

HPFD-F05/243/2023-FCA-HIMACHAL PRADESH FOREST DEPARTMENT

I/254774/2023

No.Ft.48-4019/2011 (FCA)
H.P.Forest Department.

From

Nodal Officer-cum-APCCF (FCA)
O/o Pr.CCF(HoFF), H.P. Shimla..

To

The Assistant Inspector General of Forests (FC),
Govt. of India, Ministry of Environment, Forests & Climate Change,
(Forest Conservation Division) Indira Paryavaran Bhawan,
Aliganj, Jor Bagh Road, New Delhi-110003.

Dated Shimla-1, the

Subject: Diversion of 7.3722 ha of forest land as additional forest land requirement in already approved diversion in favour of Shongtong Karchham Hydro Electric Project, HPPCL under the jurisdiction of Kinnaur Forest Division, Distt. Kinnaur, Himachal Pradesh (Online Proposal No. FP/HP/HYD/40611/2019).

Sir,

Kindly refer to your letter No. 8-78/2010-FC dated 08.08.2023 on the subject cited above.

2. The point wise reply to the observations as raised your above referred communication is submitted as below:-

1. In the earlier approved proposal of 63.5015 ha there were 6 Nos. dumping sites. Whereas in the instant diversion proposal for 7.3722 ha. there are 4 Nos. proposed dumping sites, the comparative list is as under: -

Approved dumping sites in the earlier diverted 63.5015 ha.			Proposed dumping sites in additional FC case 7.3722 ha.		
Dumping site	Kh. No	Area in ha.	Dumping site	Kh. No	Area in ha.
D.S.1	470	1.1383	DS-A	2/2	2.3813
D.S. 2	301, 648, 805	0.3794	DS-B	2/1	1.1005
D.S. 3	724/576/1, 571/1	0.8928	DS-C	561/1, 568, 569	1.4470
D.S. 4	4/1,	1.2450	DS-D	3/2	0.2960
D.S. 5	303/2	0.8626			
D.S. 6	24/1/24/2	0.5819			
	Total	5.1			5.2248

1. KML file of earlier diverted dumping sites DS-1 to DS-6 of forest land has been submitted through this office email dated _____. KML file of proposed dumping sites i.e. DS-A to DS-D has been uploaded online in Part-I Column No. C (b) (1).

2. CCF Rampur has reported that the project proponent has dumped 48,401.0 cum of muck in designated Dumping Site No. 4 as per the actual quantity/capacity

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of dumping site. This position is also stated in response to observation 'Para No 3' vide this office Memo No. 1561 dated 15.07.2023. Further, DS-4 could not be used fully for dumping. Due to landslide in and around the dumping site, the capacity of designated site reduced drastically. To make up for above deficit HPPCL has dumped muck on private land on specific request of the local people. In addition to above, forest land measuring 5.2248 ha. at four locations have been requested for diversion in present proposal for dumping of muck. Justification to this effect has been attached as **Annexure-A**. User Agency has uploaded the copy of Jamabandi in part- I against additional information at Sr No 20.

3. As per user agency Muck Management Plan has been sent to H.P. State Pollution Control Board (HPSCB) for seeking approval. The copy of Muck management Plan of the proposed site is attached as **Annexure-B** . The approved Muck Management Plan will be submitted before Stage-II approval. Undertaking to this is attached as **Annexure-C**.
4. The total outlay of revised CAT Plan in respect of Shongtong Karcham HEP. is for Rs.70,19,57,500/- which is 2.5% of total project cost i. e. Rs.2807.83 Crore. The cost of CAT was deposited in two installments as below:-

Date of Deposition	Amount deposited	Remarks
01.10.2012	604400000	Copy of Receipt enclosed as Annexure-D
12.07.2023	97557500	Copy of Receipt enclosed as Annexure-E
Total	701957500	

As per DFO Kinnaur reason for slow progress of implementation of CAT is due to limited working period and harsh weather condition in the Kinnaur area. In addition to this due to frequent changes in the climatic condition of the area in last few decades where CAT was to be implemented is also a reason for slow progress of CAT implementation.

