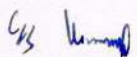



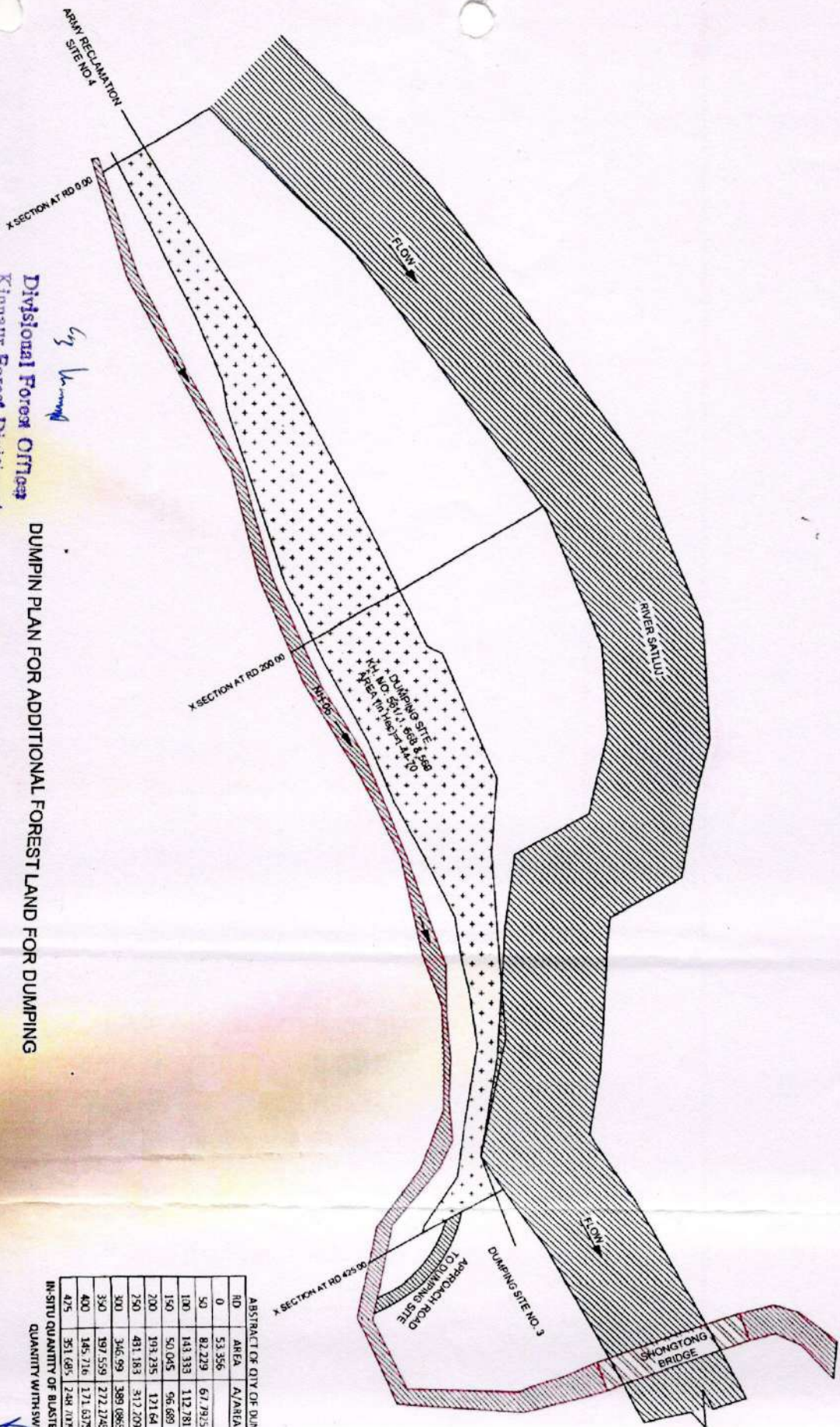
DETAIL OF QUANTITY						
Name of work:- Estimate for protection works of additional dumping site adjoining to dumping site 3 upstream of Shongtong bridge right bank						
Sr. No.	Description of items	N0.	L	B	H	Qty
1	Wire crate of G.I wire filled with bouldars with square cut faces against the wire. (wire crates to be measured and paid for separately)					
	R.D 0.00 to 50.00mtr					
	5 Rows (50/1.25 = 40x5= 200)	200.00	2.50	1.25	1.25	781.25
	1 Rows (50/2.5 = 20x1 =20)	20.00	2.50	1.25	1.25	78.13
	RD 50.00 to 150 (3 Row) 100/1.25x3 = 240	240.00	2.50	1.25	1.25	937.50
	RD 150.00 to 425 (4 Row) 275/1.25x4 = 880	880.00	2.50	1.25	1.25	3437.50
	1 Row 275 /2.5 = 110	110.00	2.50	1.25	1.25	429.69
				Total		5664.06
2	Providing & laying cement concrete work 1:2:4 (1 cement : 2 Sand: 4 graded stone aggregate 20 mm nominal size ) and curing complete :-					
	(R D 0.00 to 425.00mtr) Bottom	1.00	425.00	2.50	0.30	318.75
	Front	3.00	425.00	1.25	0.20	318.75
	Top	2.00	425.00	0.50	0.20	85.00
				Total		722.50

  
 Divisional Forest Officer  
 Kinnaur Forest Divisional  
 R/Pao

  
 Sr. Manager (R&R)  
 Shongtong Karchham HEP,  
 H.P. Teekong-Pao,  
 Distt. Kinnaur H.P., 172107



**HIMACHAL PRADESH POWER CORPORATION LIMITED**  
**SHONG TONG KARCHAM HEP (450MW)**



**DUMPIN PLAN FOR ADDITIONAL FOREST LAND FOR DUMPING**

**Divisional Forest Officer**  
**Kinnaur Forest Division**  
*By hand*

**R.P. No.**

**ABSTRACT OF QTY OF DUMPING/MUCK FILLING**

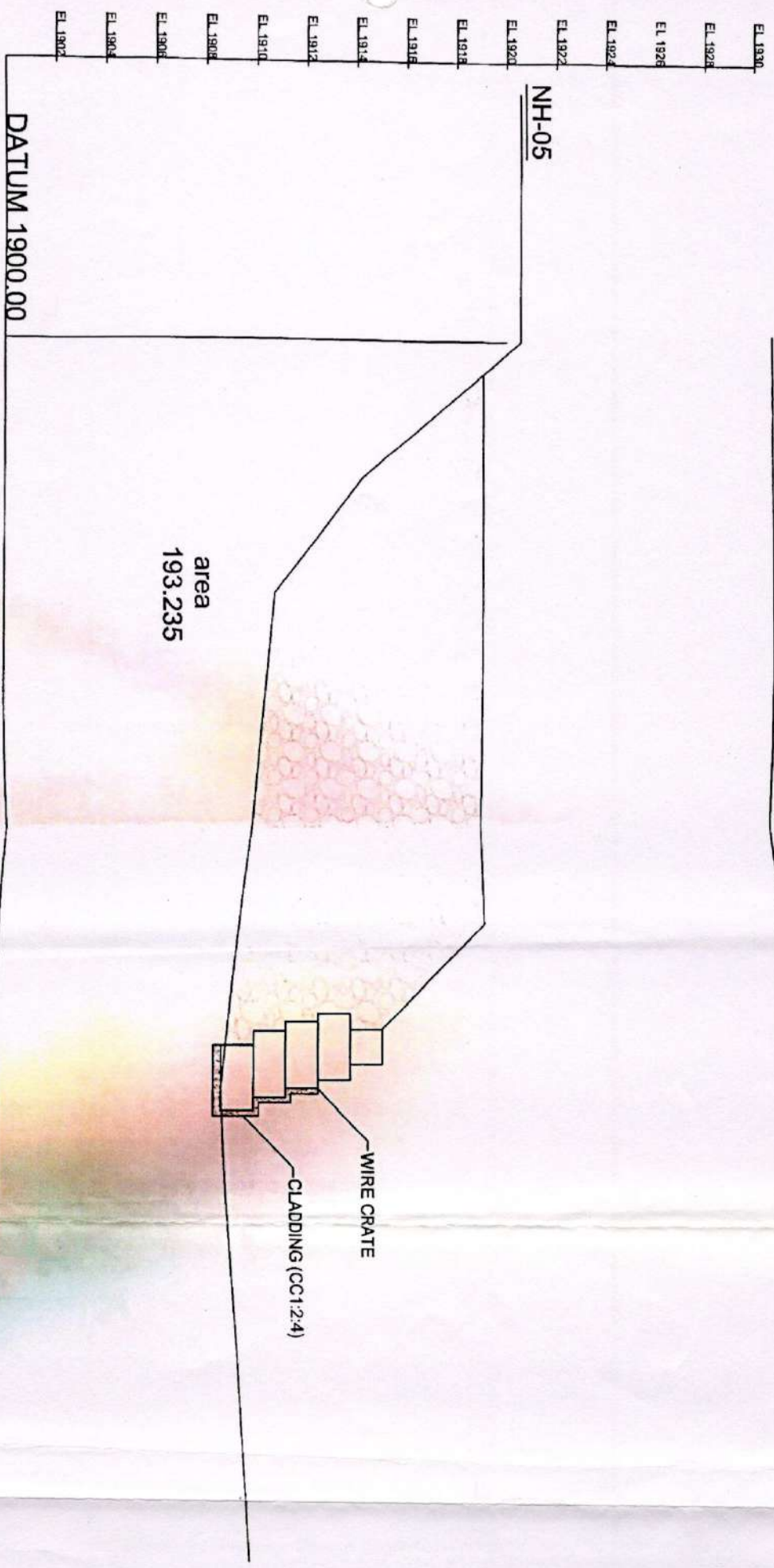
NO	AREA	A/AREA	DISTANCE	QTY
0	53.356			
50	82.229	67.7935	50	3389.625
100	143.333	112.781	50	5699.05
150	50.045	96.689	50	4854.45
200	193.235	121.64	50	6087
250	481.183	312.209	50	15610.45
300	346.99	389.086	50	19454.125
350	197.559	272.1245	50	13613.725
400	145.716	171.6375	50	8641.875
425	351.685	248.7075	25	6717.575

**IN-SITU QUANTITY OF BUSTED MATERIAL 8943.0125**  
**QUANTITY WITH SWELL FACTOR= 5093.84um**

**St. Manoj (R&P)**  
**Shongtong Karcham HEP,**  
**HPCL, Shong-Pee,**  
**Dist. Kinnaur H.P., 172107**



HPCL SHONG TONG KARCHAM HEP (450MW)  
ADDL. DUMPING SITE ADJOINING TO DUMPING SITE NO-3



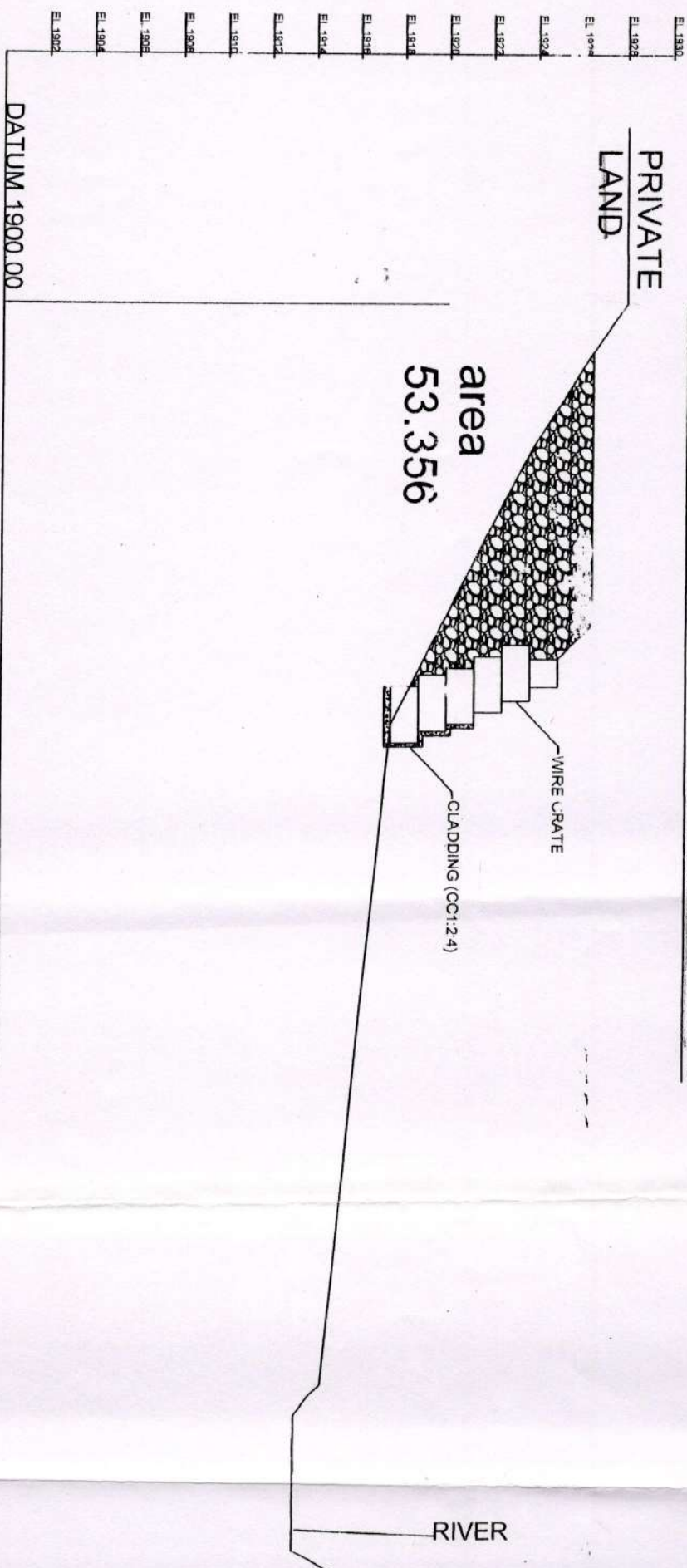
by *h. m. m.*  
 Divisional Forest Officer  
 Kinnaird Forest Divisional

