essentially required to be diverted under Forest (Conservation) Act, 1980 or to be acquired for the construction of various components of the proposed project for non-forestry purposes. Enumeration list of trees shall be attached separately. Total land coming in the proposed project is as per detailed below:-

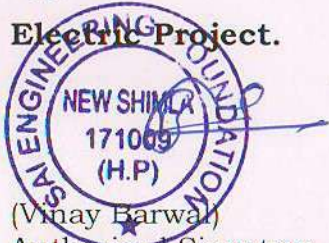
S.No.	Name of Component	Khasra No.	Total area involved in the proposed project				Present Land Use
			In Bigha / Biswa	(Area in Hectares)		Total Land	
				Forest Land	Private Land		
1	2	3	4	5	6	7	8
(A)	MUHAL : TUNDAH (Hadbast No-26)						
1	Approach Road-1 to Barrage Site.	755/733/1	02-10-05	0.2030	-	0.2030	Charagah Drakhtan
2	Muck Dumping Site No-1	755/733/2	00-15-00	0.0607	-	0.0607	Charagah Drakhtan
3	Diversion Barrage.	755/733/3	01-11-10	0.1274	-	0.1274	Charagah Drakhtan
4	Intake Structure.	755/733/4	00-04-18	0.0198	-	0.0198	Charagah Drakhtan
5	Water Conductor System-1.	755/733/5	01-05-16	0.1042	-	0.1042	Charagah Drakhtan
6	Muck Dumping Site No.-2.	755/733/6	00-17-10	0.0708	-	0.0708	Charagah Drakhtan
7	De-silting Tank.	755/733/7	02-09-00	0.1982	-	0.1982	Charagah Drakhtan
8	Muck Dumping Site No.-3.	755/733/8	01-07-00	0.1092	-	0.1092	Charagah Drakhtan
9	Silt Flushing Channel.	755/733/9	00-02-08	0.0097	-	0.0097	Charagah Drakhtan
10	Head Race Tunnel-1.	755/733/10	01-02-04	0.0897	-	0.0897	Charagah Drakhtan
11	Muck Dumping Site No.-4.	755/733/11	00-11-05	0.0455	-	0.0455	Charagah Drakhtan
12	Aquaduct.	755/733/12	00-01-07	0.0055	-	0.0055	Charagah Drakhtan
13	Diversion Barrage.	734/1	01-11-10	0.1274	-	0.1274	Gair Mumkin Khad
14	Aquaduct.	735/1	00-02-02	0.0085	-	0.0085	Gair Mumkin Khad
TOTAL (A)			14-11-15	1.1796	NIL	1.1796	
(B)	MUHAL : PALAN (Hadbast No-42)						
1	Diversion Barrage.	302/1	00-02-10	0.0101	-	0.0101	Charagah Bila Drakhtan
2	Approach Road-2 to Barrage Site.	302/2	02-05-12	0.1842	-	0.1842	Charagah Bila Drakhtan
3	Diversion Barrage.	304/1	01-08-16	0.1165	-	0.1165	Gair Mumkin Nala
4	Diversion Barrage.	308/1	01-07-12	0.1117	-	0.1117	Charagah Bila Drakhtan
5	Approach Road-2 to Barrage Site.	308/2	01-14-16	0.1406	-	0.1406	Charagah Bila Drakhtan
6	Store No-1.	308/3	04-13-07	0.3777	-	0.3777	Charagah Bila Drakhtan
7	Approach Road-2 to Barrage Site.	308/4	02-17-12	0.2327	-	0.2327	Charagah Bila Drakhtan
8	Approach Road-2 to Barrage Site.	308/5	03-04-16	0.2618	-	0.2618	Charagah Bila Drakhtan
9	Muck Dumping Site No.-5.	308/6	02-11-07	0.2078	-	0.2078	Charagah Bila Drakhtan
10	Store No-2.	308/7	00-15-00	0.0607	-	0.0607	Charagah Bila Drakhtan
11	Muck Dumping Site No-6 and installation of temporary portable stone crusher to recycle the road & tunnel material for bonafide use (Near Barrage Site).	312/1	06-09-17	0.5254	-	0.5254	Charagah Bila Drakhtan