5. To comply with the Stipulation No 15 of GOI dated 14.11.2022 project proponent had deposited an amount of Rs. 1,36,73,737/- vide demand Draft No 630174 dated 21.04.2011 with HP Forest Department. Accordingly in Kinnaur Forest Division during the year 2016-17 & 2017-18 plantations were raised over 125 ha and also expenditure of Rs.1,36,74,200/- incurred to regenerate the equivalent area of degraded forest land. The detail is as under:-

Year of Plantation	Name of Range/Block/Beat	Name of area	Area in Ha.	Amount utilized
2016-17	Lippa	C-216	10	625000
	Pangi	C-234	5	312500
	Roghi	C-245	10	625000
	Rarang	UF-Thopan	10	625000
	Moorang	UF-Shurting	10	625000
	Leo	UF-Chulling	5	312500

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	Kalpa	C-239	10	625000
	Cost of plants			1485000
	Cost of material B/wire etc			816300
Sub-Total			60	6051300
2017-18	Rarang	UF-Rarang	15	937500
	Pangi	C-237	5	312500
	Roghi	C-244	10	625000
	Rarang	RF-Khadra	10	625000
	Moorang	C-197	10	625000
	Skibba	C-187	5	312500
	Kalpa	C-240	10	625000
	Cost of plants			1608750
	Maintt of plantation		60	528000
	Cost of material			1423650
Sub-Total			65(new Plantation)	7622900
G. Total			125	13674200

The progress reports and utilization certificate are enclosed as **Annexure-F, G, H.**

- CCF Rampur has reported that the Shongtong Project is a flagship project as conveyed by Project proponent and the largest one undertaken by GoHP so far. Due to various reasons project has got delayed. The stated violation has happened in silt flushing area which is critical for the commissioning of the Project and is getting completed as a last activity of the project. In the instant FCA proposal which seeks diversion of this patch of land was submitted way back in October 2019; however, due to repeated objections at different levels the proposal is still not approved. HPPCL had started the work with the hope that proposal will get through in due course. So the work was started with greater public interest in mind and not due to any vested interest. As per DFO Kinnaur no damage report etc was issued against the project authorities for the violation in the Silt Flushing Area measuring 0.5883 ha. The Silt Flushing Component measuring 0.8595 ha including violation area measuring 0.5883 ha has also been included in the present proposal for seeking approval of GOI under FCA, 1980.

DFO Kinnaur has calculated Penal NPV in this case for Rs. 41, 21,058.0 with 12% interest from the date of reporting violation. The bill of NPV has been uploaded in Part-II as Additional information at Sr. No.6 Further also intimated by DFO Kinnaur that the works on area in question ha also been completely stopped and no construction activities are going on.

- CCF Rampur has reported that the Project proponent has already taken up the matter with Deputy Commissioner, District Kinnaur and with his office to declare the reservoir to be created due to submergence as Reserve Forest. The declaration of reservoir as RF is a time taking process and there is certain SOP to be followed prior to completion of the project. As per user agency the works of project has already been delayed and the diversion of 7.3722 ha of forest land

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is very critical for the progress of the Project. It is therefore requested that the two issues may not be linked.

8. CCF Rampur has reported that the area measuring 0.5883 ha. for Adit –I & 1.1005 ha. for dumping site below Adit –I, has been included in the present proposal for diversion of 7.3722 ha of additional forest land. A portion of the road to RBM site measuring 0.1360 ha. was inadvertently left out in previous proposal due to its proximity with the larger patch diverted in original proposal of 60.5015 ha. Therefore this patch was included in the present proposal. As far as overlapping of the area with Barrage component is concerned the same has been rectified and revised KML file has been uploaded on portal.
9. KML file of earlier diversion of 63.5015 ha. of forest land has been submitted through this office email dated _____.

It is, therefore requested that the Stage- I approval of the proposal may please be conveyed. This is for favour of your kind information and further necessary action in the matter please.

Yours faithfully,

Nodal Officer–cum-APCCF (FCA)
O/o Pr.CCF(HoFF), H.P. Shimla.

JUSTIFICATION FOR NON-DUMPING OF MUCK IN DESIGNATED SITE OF DS-4

The project proponent has dumped 48,401.0 cum of muck in designated dumping site no. 4 as per the actual quantity/capacity of dumping site. This position is also stated in response to observation 'Para no 3' of reply by HP state Govt. dated 16.July 2023. Further, DS-4 could not be used fully for dumping due to the following reasons:-

1. Due to landslide in and around the dumping site the capacity of designated sites reduced drastically.

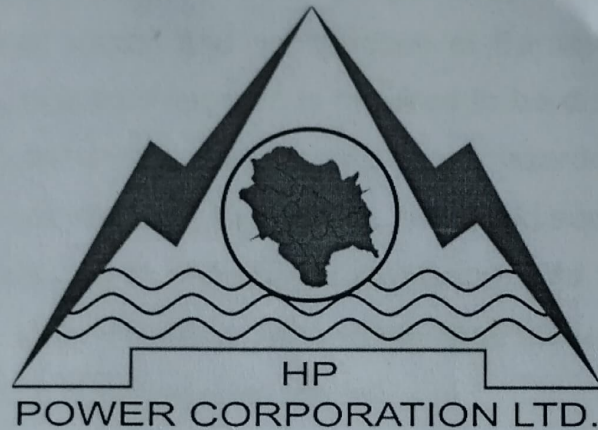
In addition to above, the forest land measuring 5.2248 ha. at four locations has been requested for diversion in instant proposal for dumping of muck.

g
/s

Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P

Kinnaur
Long-Karchham HEP.
Reckong Peo
Kinnaur (HP) 172107

HIMACHAL PRADESH POWER COROPORATION LIMITED



Draft Muck Management Plan
For
Shongtong Karchham HEP (450 MW)
Prepared by WAPCOS Ltd.