R/Pao

TYPICAL SECTION SHOWING RETAINING STRUCTURES

Sr. Manager (C&P)  
 Shongtong-Karcham HEP,  
 HPPCL, Pockong-Poo,  
 Distt. Kinnaird H.P., 172107

HPCL SHONG TONG KARCHAM HEP (450MW) ADJL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3



X-SECTION AT RD 0.00

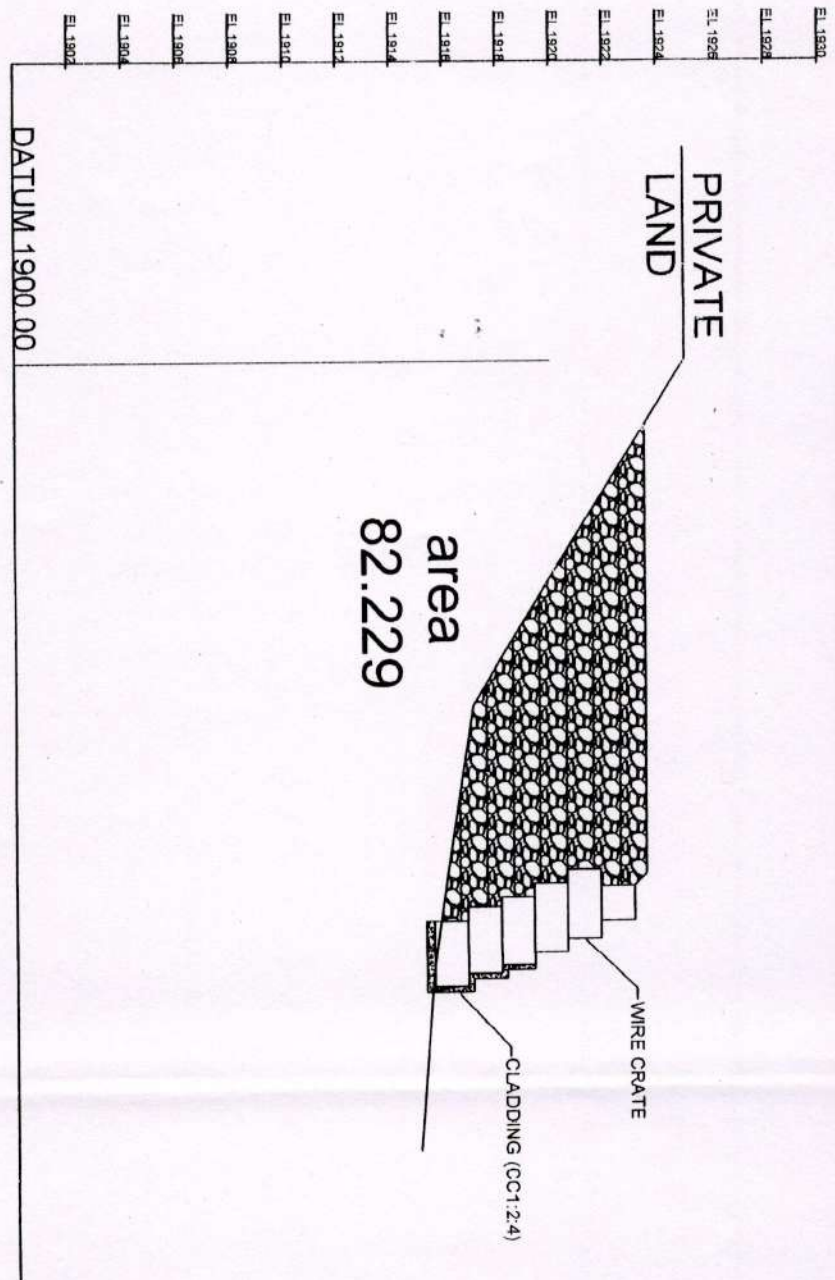
*by hand*

Divisional Forest Officer  
 Kinnaird Forest Division  
 R. Pao

Sr. Manager (R&R)  
 Shong Tong Karcham HEP,  
 HPP, Shong Kong Peo,  
 Dist. Kinnaird H.P., 172107



HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3

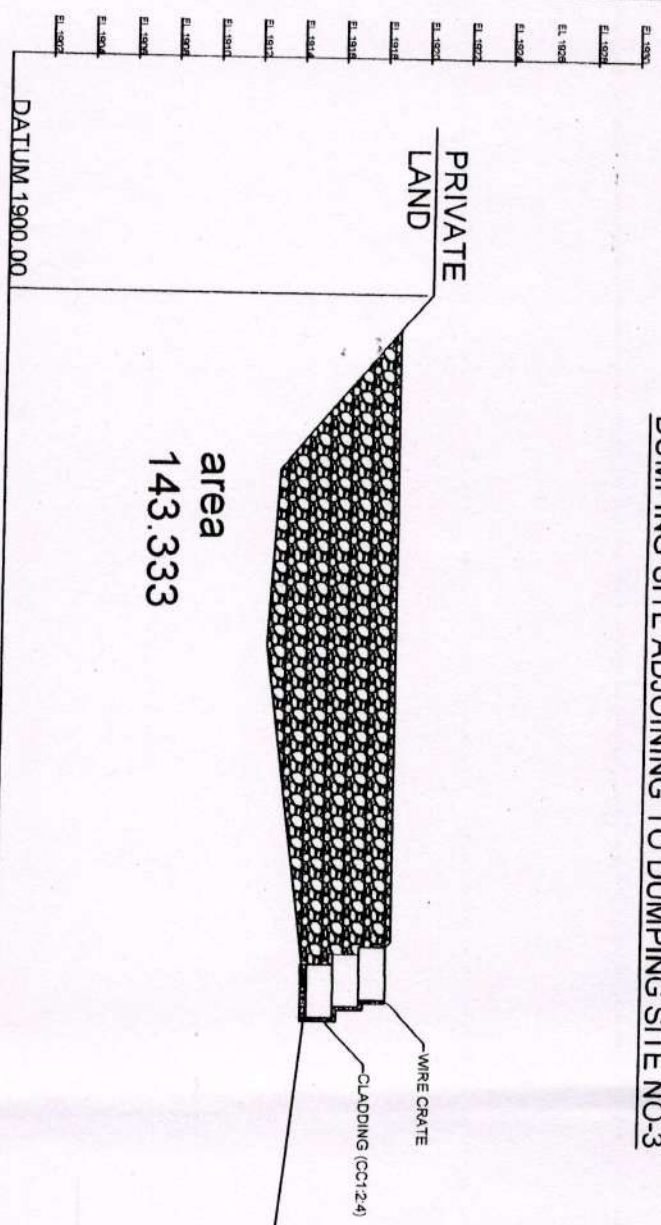


X-SECTION AT RD 50.00

*4/5*  
 Divisional Forest Officer  
 Kinnair Forest Division  
 R/Peo

St. Manager (R&R)  
 Shong Tong Karcham HEP,  
 Kinnair Forest Division,  
 Distt. Kinnair H.P., 172107

HPPL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3

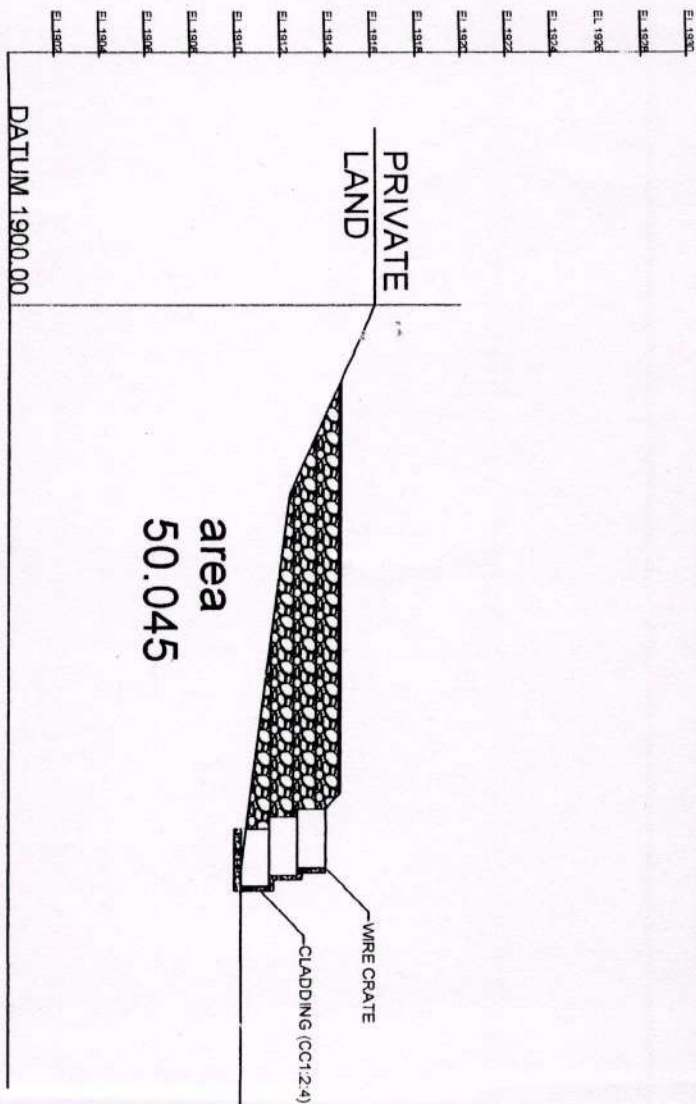


*C/S*  
Divisional Forest Officer  
Kinnair Forest Division  
R/Peo

Sr. Manager (T&E)  
Shong Tong Karcham HEP,  
Kong Peo,  
Dist. Kinnair H.P., 172107



HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3



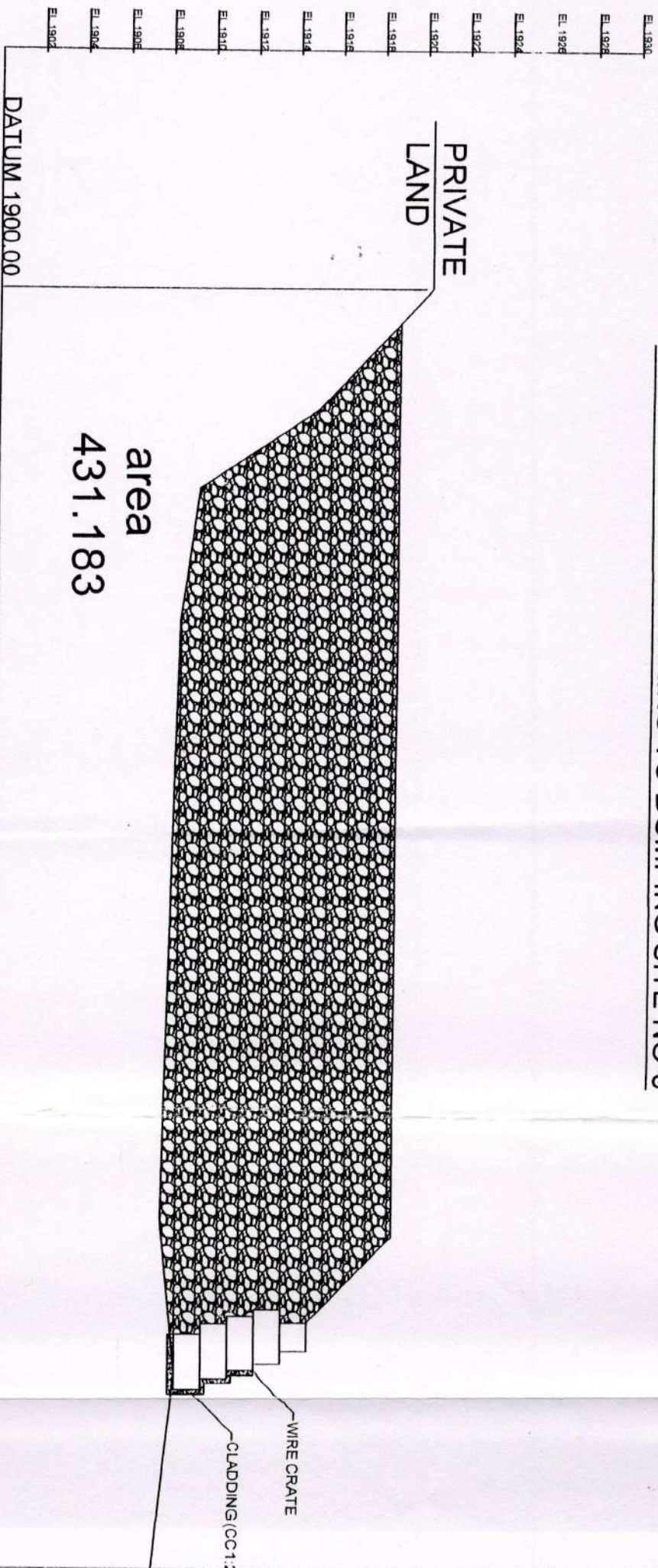
X-SECTION AT RD 150.00

*by hand*  
Divisional Forest Officer  
Kinnair Forest Division  
R/Peo

Sr. Manager (R&R)  
Shong Tong Karcham HEP,  
HPCL Shong Tong Karcham HEP,  
Dist. Kinnair H.P., 172107



HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3



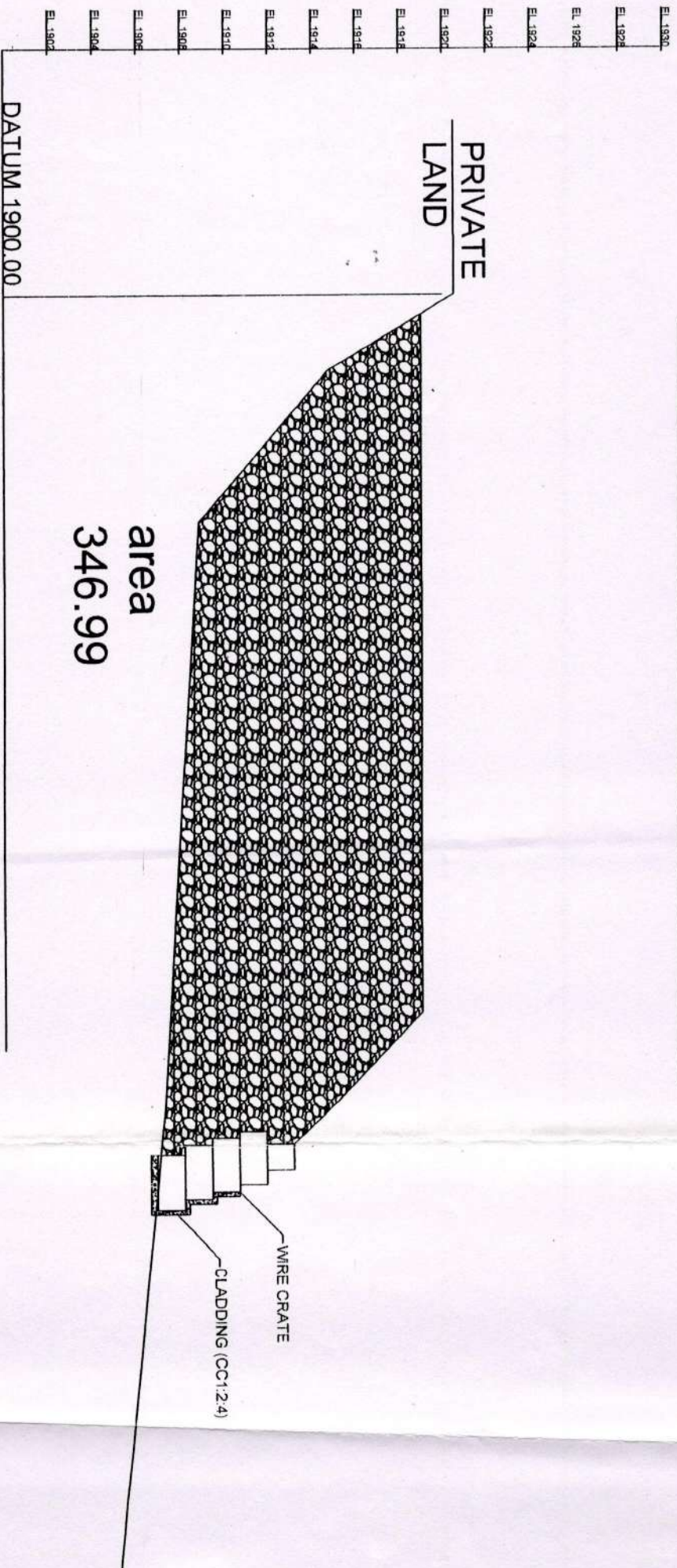
X-SECTION AT RD 250.00

*by hand*  
Divisional Forest Officer  
Karnali Forest Division  
R/Peo

Sr. Manager (HEP)  
Shongtong Karcham HEP,  
HPCL, Karnali, Kanchi, Nepal  
Dist. Jirga H.P., 172107



**HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3**



**X-SECTION AT RD 300.00**

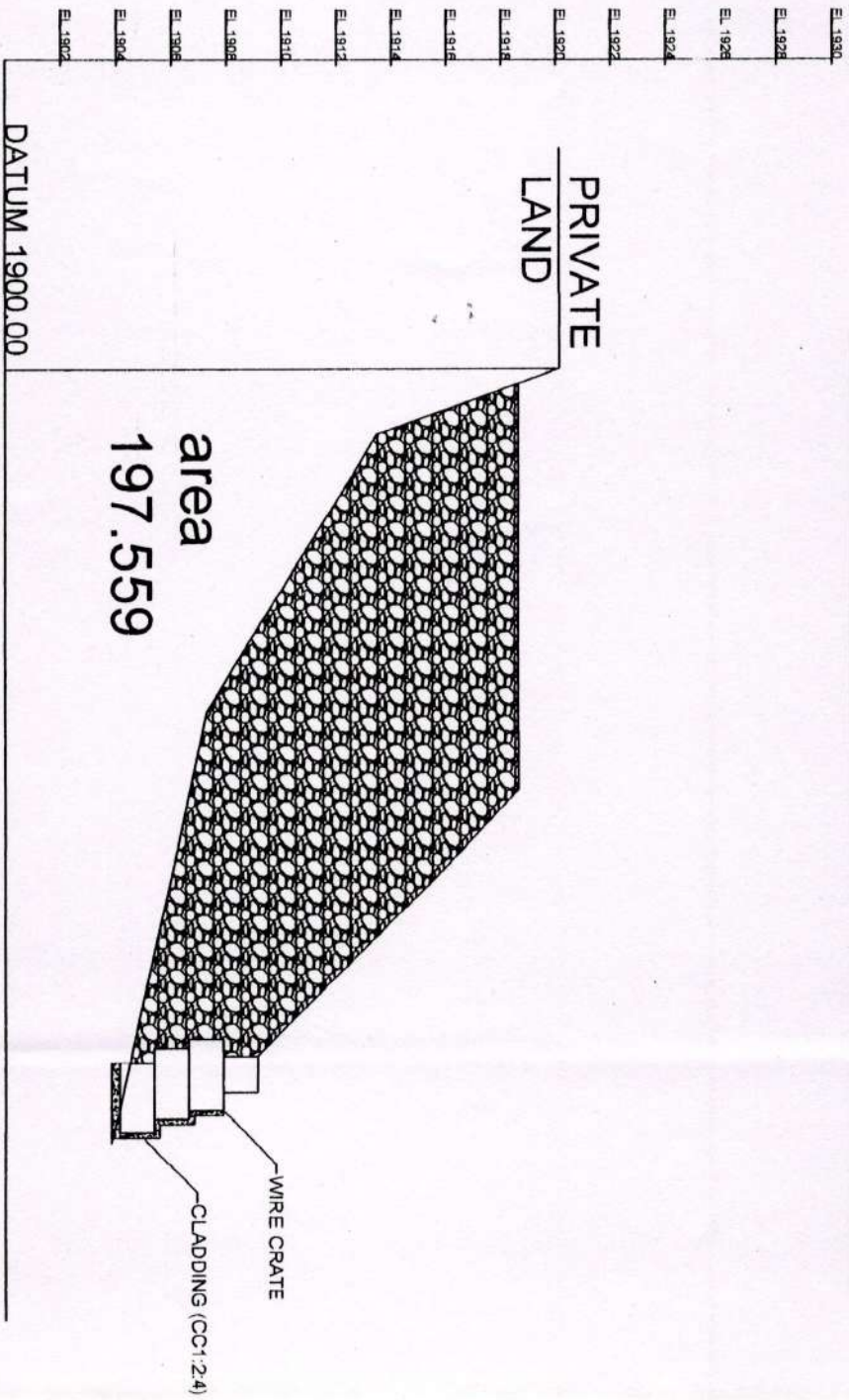
**Divisional Forest Officer  
Kinnair Forest Divisional  
R/Peo**

**Sr. Manager (R&R)  
Shongtong Karcham HEP,  
HP  
Dist. Jinnair H.P., 172107**



(122)

HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3

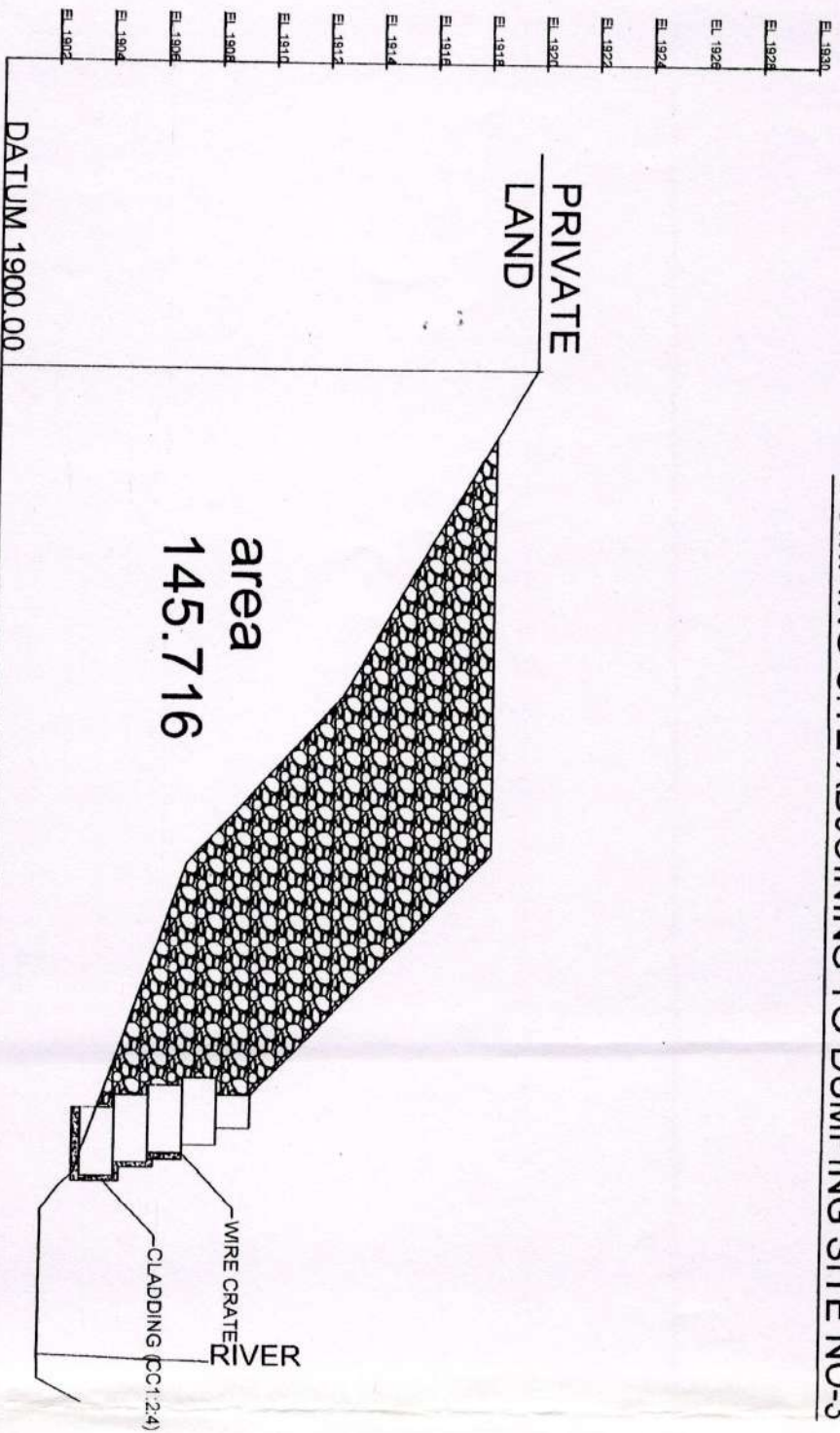


*Sy. Karmay*  
Divisional Forest Officer  
Kinnaur Forest Division  
R/Peo

St. Manu (R&T)  
Shong Tong Karcham HEP,  
HPCL  
Kinnaur H.P., 172107



HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3



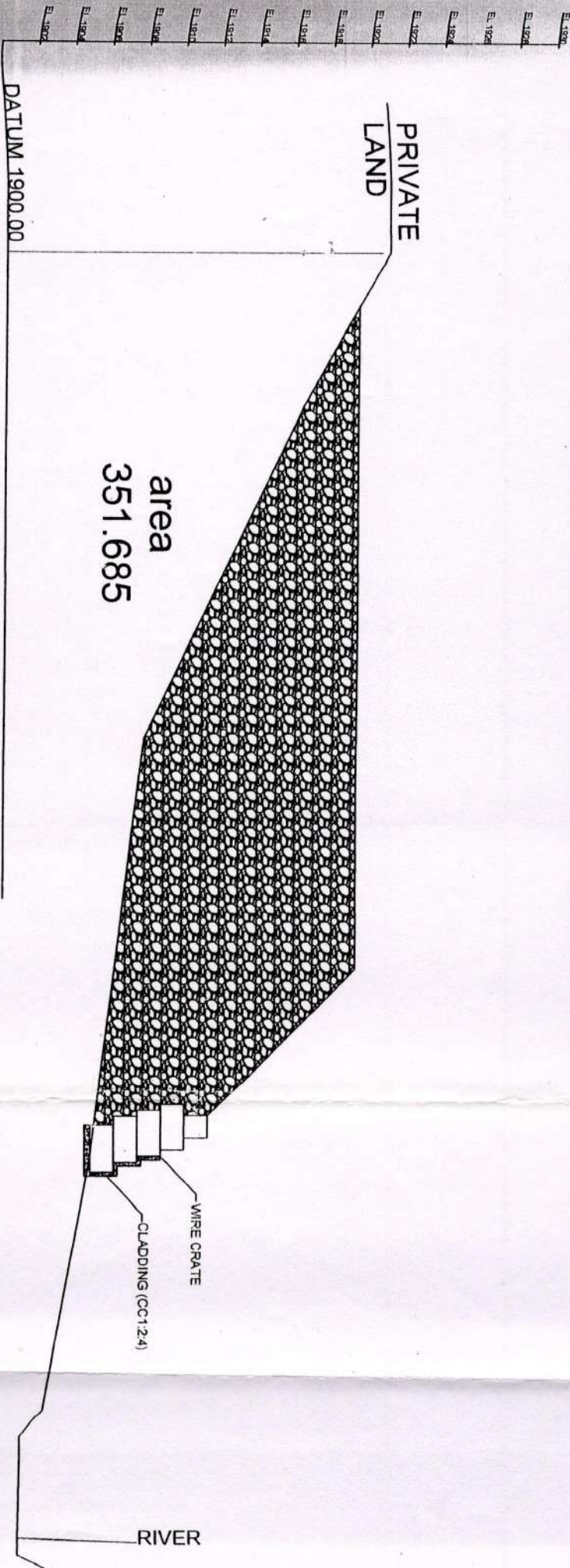
X-SECTION AT RD 400.00

*by hand*  
**Divisional Forest Officer**  
Kinnaird Forest Division  
R/Pen

**Sr. Manager (R&E)**  
Shong Tong Karcham HEP,  
Kinnaird Forest Division,  
Kong-Peo,  
Distt. Kinnaird H.P., 172107



HPCL SHONG TONG KARCHAM HEP (450MW) ADDL.  
DUMPING SITE ADJOINING TO DUMPING SITE NO-3



X-SECTION AT RD 425.00

Divisional Forest Officer  
Kjama Forest Divisional  
R/Peo

St. Minister (R&R)  
Shong Tong Karcham HEP,  
HP  
Kong Peo,  
Dist. Administrator H.P., 172107

124



Check Cost Number - 29

125

Table: B

# COST BENEFIT ANALYSIS

## Estimation of Cost of Forest Diversion

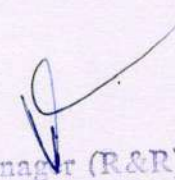
Sr. No.	Parameters	Value expressed to Monetary terms and in Detail	Remarks
1.	Ecosystem services losses due to proposed forest diversion	Rs. 51,53,167 /-	Economic value of loss of eco-system services due to diversion of forest shall be the net present value (NPV) of the forest land being diverted as prescribed by the Central Government (MoEF & CC).
2.	Loss of animal husbandry productivity, including loss of fodder	Rs. 5,15,316.7/-	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum
3.	Cost of human resettlement	Since no residential village/ area is getting affected, there will be no cost of human resettlement.	To be quantified and expressed in monetary terms as per approved R&R plan
4.	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	Since no public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land, being diverted due to the project, there will be no such loss.	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion
5.	Possession value of forest land diverted	30% of environmental costs (NPV) due to loss of forests i.e. Rs. 1,71,772.2 /-	30% of environmental costs (NPV) due to loss of forests or circle rate of adjoining area in the district should be added as a cost component as possessor value of forest land whichever is maximum
6.	Cost of suffering to outsiders	Nil	The social cost of rehabilitation of oustees (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R&R plan) be worked out as 1.5 times of what oustees should have earned in two years had he not been shifted.
7.	Habitat Fragmentation Cost	Rs.1,03,063.34/-	While the relationship between fragmentation and forest goods and services in complex, for the sake of

Sr. Manager (R&R)  
Shongtung Karchham BEP,  
HPPCL, Per Kong-Pao,  
Dist. Khamti, P.O. 172107



12

			simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule.
8.	Compensatory afforestation and soil & moisture conservation cost	Rs. 42,08,171 /-	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value

  
Sr. Manager (R&R)  
Shongtang Karchham HEP,  
HP, Jharkhand, Dhanbad,  
Distt. Dhanbad H.P., 172107



**PARAMETERS OF EVALUATION OF BENEFITS NOT WITH STANDING LOSS OF FORESTS (BENEFITS).**

Nature of Proposal			Hydro Electric Project		
Sr. No.	Parameter	Applicability vis-à-vis nature of proposal and explanation.	Quantity of Benefit	Rate in Rupees	Monetary Value of Benefit (Rs. in lakh)
1.	increase in productivity attributable to the specific project	Applicable as in case of HEP. Though irrigation is not feasible in this run of the river project hence in primary sector no benefit may accrue yet the productivity increase in secondary and tertiary sector is likely to increase. This excludes revenue from sale of power *	50 units	10 000/- unit per year	250.00
2.	Benefits to economy due to specific project.	Revenue from sale of power annually. For the total project period $\Delta$ it would increase tremendously.	1735.50 Gwh ( Giga-watt-hour) or 1735500000 units.	2.48 per unit	43040.40
3.	No. of population benefited due to specific project.	Increase availability of power will give impetus to industry and service sector as indirect employment etc#	6000 persons	1000 per capita per year	3000.00
4.	Economic benefit due to direct and indirect Employment due to the project.	Direct employment ( for period of three years) <sup>§</sup> ( construction phase)	3000 persons	30000 per year	2700.00
		Direct employment (for a period of 50 years ) <sup>§</sup> ( Post construction phase)	75 years	108000 per year	4050.00
5.	Economic benefits due to Compensatory afforestation.		50 years	NIL	0
Total ( Benefits)			-	-	53040.40

**Notes @ Explanations.**

- \*The benefiting units in terms of an increase in productivity vary greatly in secondary and tertiary sectors. As such this kind of distant benefit is difficult to quantify and monetize. However, the taking the beneficiary as units (whether as industries, service sectors companies or individuals) the quantity of benefit is attempted to be defined for a period of 50 years. This is highly conservative estimate.
- $\Delta$ If the benefit to the economy is calculated for a period of 50 years (ie expected life of the project) then it comes to 2152020 lac Rupees.
- #However, the indirect employment in a post construction scenario is expected to then rise as the power supply begins to the industries and urban areas. About 4000 people are expected to benefit annually for a period of 50 years in the secondary and tertiary sectors @ Rs 1000 per person in a year gaining benefit of Rs 100 lac annually.

(Reginal Royston A) IFS  
Dy. Conservator of Forests



4. \$Direct employment of people during construction period is to be the tune of 1000 persons @Rs 300per day for about 300 days in a year. During the construction phase approximately 250 people in service and trade would also benefit for which no monetization is possible. The direct employment would come down draslically in a post construction phase and about 25 persons would be there for maintenance and for power supply as regular employees @ Rs 9000/-pm average salary (annual Rs 27,00,000)

**Cost Benefit Analysis.**

	Rs in lakh
Total loss(cost)	146
Total Benefit	53040.40
Cost Benefit Ratio	1:363.29

	Rs in lakh	Remarks
Total loss(Cost)	146	
Total Benefit:	53040.40	When only annual value of sale of power = Rs43040.40Lac is taken into account.
Cost Benefit Ratio	1:363	
Total Benefit	2152020	When value of sale of power =2152020 lac for 50 year taken into account.

(Reginal Rayston A) IFS  
Dy. Conservator of Forests



129

189

Kind Attn:- Er M S Chandel  
ASR

Fax No 223857

*Handwritten:*  
To  
AL  
1-11

No.MPP-F(2)-5/2005-II  
Government of Himachal Pradesh,  
Department of MPP & Power

The Pr. Secretary (Power) to the  
Government of Himachal Pradesh.

The Chairman-cum-Managing Director,  
Himachal Pradesh Power Corporation Ltd.,  
Himrus Building,  
Shimla-171001.

Dated, Shimla-2

6<sup>th</sup> January 2007

Subject

Allotment of Hydro Electric Projects to Himachal Pradesh Power  
Corporation Ltd. (HPPCL).

Sir,

I am directed to refer to the subject cited above and to say that  
the following Hydro Electric Projects shall be executed by the Himachal Pradesh  
Power Corporation Ltd.:-

1. Shongtong Karchham (402 MW) HEP.
2. Chirgaon Majhgaon (46 MW) HEP.
3. Dhamwari Sunda (70 MW) HEP (subject to the final outcome of the Arbitration)
4. Sainj (100 MW) HEP.
5. Luhri (700 MW) HEP
6. Bharmour (46 MW) HEP
7. Harsar (60 MW) HEP.

Besides above, the Clause xxxvii of Chapter -V of Hydro Power  
Policy, 2006 provides as under:-

"There are good number of Projects which are yet to be  
identified. The HPC/ HPSEB shall identify such Projects. The Government of  
Himachal Pradesh reserves the right either to allot these Projects upto 25.00  
MW to HPC & HPSEB or offer it to the IPPs and above 25 MW to HPC & IPPs.  
However, for Projects upto 25.00 MW, preference shall be given to Sonofide  
Himachalis. The developer shall have to prepare PFRs/ DPRs and develop them  
as per agreed terms & conditions of Hydro Power Policy."

There are a number of HEPs which have been identified by the  
Independent Power Producers, the list of which is enclosed. Besides these, there may  
be other HEPs for which identification is to be made.

You are, therefore, requested kindly to take immediate necessary  
action in the matter. Under intimation to this Department please.

This may be given TOP PRIORITY please

*Handwritten:*  
Attended

*Handwritten:*  
Dy. General Manager  
Shongtong Karchham HEP.

Addl. Superintending Engineer Reckong Poo,  
Investigation Division, Distt. Kinnaur (H. P.) 172107  
11 E 2 Reckong Poo

*Handwritten:*  
Sr. Manager (R&R)  
Shongtong Karchham HEP,  
HP, Reckong Poo,  
Distt. Kinnaur H.P., 172107



No. WLM/NOC \_\_\_\_\_  
H.P. Forest Department

Dated Sarahan, the

From: - DCF WL Sarahan

To: - CCF WL (S) Shimla

Subject: -

Diversion of 7.3722 ha. of Addl. Forest land in favour of Himachal Pradesh Power Corporation Ltd. for the construction of Shongtong-Karchham HEP 450 MW due to enhancement in the existing capacity of HEP 402 to 450 MW and due to change in the river course during flood within the jurisdiction of Kinnaur Forest Division Distt. Kinnaur, HP.

Memo: -

In this regard, it is submitted that as requested by the user agency vide their letter No. HPPCL/SM (R&R)- SKHEP/Env-VI/2019 dated 26.02.2021 (Copy enclosed as Annexure-I) a joint inspection of the proposed project site within the boundaries of proposed ESZ of Lippa-Asrang WLS & sanctuary area was conducted by the field staff of Sangla WL Range and project representative on 20.05.2021

2. As per the joint inspection report the Co-ordinates of the weir site of the above project & aerial distance with reference to the boundaries of WLS and ESZ of Lippa-Asrang Wildlife Sanctuaries were recorded. The aerial distance shows that the project site falls outside the boundary of the Lippa-Asrang Wildlife Sanctuary and its proposed eco sensitive zone.

S. No.	Particulars	Lat/Long	Aerial Distance (in kms)	Remarks
1	Start of Trench Wear	N=31°02'54" E=078°30'19"	-	-
2	Aerial distance of Trench Wear from Lippa-Asrang WLS.	N=31°40'32.796" E=078°18'4.795"	13.41 Km	Enclosed as Annexure-II
3	Aerial distance of trench wear from proposed ESZ of Lippa-Asrang WLS.	N=31°44'20.237" E=078°17'16.060"	12.98 Km	Enclosed as Annexure-III

3. In addition to above, as per User Agency there is no requirement of animal passage plan for the construction of above mentioned project. as Project components of above mentioned SHEP are very far away from Sanctuary area and proposed ESZ of Lippa Asrang WLS. and as such it will not affect movement of wildlife of the Sanctuary area. Also, construction of the above project will not adversely impact the Wildlife of the Sanctuary area.

This is for favour of information and further necessary action please.

Encl: As above.


Dy. General Manager  
Shongtong-Karchham HEP,  
HPPCL, Reckong Poo,  
Distt. Kinnaur (H. P.) 172107

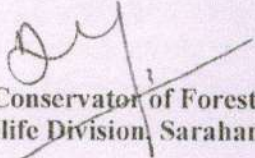
Dy. Conservator of Forests,  
Wildlife Division, Sarahan.