12	Approach Road-2 to Barrage Site.	312/2	01-06-16	0.1083	-	0.1083	Charagah Bila Drakhtan
		312/3	01-08-08	0.1147	-	0.1147	Charagah Bila Drakhtan
		312/4	01-04-08	0.0986	-	0.0986	Charagah Bila Drakhtan
TOTAL (B)			31-10-17	2.5508	NIL	2.5508	
(C)	MUHAL : SIRD (Hadbast No-44)						
1	Muck Dumping Site No-12.	16/1	08-00-00	0.6474	-	0.6474	Charagah Drakhtan
2	Approach Road to Adit-II.	16/2	02-02-08	0.1713	-	0.1713	Charagah Drakhtan
3	Store No-3.	16/3	00-19-16	0.0801	-	0.0801	Charagah Drakhtan
4	Ropway Unloading Point.	16/4	00-12-16	0.0518	-	0.0518	Charagah Drakhtan
5	Ropway Corridor.	16/5	00-18-06	0.0739	-	0.0739	Charagah Drakhtan
6	Magazine Site.	1193/17/1	04-00-00	0.3236	-	0.3236	Charagah Drakhtan
7	Magazine Guard Hut.	1193/17/2	00-01-05	0.0051	-	0.0051	Charagah Drakhtan
8	Approach Road to Vertical Dropshaft.	1193/17/3	02-07-04	0.1907	-	0.1907	Charagah Drakhtan
9	Muck Dumping Site No-13.	1193/17/4	04-13-15	0.3794	-	0.3794	Charagah Drakhtan
10	Store No-4.	1193/17/5	01-11-05	0.1265	-	0.1265	Charagah Drakhtan
11	Transmission Line Corridor.	1193/17/6	01-07-15	0.1123	-	0.1123	Charagah Drakhtan
12	Double Pole Structure.	1193/17/7	00-03-17	0.0156	-	0.0156	Charagah Drakhtan
13	Transmission Line Corridor.	1193/17/8	03-13-14	0.2981	-	0.2981	Charagah Drakhtan
14	Double Pole Structure.	1193/17/9	00-03-17	0.0156	-	0.0156	Charagah Drakhtan
15	Transmission Line Corridor.	1193/17/10	01-02-19	0.0929	-	0.0929	Charagah Drakhtan
16	Approach Road to Power House & Tail Race.	20/1	07-14-00	0.6221	-	0.6221	Charagah Drakhtan
17	Switch Yard.	20/2	02-15-00	0.2225	-	0.2225	Charagah Drakhtan
18	Muck Dumping Site No-14 and installation of temporary portable stone crusher to recycle the road & tunnel material for bonafide use (Near Power House).	20/3	07-08-19	0.6027	-	0.6027	Charagah Drakhtan
19	Transmission Line Corridor.	20/4	03-09-17	0.2826	-	0.2826	Charagah Drakhtan
20	Double Pole Structure.	20/5	00-03-17	0.0156	-	0.0156	Charagah Drakhtan
21	Transmission Line Corridor.	20/6	01-07-15	0.1123	-	0.1123	Charagah Drakhtan
22	Muck Dumping Site No-15.	20/7	02-11-12	0.2087	-	0.2087	Charagah Drakhtan
23	Transmission Line Corridor.	20/8	01-04-10	0.0991	-	0.0991	Charagah Drakhtan
24	Double Pole Structure.	20/9	00-03-17	0.0156	-	0.0156	Charagah Drakhtan
25	Transmission Line Corridor.	20/10	01-02-17	0.0925	-	0.0925	Charagah Drakhtan
26	Muck Dumping Site No-7.	409/1	03-00-00	0.2427	-	0.2427	Charagah Drakhtan