Endst. No. WLM/NOC 600 Dated Sarahan, the 28/07/2021

Copy is forwarded to Sr. Manager (R&R), Shongtong Karchham HEP,  
HPPCL, Reckong Peo Distt. Kinnaur, H.P. for information please.

  
Dy. General Manager  
Shongtong-Karchham HEP,  
HPPCL, Reckong Peo,  
Distt. Kinnaur (H. P.) 172107

  
Dy. Conservator of Forests,  
Wildlife Division, Sarahan.



CERTIFICATE

It is certified that the land comprising Khazra No. 121, where the Shongtong Karchham Hydro Electric Project (10 MW) on Salyu river near Village Powari Tehsil Kargil Dist. Kargil is to be constructed does not fall within 10 Kms. radius of the Chhikuk (W.L.) Sanctuary, as per Preliminary report submitted by the Executive Engineer, Investigation Division, HPSEB, Reckong Poo District, Kinnaur, H.P.

*Attended.*

*Be*  
Divisional Forest Officer,  
Wildlife Division,  
Kinnaur H.P. *2/2/05*

*Adm. Secy*  
Addl. Secy. (R&R) Kinnaur  
Investigation Division, Shongtong Karchham HEP,  
H.P. Reckong Poo,  
Dist. Kinnaur H.P. 172107

*Adm. Secy*  
Dy. General Manager  
Shongtong Karchham HEP,  
H.P. Reckong Poo,  
Dist. Kinnaur (H.P.) 172107



No.SDK-29(MC)/- 2617  
Office of the Sub-Divisional Magistrate  
Kalpa at Reckong Peo, Distt. Kinnaur, H.P.

133

To

The General Manager,  
STKEP, HPPCL Reckong Peo,  
District Kinnaur, H.P.

Dated:Peo-172107 the 21<sup>st</sup> November, 2019.

Sub: Diversion of 7.3722 Hectare of Addl. Forest Land in favour of HPPCL  
for the construction of Shongthong-Karchham HEP 450MW

Sir,

Please refer to your letter No. HPPCL/GM-STKHEP/AFL/2019-5317-  
18 dated 19.11.2019 on the subject cited above.

In this context, requisition information as desired by you vide your  
letter under reference is as under:-

Sr.No.	Name of village	Village code	Population
1.	Shudarang	004201	1789
2.	Tangling	006001	495
3.	Powari	006701	448+222=1165
4.	Barang	005801	1202

Yours faithfully,

Harsh Arvender Singh HPAS  
Sub-Divisional Magistrate  
Kalpa at Reckong Peo, H.P.

Dy. General Manager  
Shongthong-Karchham HEP,  
HPPCL, Reckong Peo,  
Distt. Kinnaur (H. P.) 172107

Sr. Manager (P&R)  
Shongthong-Karchham HEP,  
HPPCL, Reckong Peo,  
Distt. Kinnaur H.P., 172107



IR-IV-V-24(DRA)/

1057127

Dated:- 06/04/17

Inescapability Certificate

As per report of SDM Kalpa vide letter No. SDK-07-II (OK)/09-396 dated 09.03.2017. Certified that the under mentioned land is inescapable for the purpose of which the land proposed to be acquired by the General Manager, Shongtong-Karchham HEP (450MW), HPPCL, Reckong-Peo. It is further certified that there is no water resources, religious places, public path etc. within the limits of the land proposed to be acquired.

Sr. No	Name of Distt.	Tehsil	Name of Mauja	Khasra No.	Area in Hect.
1.	Kinnaur	Kalpa	Up-Mohal Rang	724/576/2/1, 571/2/1, 561/1, 568, 569	03-50-65
2.	Kinnaur	Kalpa	Up-Mohal Usaring	3/2	0-29-60
3.	Kinnaur	Kalpa	Up-Mohal Tangling	21/1, 2/1, 2/2, 1/1, 838/1, 840/1	04-92-96
4.	Kinnaur	Kalpa	Up-Mohal Powari	854/823/1, 810/2	0-69-96
				Total=	09-43-17

Deputy Commissioner,  
Kinnaur District at Reckong-Peo  
Reckong-Peo 172107

Dy. General Manager  
Shongtong-Karchham HEP,  
HPPCL, Reckong-Peo,  
Distt. Kinnaur (H.P.) 172107

Sr. Manager (R&R)  
Shongtong-Karchham HEP,  
HPPCL, Reckong-Peo,  
Distt. Kinnaur (H.P.) 172107

Scanned by CamScanner




# JOINT INSPECTION & DEMARCATION REPORT

We the undersigned have jointly inspected & Demarcated 7-37-22 hectare of Forest land on dated 22.08.2019 & 23.08.19 falling in Kalpa Range under Kinnaur Forest Division, Reckong Poo Distt. Kinnaur to be diverted as additional land for construction of Shongtong Karchham HEP. Falling in Sub Mohal Rang, Usaring, Tangling & Powari. The Project required 7-37-22 Hect. of Additional Forest land for Intake tunnel, Diversion Tunnel Outlet, Silt Flushing Tunnel's outlet Portal, Dumping, Approach roads to Portal & it's working are in Tehsil Kalpa Distt. Kinnaur (HP).

The detail of land is as under.

Sr. No.	Purposed/ Component	Sub-mohal	Khasra No.	Area of Forest Land in (hect.)	Classification of land	Remarks
3	Dumping area adjoining to the	Kang	561/1	0-21-91	Charagah Drakhtaan	Surface activities.
5	Existing Dumping area No. 3 on Right		568	0-84-09	Charagah Drakhtaan	
6	Bank of River Sutlu near Shongtong Bridge		569	0-38-70	Charagah Drakhtaan	
		Sub-Total	05 kila	1-44-70		
7	Dumping Area near Aditi on left bank of Sutlu River	Usaring	3/2	0-29-60	Charagah Drakhtaan	Surface activity
		Sub-Total	01 kila	0-29-60		
8	Aditi Portal on left bank of river Sutlu including its working area.	Tangling	21/1	0-58-83	Charagah Drakhtaan	Surface activity
9	Dumping Area on left bank of river Sutlu near Aditi below existing HPWD road Shongtong to Purbani.	Tangling	2/1	1-10-05	Charagah Drakhtaan	Surface activity
10	Dumping Area on left bank of river Sutlu near Aditi below existing HPWD road Shongtong to Purbani D/S of proposed Aditi.	Tangling	2/2	2-38-13	Charagah Drakhtaan	Surface activity
	Silt Flushing	Tangling	1/1	0-15-73	Gur mumkin	Surface

  
 Dy. General Manager  
 Shongtong Karchham HEP,  
 HPD, Reckong Poo,  
 Distt. Kinnaur (H. P.) 172107



1	Tunnel's outlet				adva	activity
12	Portal and approach road to	Tongling	838/1	0-35-86	Charagah Drakhtaan	Surface activities
13	Portal & its working area	Tongling	840/1	0-34-36	Charagah Drakhtaan	
		Sub-Total	06 kila	04-92-96		
14	Intake tunnels & Diversion tunnel outlet & its working areas in between existing HPPWD road and vertical cliff.	Powari	854/823/1	0-56-36	Charagah Drakhtaan	Surface activities
15	Approach road to RBM site at Powari on left bank of river Sutluj	Powari	810/2	0-13-60	Charagah Drakhtaan	Surface activity
		Sub-Total	02 kila	0-69-96		
		G-Total	14 Kila	07-37-22		

Joint inspection & Demarcation team has examined all the alternatives with a view to avoid/minimize the use of forest land; we have come to the conclusion that the above mentioned land is the minimum requirement of the proposed project and is inescapable.

Range Forest Officer,  
Range Forest Officer  
Kinnaur Forest Range  
Distt. Kinnaur (HP)

Tehsildar, Kinnaur  
Distt. Kinnaur (H. P.)

Junior Officer (R&R)  
STKHEP, HPPCL  
Reckong Peo, Kinnaur

Mining Officer,  
Kinnaur at Reckong Peo  
Distt. Kinnaur (HP)

Divisional Forest Officer,  
Kinnaur at Reckong Peo  
Distt. Kinnaur (HP)

Sub Divisional Magistrate,  
Kinnaur at Reckong Peo  
Reckong Peo, Kinnaur

Dy. Manager (E&R)  
STKHEP, HPPCL  
R/ Peo Kinnaur  
Distt. Kinnaur (HP)

Dy. General Manager  
Shangtong-Karchham HEP,  
HPPCL, Reckong Peo,  
Distt. Kinnaur (H. P.) 172107

Dy. General Manager  
Shangtong-Karchham HEP,  
HPPCL, Reckong Peo,  
Distt. Kinnaur (H. P.) 172107



134



भारत सरकार/Government of India  
केंद्रीय विद्युत प्राधिकारण/Central Electricity Authority  
कार्यालय सचिव/Office of Secretary  
सेवा भवन/Sewa Bhawan  
आर.के.पुरम/R.K. Puram  
नई दिल्ली/New Delhi - 110006



[आइ.एस.ओ. : 9001:2008]

No.2/HP/29/CEA/07-PAC/5066-97

Dated the 16<sup>th</sup> August, 2011

OFFICE MEMORANDUM

**Subject:** Shongtong Karcham Hydro Electric Project (3x150=450 MW) in Himachal Pradesh by M/s. Himachal Pradesh Power Corporation Limited (HPPCL) at an estimated cost of Rs. 2807.83 Crores including IDC of Rs. 465.74 Crores at July, 2011 Price Level - Issue of Concurrence.

M/s. Kinner Kailash Power Corporation Limited (KKPCL) had submitted Detailed Project Report (DPR) of the generation scheme of Shongtong Karcham Hydro Electric Project (402 MW) in Himachal Pradesh vide letter dated 27.10.2007. Meanwhile, M/s Himachal Pradesh Power Corporation Limited (HPPCL) also submitted Detailed Project Report (DPR) of the generation scheme of Shongtong Karcham Hydro Electric Project (402 MW) vide their letter No. HPPCL/DC/SHONGTONG-KARCHAM/DPR/07-156, dated 30.10.2007. Subsequently, DPR submitted by M/s. KKPCL was withdrawn vide their letter dated 02.11.2007. The presentation of the scheme was made by M/s.HPPCL on 27.11.2007 to appraisal groups of CEA, CWC & GSI. The DPR was returned on 18.12.2007 due to inadequate geological explorations, updation of hydrology, confirmation of levels of upstream & downstream projects from State Govt., updation of cost estimates etc.

M/s. HPPCL again submitted revised DPR of Shongtong Karcham HEP (450 MW) vide their letter No.HPPCL/CP/Shongtong karcham/ Vol VI/2010-16373 dated 9.11.2010. The DPR was returned on 31.3.2011 due to non submission of reply to comments of CEA, CWC & GSI and non resolution of various issues of Project. However, M/s. HPPCL was advised to interact with CEA, CWC & GSI on various key issues and get them resolved. DPR of Shongtong Karcham HEP was taken under examination in November 2011, after resolution of most of the outstanding issues with CEA, CWC and GSI.

The proposal for establishment of Shongtong Karcham Hydro Electric Project (3x150=450 MW) in Kinnaur District of the State of Himachal Pradesh proposed by M/s HPPCL was considered in the 313<sup>th</sup> Meeting of CEA held on 27.4.2012 based on the Agenda note circulated vide CEA letter No.3/106/313<sup>th</sup>/2006-PAC/2376-2403, dated 26.4.2012 and in Authority meeting held on 13.7.2012 at Sewa Bhawan, R.K. Puram, New Delhi-110006. M/s HPPCL submitted the updated DPR after incorporating the suggestions / modifications indicated by CEA, CWC & GSI during joint study process and changes in project features and project cost as approved in the Authority meeting held on 13.7.2012.

2. In exercise of the powers vested with the Authority under Section 8 of the Electricity Act, 2003, the Central Electricity Authority accords Concurrence to the aforesaid scheme at an estimated

Dy. General Manager  
Shongtong Karcham HEP,  
HPPCL, Kinnaur Pco.  
Dist. Kinnaur (P. 1172107)



139

- 2 -

cost of Rs. 2807.83 Crores including IDC of Rs. 465.74 Crores at July, 2011 Price Level with the following stipulations:-

(i) the cost of the scheme shall not exceed the above cost except on account of:

- (a) Change in rates of Indian taxes and duties and additional taxes and duties levied, if any, subsequent to issue of this O.M.
- (b) Change in Indian Law resulting in change in cost.
- (c) Variation in actual interest rate.

(ii) Interest During Construction (IDC) shall be as per actuals but not exceeding the amount as indicated at *Annex-I* except for variation in actual interest rate(s) and the pro-rata variation in hard cost, as stated in clause 2 (i) (a) & (b) of this O.M.

3. The abstract of Project Cost approved by CEA, is furnished at *Annex-I, IA and IB*. The summary of tentative Financial Package, as submitted by M/s. HPPCL and considered by CEA and the salient features of the scheme are given in *Annex-II & III* respectively.

4. This Concurrence is subject to fulfilment of the following conditions:-

- i) The following conditions/circumstances shall not be a re-opener of the Project Cost Concurrence:-
  - (a) Non-acquisition of land
  - (b) Non-finalisation of power purchase agreement.
- ii) M/s HPPCL shall incorporate the suggestions/ observations of Central Water Commission (CWC) (*Annex - IV*) on Hydrology, Hydel Civil Design, FCL, Foundation Engineering & Seismic Design, Inter-State aspects and Central Soil & Material Research Station (CSMRS) etc. during the detailed design stage.
- iii) M/s HPPCL shall collect site specific short interval rainfall-runoff data for the project catchment for at least 4-5 flood events for the development of catchment response function and review the design flood at the construction stage.
- iv) Suggestions of GSI (as given at *Annex - F & FA*) and furnished as comments from time to time shall be followed. Cost for changes required subsequent to investigations shall be absorbed by the company. Report on additional investigations completed shall be submitted by M/s HPPCL.
- v) Site specific seismic studies for design earthquake parameters shall be got approved from the National Committee on Seismic Design Parameters (NCSDP).
- vi) Govt. of HP have confirmed FRL and TWT of Shonglong Karcham HEP as 1956 m and 1810 m respectively vide letter No. HP DOE/CE (Energy)/HPPCL Misc/2010-5901-02 dated 19.03.2011. As such responsibility of correctness of levels of Shonglong Karcham HEP lies with the Govt. of HP and M/s HPPCL.
- vii) M/s HPPCL shall carry out Physical/ Numerical Model Studies during detailed design stage as agreed by them.
- viii) M/s HPPCL shall carry out Petrographic examination of coarse and fine grained samples for all potential quarries for knowing the presence of reactive materials and all other tests suggested by CSMRS at pre-construction stage.

Dy. General Manager  
Shonglong Karcham HEP,  
HPPCL, Reckong Poo,  
Distt. Kinnaur (H. P.) 172107



- ix) As per Decision taken in Authority Meeting No. 25/2002, dated 29.02.2002, M/s HPPCL being a State Public Sector Organization, quantities involved in Civil and Engineering structures have not been examined in CEA/CWC. A certificate in regard of correctness of quantities of civil works has been furnished by M/s HPPCL vide letters dated 17.12.2011 (*Annex-VI*) & dated 29.6.2012 (*Annex-VIA*). Hence, the correctness of quantities of civil works shall be the responsibility of M/s HPPCL.
- x) Under the cost of civil works, total provision under the head "B-Land" has been made as Rs 67.38 crores at July, 2011 P.L.
- xi) Environmental clearance (for 450 MW) and Forest clearance (for 402 MW) have been accorded by Ministry of Environment & Forest (MOE&F). A provision of Rs 102.71 crores has been kept in cost estimates of civil works under the sub-head 'Environment and Ecology'. Forest clearance for 450 MW shall be obtained by M/s. HPPCL.
- xii) Suitable rehabilitation and re-settlement plan shall be prepared by HPPCL and submitted to MOE&F for obtaining their clearance. A provision of Rs.3.93 Crores in cost estimates of Civil works has been made for R&R Plan at July, 2011 P.L.
- xiii) If any impact on wild life is observed, M/s HPPCL would obtain clearance from National Board of Wild Life.
- xiv) As the Scheduled Tribe population is getting affected, clearance under Forest Rights Act from Ministry of Social Justice & Empowerment / Tribal Affairs shall be obtained by M/s. HPPCL.
- xv) M/s HPPCL shall comply with the guidelines for participation of foreign Companies in tender work packages of Hydro electric Projects in sensitive areas, issued by Ministry of Power vide No. 7/1/2002-DO(NHPC) [Vol. II], dated 03.09.09 appended at *Annex-VII*.
- xvi) M/s HPPCL shall take appropriate precautions to avert flooding of power house by adopting measures listed at *Annex-VIII*.
- xvii) Fly ash and fly ash based products shall be used in the construction of various works, infrastructure facilities etc to the extent possible in accordance with MOE&F notification dated 14.09.1999 and its amendment dated 27.08.2003 and 03.11.2009 and further revision/amendment, if any. The construction material surveys shall include the required investigations for use of Fly Ash and Fly Ash based products in various works, infrastructure facilities etc, and their feasibility shall be ascertained by M/s HPPCL. In case, fly ash proposed to be used is based on imported coal, the fly ash shall be tested for radio activity before incorporating in the project.
- xviii) M/s HPPCL shall deploy modern tools/ software for construction monitoring of the project by establishing IT based monitoring systems and linking the same to CEA network.
- xix) M/s. HPPCL shall identify additional quarry sites for meeting the shortfall of construction material before taking up the construction of the project. The suitability of the material of new quarry sites shall also be established.
- xx) M/s. HPPCL shall submit the updated Final DPR to the State Govt. Approving Electricity Regulatory Commission and Central Transmission Utility, BIRDP is submitted to CEA.
- xxi) Information in respect of tying up of essential inputs/statutory clearances, results of investigations/ studies shall be submitted to CEA/CWC/GSI on receipt of same later from time to time.

**Dy. General Manager**  
**Shongtor Archam HEP,**  
**HPPCL Bhokang Eco,**  
**Dist. Dimaasur (H. P.) 72107**



- xxii) Concurrence is subject to compliance by M/s HPPCL of various policies, guidelines etc. issued by Govt. of India from time to time.
- xxiii) Broad technical aspects of the project proposal in the project report have been scrutinised in CEA in consultation with CWC, GSI and other concerned agencies. The scrutiny is based on the data, assessment and certificates presented in the report and information/clarifications received as compliances to the observations on the assumption that the data and information furnished are accurate and have been collected reliably by the project authorities from dependable sources and/or after carrying out detailed surveys and investigations as presented in the report.
- xxiv) M/s HPPCL shall obtain clearance on International aspect from Ministry of Water Resources / CWC.
- xxv) M/s HPPCL shall obtain the clearance from Ministry of Defence for the project.
- xxvi) Any modification, necessitated to be carried out by M/s. HPPCL in project / design parameters being presently concurred by CEA, shall be got approved by CEA in advance with full justification before implementation at project site.
- xxvii) The hydro machine shall be capable to run on synchronous condenser mode.
- xxviii) The current rating of 400 kV switchyard and XLPE cable shall be adequate for handling 3000 MW power at 400 kV.
- xxix) The rated short circuit current capacity for switchyard at 400 kV bus shall be 50 kA for one second.

5. The cost of the project cleared by the Authority is indicative. The tariff of the project shall be regulated by the appropriate Electricity Regulatory Commission.

6. Commissioning schedule of the generating units from zero date i.e. 1<sup>st</sup> June, 2012 shall be as follows:

Unit - 1	: 56 <sup>th</sup> Month
Unit - 2	: 57 <sup>th</sup> Month
Unit - 3	: 58 <sup>th</sup> Month

7. Monthly Status Report of compliance of the conditions stipulated under para 4 of this Concurrence letter shall be submitted to Secretary, CEA.

8. Monthly Progress Report of the project shall be submitted to Hydro-Project Monitoring (HPM) Division of CEA. Three (3) copies of the half-yearly reports on both physical progress of the scheme and expenditure actually incurred, duly certified by statutory auditors shall be submitted to the Authority till the Commercial Operation Date of the plant. The project authorities shall give free accessibility to CEA officers and staff to have on the spot assessment of various aspects of the project.

9. Monthly status of the project from the date of Concurrence to Financial closure shall be furnished to Secretary, CEA as per the proforma enclosed at Annex-IX.

10. In case the time gap between the Concurrence to the scheme by CEA and the actual start of main works by M/s HPPCL is three years or more, a fresh Concurrence of CEA is required to be obtained by M/s HPPCL before the start of actual work.

Dy. Genl. Manager

Dr. K. R. Chakrabarti, HPPCL

Dist. Kinnaur (H. P.) 172107



Revalidation of concurrence can also be considered, in case the reason for not starting the work is beyond the control of developer. However, proposal of revalidation shall be submitted three months before the expiry of validity of concurrence which is 3 years from the date of issue of this O.M.

11. The Authority reserves the right to revoke this concurrence, if the conditions stipulated in this Office Memorandum are not complied with to the satisfaction of the Authority.

Encls: Annexes I, IA, IB, II, III, IV, V, VA, VI, VI A, VII, VIII & IX.

1. Managing Director, Himachal Pradesh Power Corporation Limited, Himat Bhawan, Panipat (Below Old MLA Quarters), Shimla, Himachal Pradesh - 171 005.
2. Secretary, Ministry of Power, Govt. of India, Shram Shakti Bhawan Rafi Marg, New Delhi - 110 119.
3. Secretary, Ministry of Environment & Forests, Government of India, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi - 110 003.
4. Chairman, Central Electricity Regulatory Commission, 3<sup>rd</sup> & 4<sup>th</sup> Floor, Chanderlok Building, 36, Janpath, New Delhi - 110 001.
5. Chairmaa, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi - 110 006.
6. Chairperson, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi.
7. Chairman, HP Electricity Regulatory Commission, Keonthal Commercial Complex, KHALINI, Shimla - 171 002.
8. Chairman-cum-Managing Director, Power Grid Corporation of India Limited, Sandamini, Plot No.2, Sector 29, Gurgaon - 122 001 (Haryana).
9. Chairperson HP Power Transmission Corpn. Ltd. Barowalia House, Khudim, Shimla - 171 002.
10. Secretary (Department of Power), Government of Himachal Pradesh, Secretariat, Shimla, Himachal Pradesh - 171 002.
11. Adviser (Energy), Planning Commission, Yojana Bhawan, New Delhi - 110 001.
12. Member (D&R), Central Water Commission, Sewa Bhawan, R. K. Puram, New Delhi - 110 606.

Dy. General Manager  
Shongtong-Kachham I.P.P.  
HPPCL, Reckong Poo  
Distt. Kinnaur (H. P.) 172107



13. Member (WP&P), Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi 110606.
14. Member (Hydro / Planning / Thermal / Grid Operation & Distribution / Economic & Commercial / Power System), CEA, Sewa Bhawan, R.K. Puram, New Delhi - 110606.
15. Joint Secretary (Hydro), Ministry of Power, Shram Shakti Bhawan, Rajbhawan, New Delhi-110119.
16. Chief Engineer (HPA/ SP&PA/ F&CA/ TCD/ Legal/ HPM / IRP/ HP&I / HE&TD/ LD&F), CEA, Sewa Bhawan, R.K. Puram, New Delhi - 110606.
17. Chief Engineer (PAO), CWC, Sewa Bhawan (S), R.K. Puram, New Delhi - 110606.
18. Director (LHM&EFF Division), Geological Survey of India, A-11, Pushpa Bhawan, Madangir Road, New Delhi - 110062.

*Handwritten signature*  
Dy. General Manager  
Shongtong Narchham HLP,  
HPPCL, Reckong Poo,  
Distt. Kinnaur (H. P.) 172107



Shongtong Karcham Hydro Electric Project (3x150=450 MW) - Himachal Pradesh, by  
M/s Himachal Pradesh Power Corporation Limited (HPPCL)

Estimated Cost at July, 2011 Price Level

S.No.	Description	Total (Rs. Crs.)
1.	Civil works	1720.16
2.	Electro-Mechanical Works	621.93
3.	<b>Total Hard Cost</b>	<b>2342.09</b>
4.	IDC	465.74
	<b>Total Cost</b>	<b>2807.83</b>

Dy. General Manager  
Shongtong-Karcham HEP,  
HPPCL, Rohtang P.O.,  
Distt. Kinnaur (H. P.) 172107

Dy. General Manager  
Shongtong-Karcham HEP,  
HPPCL, Rohtang P.O.,  
Distt. Kinnaur (H. P.) 172107




HIMACHAL PRADESH STATE ELECTRICITY BOARD

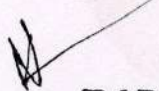
OFFICE ORDER

144

HPSEB is pleased to accord Techno Economic Clearance (TEC) to SHONGTONG KARCHAM HEP (402 MW) in Satluj basin in Distt Kinnaur of Himachal Pradesh at an estimated cost (at bus bar) of Rs.2415.53 crore (Rupees Two thousand four hundred fifteen crore & fifty three lac only at December, 2005 price level including Escalation, IDC and LADA charges @ 1.5 % with the stipulation that:

- 1) The complete cost of the scheme shall not exceed the above cost except on account of the following:
  - a) Interest During Construction (IDC) shall be as per actuals not exceeding the amount as indicated at Annex-I unless revised by HPSEB while according concurrence under section 31 of Electricity (supply) Act, 1948 repealed by Electricity Act, 2003 after review of financial package.
  - b) Change in rates of Indian taxes/ duties such as excise duty, sales tax/ VAT, custom duty and levy of any other taxes/duties subsequent to issue of Techno-Economic Clearance (TEC).
  - c) Change in Indian law resulting in change in cost.
  - d) The abstract of the estimated cost approved by HPSEB is furnished at Annex-I, Summary of Financial package as considered by HPSEB is at Annex-II and the Salient Features of Scheme are at Annex-III.
- 2) The Techno-Economic Clearance (TEC) is subject to the fulfillment of the following conditions:
  - i) Completed cost/techno economic clearance shall not be re-opened due to the following:
    - a) Non-acquisition of land.
    - b) Non-finalisation of Power Purchase Agreement (PPA).
    - c) Delay in financial closure.
  - ii) The final financial arrangement shall not be inferior to the financing arrangement projected in the Detailed Project Report (DPR) for TEC.
  - iii) Tariff shall be decided by the Central/State Electricity Regulatory Commission.
  - iv) The public issue expenses, if any, shall be reconsidered at the time of approval of completion cost based on documentary proof and in accordance with Security Exchange Board of India (SEBI) guidelines regarding regulation of public issue expenses.