27	Approach Road-2 to Barrage Site.	409/2	09-02-16	0.7384	-	0.7384	Charagah Drakhtan
28	Muck Dumping Site No-8.	409/3	02-08-00	0.1942	-	0.1942	Charagah Drakhtan
29	Muck Dumping Site No-9.	409/4	04-07-10	0.3540	-	0.3540	Charagah Drakhtan
30	Muck Dumping Site No-10.	409/5	02-10-00	0.2023	-	0.2023	Charagah Drakhtan
31	Muck Dumping Site No-11.	409/6	05-08-00	0.4369	-	0.4369	Charagah Drakhtan
32	Ropway Loading Point.	409/7	00-12-16	0.0518	-	0.0518	Charagah Drakhtan
33	Ropway Corridor.	409/8	00-16-01	0.0648	-	0.0648	Charagah Drakhtan
34	Transmission Line Corridor.	1210/1141/673/1	02-01-00	0.1659	-	0.1659	Charagah Bila Drakhtan
35	Double Pole Structure.	1210/1141/673/2	00-03-17	0.0156	-	0.0156	Charagah Bila Drakhtan
36	Transmission Line Corridor.	1210/1141/673/3	00-07-05	0.0293	-	0.0293	Charagah Bila Drakhtan
37	Approach Road to Power House & Tail Race.	1210/1141/673/4	01-15-12	0.1438	-	0.1438	Charagah Bila Drakhtan
38	Transmission Line Corridor.	1210/1141/673/5	00-13-12	0.0550	-	0.0550	Charagah Bila Drakhtan
39	Head Race Tunnel-2.	Underground -1	02-09-14	0.2412	-	0.2412	Underground
40	Adit No-I.	Underground -2	00-04-16	0.0194	-	0.0194	Underground
41	Adit No-II.	Underground -3	00-11-14	0.0473	-	0.0473	Underground
42	Surge Shaft.	Underground -4	03-01-05	0.2478	-	0.2478	Underground
43	Penstock Tunnel.	Underground -5	08-02-18	0.658	-	0.658	Underground
44	Power House.	Underground -6	03-15-00	0.3035	-	0.3035	Underground
45	Dropshaft Access Tunnel.	Underground -7	00-07-04	0.0291	-	0.0291	Underground
46	Main Access Tunnel.	Underground -8	00-07-12	0.0307	-	0.0307	Underground
47	Tail Race Tunnel.	Underground -9	01-00-02	0.0812	-	0.0812	Underground
TOTAL (C)			113-17-15	9.2109	NIL	9.2109	
(D)	MUHAL : LAHAL (Hadbast No-124)						
1	Transmission Line Corridor.	1/1	00-11-12	0.0469	-	0.0469	Gair Mumkin Khad
2	Transmission Line Corridor.	1488/1484/411/1	01-04-19	0.1010	-	0.1010	Charagah Bila Drakhtan
3	Double Pole Structure.	1488/1484/411/2	00-03-17	0.0156	-	0.0156	Charagah Bila Drakhtan
4	Transmission Line Corridor.	1488/1484/411/3	02-07-06	0.1913	-	0.1913	Charagah Bila Drakhtan
5	Transmission Line Corridor.	415/1	00-03-00	0.0121	-	0.0121	Charagah Drakhtan
TOTAL (D)			04-10-14	0.3669	NIL	0.3669	
GRAND TOTAL (A to D)			164-11-01	13.3082	NIL	13.3082	

- Keeping in view the various aspects as per site, Joint Inspection Committee decided that Alternate / Alignment No-1 is feasible and suitable out of three different alternates. There is no other suitable non forestland available in the project area. **Forest land measuring 13.3082 hectares is the barest minimum and cannot be escaped.**

There is no any Burial / Cremation Place, Public Utility, Water Bourny (Spring), Foot Path etc. which shall be affected by the construction of this proposed project. **Keeping in view various aspects in mind, the Joint Inspection Committee approved the Alternate / Alignment No-1. Hence, recommended for the construction of Tundah-II (24 MW) Hydro Electric Project.**



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