  
Dy. General Manager  
Shongtong Karcham HEP,  
H.P., Reckong Poo,  
Distt. Kinnaur (H. P.) 172107

  
Sr. Manager (R&T)  
Shongtong-Karcham HEP,  
H.P., Reckong Poo,  
Distt. Kinnaur H.P., 172107



- vi) Fulfillment of conditions stipulated in Central Electricity Authority (CEA)/ Central Water Commission (CWC) guidelines in respect of civil works at the stage of detailed design/execution
- vii) The Techno-Economic Clearance (TEC) is subject to clearances of project by MOE & F from environmental and forest angle. The statutory clearances as per Annexure-IV shall be obtained before execution/implementation of the project
- viii) Implementing agency/ Project Authority shall enter into an agreement with beneficiary status for absorbing power generated from the project.
- ix) Implementing Agency/Project authority shall obtain the forest clearance for the Power evacuation line before commencement of the construction work.
- x) Implementing Agency/Project authority shall construct the Power evacuation line matching with the commissioning of the generation units
- xi) No additional cost shall be allowed due to Resettlement & Rehabilitation (R&R) Plan
- xii) Normal operation life of the hydro power plant shall be as provisions of the sixth schedule of the Electricity (Supply) Act 1948 repealed by Electricity Act 2003
- xiii) The TEC is based on the reports and data furnished in the DPR and it is presumed that information furnished is accurate. The scrutiny does not cover the examination of the detailed design and working drawings of work components in regard to the structural, hydraulic and mechanical performance and safety which shall be ensured by the implementing Agency/Project Authority.
- xiv) Final Financial package shall be approved by the HPSEB.
- 3) The Project shall be completed within 72 (seventy two) months from the date of start of the Project
- 4 a) Monthly Progress Report of the Project shall be submitted to Monitoring Cell of HPSEB. Three (3) copies of the semi-annual physical progress report of the scheme and expenditure actually incurred, duly certified by statutory auditors shall be submitted to the HPSEB till the Commercial Operation of the plant
- b) Final financial package and issue related to that shall be submitted to HPSEB
- 5 Monthly status of the Project from the period of TEC to financial closure/ investment decision shall be furnished to HPSEB
- 6 The completion cost of the scheme shall be submitted to HPSEB for approval as soon as possible after the commercial operation date (COD) of the plant, but not later than three (3) months from the COD of the plant

**Dy. General Manager**  
**Shongtong-Karchham HEP,**  
**HPCL, Reckong Peo,**  
**Distt. Khamti (H. P.) 172107.**

**Sr. Manager (R&R)**  
**Shongtong-Karchham HEP,**  
**HPCL, Reckong Peo,**  
**Distt. Khamti H.P., 172107**



7. The concurrence of the HPSEB to the scheme under Section 31 of the Electricity (Supply) Act, 1941 repealed by Electricity Act, 2003, shall be considered by the Board on submission of the Financial Estimate and the up of balance inputs clearances by the implementing Agency/Project Authority within a period of six months from the date of issue of TEC.
8. In case the time gap between the Techno-Economic Clearance of the scheme and actual start of work on the Project is three years or more, a fresh Techno-Economic Clearance shall be obtained from HPSEB before start of actual work.
9. The HPSEB reserves the right to revoke the Techno-Economic Clearance if the conditions stipulated in the TEC are not complied with to the satisfaction of the HPSEB.
10. The implementing Agency/Project Authority shall have to obtain clearance from CERC/HPERC as per provision in the Electricity Act, 2003.

Chief Engineer (P&A)  
HPSEB, Shimla-4

N. J. HPSEB (Recd) /491-Shongtong Karchham TEC/05-3/PS-3-73 dated 22.06.06  
Copy of above is forwarded to the following for information and please:

1. The Additional Secretary (Power) to the Govt. of HP, Shimla-2
2. The Secretary, HPSEB, Shimla-4 alongwith copy of the order approved by the WTMs of the Board by direct order.
3. The Addl Secretary cum P.W. Spl. Sr. PS/Sr. PS to the Chairman and Members of HPSEB for kind information of the Worthy Chairman/Members etc.
4. The CAO, HPSEB, Vidyut Bhawan, Shimla-2
5. The Chief Engineer (P&A), HPSEB, Shimla-4
6. The Chief Engineer (SI), HPSEB, Shimla-4
7. The Chief Engineer (Projects), HPSEB, Shimla-2
8. HPSEB CE (P&A) Shongtong-Karchham/06-574-3366
9. The Deputy Chief Engineer (Contract), HPSEB, Vidyut Bhawan, Shimla-4
10. The A.O. (CEC), E&A Wing, HPSEB with his DO note no. HPSEB/10/11 dt. 2.5.06.

Attested

Chief Engineer (P&A)  
HPSEB, Shimla-4

My doc. TEL. change - E. K. Chandra  
Addl. Supervising Engineer  
Investigation Division,  
H P S E R Reckong Peo,  
DIST. KINNAUR (H. P.)

Dy. General Manager  
Shongtong-Karchham HEP,  
HPPCL, Reckong Peo,  
Dist. Kinnaur (H. P.) 172107

Sr. Manager (T & R)  
Shongtong-Karchham HEP,  
HPPCL, Reckong Peo,  
Dist. Kinnaur H.P., 172107



Annexure-I

HIMACHAL PRADESH STATE ELECTRICITY BOARD

SHONGTONG-KARCHAM HEP(420MW)

ABSTRACT OF COST ESTIMATE

a) (Rs.Crore)

1.	Civil Works	1165.00	
2.	Electro-mechanical works	504.20	Price level year Dec., 2005
	Sub Total (a)	1669.20 crore	
b)	Escalation	380.74	
	IDC	329.89	
	Sub Total (b)	710.63	
	Total (a+b)	2379.83	
c)	LADA @ 1.5%	35.70	
	TOTAL (a+b+c)	2415.53	

(Rupees Two thousand four hundred fifteen crore and fifty three lac ) only.

*Attested*  
Sr. Manager (T&R)  
Shongtong-Karcham HEP,  
HPPCL, Reckong-Poo,  
Distt. Kinnaur H.P., 172107

*[Signature]*  
Dy. General Manager  
Shongtong-Karcham HEP,  
HPPCL, Reckong-Poo,  
Distt. Kinnaur (H. P.) 172107



143

HIMACHAL PRADESH  
I&PH DEPARTMENT.

No. KNR-IPHD-PEO-WA-NOC/07  
To

14331-34

Dated: 17/3/08

The Superintending Engineer,  
I&PH Circle R/Peo,  
Distt. Kinnaur H.P.



Subject:

Forest Clearance of Shongthong Karcham (402 MW).

Enclosed kindly find herewith a copy of letter No. HPSEB/ISD/II/G-I/2006-57-58 Dated: 26-5-2006 along with site map of above proposed HEP as received from the Assistant Engineer, Investigation Sub-Division No. II HPSEB R/Peo for issuance of necessary NOC for above proposed project. In this regard it is submitted that the subject cited project is proposed to be constructed on the Bank of Satluj River and there is no WSS and FIS of this Department falling along the alignment of said project. But the NOC to the concerned Department can only be issued subject to the condition that any loss/ damage to the Departmental schemes in the vicinity of this area such as drying of source and damage due to blasting work during execution of tunnel, then the project construction company will be responsible for repair of such damages at their own cost. In view of the above facts the conditional NOC to the concerned company can be given subject to the fulfillment of above conditions by the company/ Department.

This is for favour of kind information and necessary action

please.

DA: As Above.

S. Sen  
Suptd-II  
Supd D/A  
Stand  
E. I, II  
G. A.

Executive Engineer,  
I&PH Division R/Peo,  
Distt. Kinnaur H.P.

Copy to the Assistant Engineer, I&PH Sub-Division R/Peo w.r.t. his office letter NO. ISD-Peo-General/07-1049 Dated: 15-11-2007.

Copy to the Assistant Engineer, Investigation Sub-Division No. II HPSEB R/Peo w.r.t. his office letter No. referred to above for information.

Copy to Addl. SE - Investigation  
Div. No. HPSEB R/Peo w.r.t. his office letter 1517-22-5-11-07 for information.

Executive Engineer,  
I&PH Division R/Peo

Addl. Superintending Engineer  
Investigation Division,  
HPSEB Reckong Peo,  
DISTT. KINNAUR (H. P.)

Sr. Manager (R&R)  
Shongthong-Karchham HEP,  
HPPCL, Reckong-Peo,  
Distt. Kinnaur H.P., 172107



Himachal Pradesh  
Public works Department.

No.BHNR-B&R-WA-NOC/2007-08- 11699-701

Dated:- 28.1.08

To

The Superintending Engineer,  
11<sup>th</sup> Circle, HP.PWD.,  
HP.PWD., Rampur.

1766  
5/2/08

Subject:-

NOC/ Forest clearance of Shongthong Karchham Hydro  
Electric Project (402 MW)

Sir,

In this connection it is intimated that the Add. Superintending Engineer, Investigation Division HP.SEB. Reckong Peo applied for NOC by this Department. The NOC is hereby recommended subject to the following conditions:-

1. There exists the PWD road namely Shongthong Purbni road as marked in the index plan from Km. 0/0 to 3/120. The appropriate area which will be disturbed in the road comes to 21840 Sqm. The undertaking regarding any damages to this effect may be given by the HP Power Corporation.
2. There exists 9 Nos Neoza trees in the alignment of road which are in the papers of Public Works Department while conducting the joint inspection with the forest department the Public works department may also be intimated, the compensation of these trees if required shall be born by the HP Power Corporation.
3. Any Structure/ Component of road as mentioned above is damaged, the same shall be repaired by the HP Power Corporation.

This is for your kind information and necessary action.

DA:- Index plan.

Executive Engineer,  
Karchham Division  
HP.PWD Bhabanagar.

✓ Copy to the Add. Superintending Engineer, Investigation Division HP.SEB. Reckong Peo for information and necessary action please.

Copy to the Assistant Engineer, Karchham Sub-Division HP.PWD Tapri for information.

Sr. Men  
Sunder  
S. D. D.

S. D. D.

S. D. D.

Attended.

Sr. Manager (R&R)  
Shongthong Karchham HEP,  
HP.PWD Reckong Peo,  
DIST. KINNAUR H.P. 172107

Executive Engineer,  
Karchham Division  
HP.PWD Bhabanagar

HP.PWD Bhabanagar  
Dist. Kinnaur H.P.



186  
89

180

HIMACHAL PRADESH  
PUBLIC WORKS DEPARTMENT  
OFFICE ORDER

The Superintending Engineer Investigation Division HPSEB- Reckong Peo Distt. Kinnaur has applied for "No Objection Certificate" for construction of Shongthong-Karchham Hydro Electric Project (402 MW) being executed through Himachal Pradesh Power Corporation Limited which is a joint Venture of Govt. of Himachal Pradesh & HPSEB.

The "No Objection Certificate" is therefore issued in favour of above Corporation subject to fulfillment of following conditions:-

1. The corporation will not harm public property belonging to the state.
2. Traffic shall not be interrupted during the construction.
3. During construction any damages to the existing road/building or any other infrastructure will be born by the corporation at their own cost.
4. The safe guards for proper maintenance of road infrastructure in the jurisdiction of project area will be observed by the corporation and the corporation shall compensate the loss caused to Govt. property (Road building and Bridges) if any in full.
5. There exist 9 Nos Neoza trees in the alignment of road which are in the papers of Public Works Department while conducting the joint inspection with the forest department the PWD may also be intimated, the compensation of these trees if required shall be born by the HP. Power Corporation.

Executive Engineer,  
Karchham Division.  
HP.PWD Bhabanagar  
Dated 13-5-08

NO.PW-BHNR-B&R-WA-NOC/2008-09 916-19  
Copy to following for information and necessary action:-

1. The General Manager, Industrial Department Distt. Kinnaur at Reckong Peo w.r.t. a copy of DO No. Ind-A(F)10-9/2007 dated 12-3-2008 (Attached)
2. The Superintending Engineer, 11<sup>th</sup> Circle HP.PWD Rampur Bsr.
3. The Superintending Engineer, Investigation Division HP. SEB- Reckong Peo w.r.t. his office letter No HPSEB/IDRP/DB-26/2007-1521-23 dated 5-11-2007.
4. The Assistant Engineer, Karchham Sub-Division HP.PWD Tapri for information and necessary action w.r.t. his office letter No. 1462 dated 4-1-2008

183 / 18-05-08 (A.E.)  
21/5/08

Attended

Executive Engineer,  
Karchham Division.  
HP.PWD Bhabanagar

Asst. Manager (B&R)  
In-charge Karchham HEP,  
HPSEB Reckong Peo,  
Distt. Kinnaur H.P., 172107

Dy. General Manager  
Shongthong-Karchham HEP,  
HPSEB Reckong Peo,  
Distt. Kinnaur H.P., 172107



151

107

No.FSH-F (2)39/2006-ARC-X- 604  
Directorate of Fisheries,  
Himachal Pradesh.

From

The Director-cum-Warden of Fisheries,  
Himachal Pradesh.



To

✓ The Managing Director,  
Himachal Pradesh Power Corporation Limited,  
Chakkar, Shimla-4

Dated Bilaspur-174001 the, 11.5 JAN 2008

Subject: -

No objection Certificate for Shongtong-Karchham, Hydro-  
electric Project (402 MW).

Sir,

I invite a reference of your letter No. MD-HPPCL-Env./2008-2 dated 07.01.2008 regarding subject cited supra and to inform you that a conditional NOC to implement the captioned project is being issued on the following terms & conditions:-

- The Project proponent shall arrange joint field survey of the project site & allied riverine portions where project components are required to be installed in order to assess the estimated losses to aquatic bio-diversity.
- The project proponent shall make provisions at the weir/dam for the release of water downstream as per directions of State Govt. in order to maintain environmental flow of water.
- The project proponent shall make provisions of fish ladder in the proposed project to facilitate free passage of fish up stream and downstream as well.
- The project proponent shall pay for the losses to fish & fisheries of the concerned rivers/rivulets, estimated by the department of Fisheries and also fund the fishery development plan proposed by the department of Fisheries, H.P. before the initiation of construction activities.

208  
C-2  
7/11/08

By General Manager  
Shongtong-Karchham HEP,  
District Engineer, P.O.,  
District Engineer (H.P.) 172107

This may be treated as Conditional No Objection Certificate.

In case of the violation or non adherence to any of the above terms, & conditions, this conditional NOC issued in the favour of captioned project shall be withdrawn without any further notice.

Yours faithfully,

Sr. Manager (R&P)  
Shongtong-Karchham HEI  
H.P. District Engineer,  
District Engineer (H.P.) 172107



Endst No. As above-

Dated:-

Copy Forwarded to:-

1. The Secretary (Fisheries) to the Govt. of H.P., Shimla-2 for favour of information in compliance to the telephonic instructions dated 10.01.2008 regarding issuance of a conditional NOC to the above cited power project. It is, therefore, requested that the above named hydro power project may also be included for discussions in the New Agenda Items of the forthcoming meeting of the NOC committee for fisheries.
2. The Assistant Director of Fisheries, Shimla (H.P.) for information and necessary action. He is directed to prepare & submit the field survey report and a fisheries development plan to be funded by the above stated hydel project to this office for taking further action in the matter.

*Attested.*Director-cum-Warden of Fisheries,  
Himachal Pradesh*[Signature]*  
Addl. Superintending Engineer  
Investigation Division,  
H.P.S.E. & Reckong Peo,  
DISTT. KINNAUR (H.P.)*[Signature]*  
Sr. Manager (R&R)  
Shorston Marchham HEP,  
HP - Reckong-Peo,  
Distt. Kinnaur H.P., 172107*[Signature]*  
Dy. General Manager  
Shorston Marchham HEP,  
HP - Reckong Peo,  
Distt. Kinnaur (H. P.) 172107





# HIMACHAL PRADESH POWER CORPORATION LTD.

(A State Government Undertaking)

New HIMFED Bhawan, Panjri, Below Old MLA Quarters,  
Tutikandi, Shimla-171005 HP India

Phone: 0177- 3206511

Fax :0177-2633813

## AUTHORIZATION

Himachal Pradesh Power Corporation Ltd. (HPPCL), hereby authorizes following officers of the concerned project to sign and file applications seeking various clearances including clearance under Forest Conservation Act, 1980, Environment Protection Act, 1986, Air (Pollution & Control of Pollution) Act 1981, Water (Pollution & Control of Pollution) Act 1974, Mining Licensee, Explosive License etc.

### I) Integrated Kashang (243 MW) HEP:

- i. Deputy General Manager, Integrated Kashang HEP, HPPCL, Reckong Peo.
- ii. Senior Manager, Kashang Construction Division No. I, HPPCL, Reckong Peo.

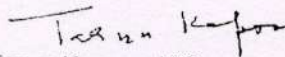
### II) Shongtong - Karcham (402 MW) HEP

- i. Senior Manager, Division HPPCL, Reckong Peo.

### III) Renuka Dam Project (40 MW):

- i. Deputy General Manager, Renuka Dam Project, HPPCL, Dadahu
- ii. Sr. Manager, Renuka Construction Division No. II, HPPCL, Dadahu

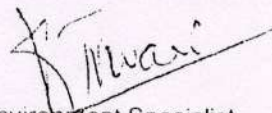
HPPCL further authorizes the above officers to sign and file various forms, reply to observations, file declarations, give undertakings and all other correspondence relating to clearances. In addition to above, Chief Environment Specialist and Chief Social, Rehabilitation & Resettlement Specialist HPPCL is also authorized in this behalf for all the above mentioned activities.


  
Tarun Kapoor, IAS,  
Managing Director

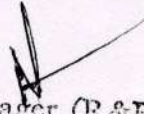
Endst. No. HPPCL/ESMU-Circulars/Vol. I/08 - 5686-40

Dated 17/7/08

Copy forwarded to the above mentioned Head of Projects and Chief Environment Specialist/Chief Social, Rehabilitation & Resettlement Specialist HPPCL for information and record.

  
Chief Environment Specialist

  
Dy. General Manager  
Shongtong-Karcham HEP,  
HPPCL, Reckong Peo,  
Distt. Kinnaur (H. P.) 172107

  
Sr. Manager (R&R)  
Shongtong-Karcham HEP,  
HPPCL, Reckong-Peo,  
Distt. Kinnaur H.P., 172107



No. Udyog-Bhu (Regd.) Patel St. Cr.-  
Government of Himachal Pradesh  
Department of Industries  
\*Geological Wing\*  
Dated, Shimla-171000

6641

5-11-2019

To

The General Manager (HOP)  
Shontong-Karcham H E Project,  
Himachal Pradesh Power Corporation Ltd.  
KC Complex, Reckong Poo,  
Disstt. Kinnaur (H.P.)

Subject:

Shongtong Karchham HEP-Lifting of RBM for de-silting of reservoir area  
at Powari, Distt. Kinnaur.

Sir,

This is with reference to your office letter No. HPPCL/GM-STKHHP/mining/2019-4704-06 dated 19.10.2019, vide which you have requested to allow the Project Proponent to lift and stack RBM that will be generated during the course of de-silting of reservoir area of Project.

In this connection it is to inform that the de-silting of reservoir is a non mining activity and does not fall under the perview of this department. Moreover, if the said activity is a part of your Project Component for which all statutory permissions have been obtained, then this department has no objection unless the involvement of mining activity. However, it shall be ensured that except de-silting no mining activities of any kind takes place for which principal employees shall be responsible. Further, the material generated during such activity can be utilized for bonafide purpose with prior permission of this department as per provisions contained under Rule 33 of H.P. Minor Mineral Rule -2015. In such cases, on the written request of applicant for the utilization of material generated due to non-mining activities, the proposal shall be forwarded to the Committee constituted for this purpose and permission shall be accorded by this office as per the recommendation of the committee, on the payment of advance royalty.

G.M.  
A.G.M.  
F&A  
P&A  
P&C  
R&R  
Sr. M.I  
Sr. M.H

Endst no As above:-  
Copy to :

1. The Deputy Commissioner of Kinnaur, Distt. Kinnaur, Himachal Pradesh for information please.
2. The Mining Officer Kinnaur for information & necessary action please.



Yours faithfully,

State Geologist  
Himachal Pradesh  
Dated : 2019

Divisional Forest Officer  
Kinnaur Forest Divisional  
R/Poo

Sr. Manager (R&P)  
Shontong-Karcham HEP,  
HPPCL, Reckong Poo,  
Distt. Kinnaur H.P., 172107

State Geologist  
Himachal Pradesh



100 88

**F. No. 8-78/2010-FC**  
**Government of India**  
**Ministry of Environment & Forests**  
**(FC Division)**

Paryavaran Bhawan,  
C.G.O Complex, Lodhi Road,  
New Delhi - 110510.  
Dated: 14<sup>th</sup> November, 2012.

To  
The Principal Secretary (Forests),  
Government of Himachal Pradesh,  
Shimla.

**Sub: Diversion of 63.5015 ha of forest land for construction of 402 MW Shongtong-Karcham Hydro Electric Project in favour of Himachal Pradesh Power Corporation Limited (HPSEB) in Kinnaur Forest Division in Kinnaur district of Himachal Pradesh.**

*Dy. Manager  
(Genl)  
16.11.12*  
Sir,

I am directed to refer to the State Government's letter no. Ft.48-1942/2009 (FCA) dated 04.09.2010 on the subject cited above seeking prior approval of the Central Government under the Forest (Conservation) Act, 1980. After careful consideration of the proposal by the Forest Advisory Committee constituted under section-3 of the said Act, in-principle approval was granted vide this Ministry's letter of even number dated 22.03.2011 subject to fulfillment of certain conditions. The State Government has furnished compliance report in respect of the conditions stipulated in the in-principle approval and has requested the Central Government to grant final approval.

2. In this connection, I am directed to say that on the basis of the compliance report furnished by the Nodal officer (FCA) of the State Government vide letter nos. Ft.48-1942/2009(FCA) dated 10.05.2011, Ft.48-1942/2004(FCA) dated 25.08.2012 and Ft.48-1942/2004(FCA) dated 16.10.2012, permission of the Central Government for diversion of 63.5015 ha of forest land for construction of 402 MW Shongtong-Karcham Hydro Electric Project in favour of Himachal Pradesh Power Corporation Limited (HPSEB) in Kinnaur Forest Division in Kinnaur district of Himachal Pradesh under the provisions of Section 2 of Forest (Conservation) Act, 1980 is hereby granted subject to fulfillment of the following conditions:

1. Legal Status of the diverted forest land shall remain unchanged.
2. The Compensatory Afforestation (CA) will be raised and maintained over double the area proposed for diversion in a degraded forest land (i.e. 128 ha) at the cost of User Agency.
3. The User Agency shall pay additional NPV, if so determined, as per the final decision of Hon'ble Supreme Court of India.

*Sh*

*Dy. Manager  
Shongtong-Karcham HEP  
Kinnaur Forest Division*



- (186) 87
4. All the funds received from the User Agency under the project shall be transferred to Ad-hoc CAMPA pertaining to the State.
  5. The State Government shall ensure that minimum flow of 15% is maintained at all time.
  6. The user agency shall set up Ecological Monitoring Unit to monitor the impact of the project on flora and fauna of the area.
  7. The user agency shall keep the effect of camping labourers on the flora and fauna during the construction phase of 48 months at minimum by providing alternate fuel for cooking and heating.
  8. The entire reservoir created due to submergence shall be declared Reserve Forest under Indian Forest Act, 1927 within six months. However, regulated fishing shall be allowed. Nodal Officer shall submit compliance report in this regard.
  9. Catchment Area Treatment Plan should be implemented at the project cost under the supervision of the State Government.
  10. Green belt of adequate width shall be raised by the user agency around the reservoir at the cost of the project.
  11. The user agency shall facilitate a basin level study on the impact of HEPs on the flora & fauna of the area as per the TOR submitted to MoEF.
  12. The user agency shall carry out muck disposal at pre-designated sites in such a manner so as to avoid its rolling down.
  13. The dumping area for muck disposal shall be stabilized and reclaimed by planting suitable species by the user agency at the cost of project under the supervision of State Forest Department. Retaining walls and terracing shall be carried out to hold the dumping material in place. Stabilization and reclamation of such dumping sites shall be completed before handing over the same to the State Forest Department in a time bound manner as per Plan.
  14. The User agency will consult other organisations having experience in construction of roads in hilly areas such as BRO to avoid frequent road blockade due to land slides etc and shall provide breast walls and retaining walls wherever necessary.
  15. The Forest Department shall regenerate equivalent amount of degraded forest area, in addition to the condition no. 1. As the user agency does not have qualified manpower and control on forest area to execute the same, they have paid for the same to the CF, Rampur. The Forest Department shall implement the same and submit a compliance report.
  16. The User Agency shall submit annual self monitoring report indicating status of compliance to the conditions stipulated in the approval, to the State Government and the concerned Regional Office of the Ministry.

Shr

Sr. Manager (G.S.T.)  
Dist. Forest Officer,  
Dist. Forest Officer,  
Dist. Forest Officer, 172107



- 152
17. All other conditions including standard conditions applicable to the proposals under Forest (Conservation) Act, 1980 and under different rules regulations and guidelines including Environmental Clearance and rehabilitation shall be complied with before transfer of forest land


Yours faithfully,

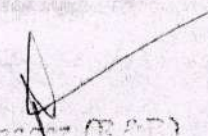
(Shiv Pal Singh)  
Sr. Assistant Inspector General of Forests

Copy to:-

1. The Principal Chief Conservator of Forests, Himachal Pradesh, Shimla.
2. The Nodal Officer (FCA), Forest Department, Himachal Pradesh, Shimla.
3. The Conservator of Forests (Central), Northern Regional Office, Chandigarh.
4. User Agency.
5. Monitoring Cell of FC Section.
6. Guard File.

Shiv 14/11/12  
(Shiv Pal Singh)  
Sr. Assistant Inspector General of Forests

  
Dy. General Manager  
Shimla - Farchham HEP,  
HECL, Reckong Poo,  
Distt. Kinnaur (H. P.) 172107

  
Sr. Manager (R&D)  
Shimla - Farchham HEP,  
HECL, Reckong Poo,  
Distt. Kinnaur H.P., 172107