Reckongpeo Distt, Kinnaur

MUCK MANAGEMENT PLAN

1. INTRODUCTION

A large quantity of muck is expected to be generated as a result of tunneling operations, construction of roads, and construction of Barrage etc. Muck generated from excavation of any project component is required to be disposed off in a planned manner so that it takes least possible space and is not hazardous to the surroundings and environment. The muck disposal sites cause increased sedimentation in the rivers (though insignificant compared to natural sedimentation) and totally spoils the visual aesthetics of the area. It is of prime importance that these sites will have to be rehabilitated as soon as the disposal sites are full.

2. MUCK GENERATION

A large quantity of muck is expected to be generated as a result of tunneling operations, construction of roads, and construction of Barrage etc. The total quantity of muck to be generated is about 2.364 Mm³. This includes 0.234 Mm³ of open excavation and 2.13 Mm³ of underground excavation. The component wise details of muck to be generated are given in Table-1. The break-up of muck generation by open and underground excavation is given in Table-2. Details of component wise muck already generated and balance to be generated is given in Table-3. The excess muck has to be dumped at nine (9) number sites.

Table-1: Component wise detail of muck to be generated

S. No.	Component description	Quantity (Cum)
A	Barrage Complex	
	Diversion Tunnel	68,804
	Adits	61826
	Descending Chamber	405248
	Main Feeder Tunnel & Branch Feeder Tunnels	31072
	Silt Flushing Tunnel and intake tunnels	143183
	Barrage including stilling Basin & Intake structure	187844
	Sub Total	897977
B	HRT & Adits	
	Adits	130169
	HRT	840934
	Sub Total	971103
C	PHC	
	MAT adit-4 to power house bottom VT & Adit to TH	47529

S. No.	Component description	Quantity (Cum)
	crown	
	Power House cavern and bus Ducts	136749
	TH Cavern & cable tunnel	53590
	Surge Gallery , Surge Chamber , Draft Tube, Adit to DT Gate chamber & Gate Grooves / Shaft	42295
	TRT and Appurtenant works	38540
	Sub Total	318703
D	Surge Shaft, BVC& Pressure Shaft	
	Adits and Surge shaft	117428
	BVC	19819
	Pressure shaft s	27861
	Road to surge Shaft	10195
	Sub Total	175304
	Grand total (A+B+C+D)	23,633,087.0

Table-2: Bifurcation of Component wise muck to be Generated from Open and Underground excavation

S. No.	Name Of Component	Quantity of muck Excavated (m ³)		
		Open Excavation	Underground Excavation	Total
1	River Diversion works	-	68804	68804
2	Diversion Barrage	187844	467074	654918
3	Intake Sedimentation Chamber and flushing tunnels (Silt Flushing Tunnel and intake tunnels, Main Feeder Tunnel & Branch Feeder Tunnels)	-	174255	174255
4	HTR and Construction	10,810	960293	971103.
5	Surge Shaft		117428	127623
6	Pressure shaft and valve chamber	-	47680	47680
7	Power House Complex	21,000	259163	280163
8	TRT Outfall	4700	33840	38540
	Roads	10195	-	10195
	Total	2,34,549	21,28,537	23,63,086

Table-3: Details of component wise muck generated till date and balance to be generated

S. No	Component Description	Quantity of Muck (CUM)		
		Total	Generated	Balance
1	Barrage complex	8,97,977	5,42,020	3,55,957.00
2	Head Race Tunnel	9,71,103	6,98,141	2,72,962.00
3	Power House complex	3,15,613	2,71,067	44,546.00
4	Surge Shaft	1,75,304	88,045	87,259.00
	Total	23,59,997	15,99,273	7,60,724.00

3. MUCK DISPOSAL

Considering a swelling factor of 40%, the quantity of muck to be generated is 2.3 Mm³. About 0.141 Mm³ of muck shall be used as backfill, while 0.117 Mm³ of muck shall be used as a construction material/protection works. The balance, i.e. (2.3- 0.141 -0.117) 2.042 Mm³ of muck shall be disposed at designated sites. The details of muck disposal sites and component wise muck disposal is given in Table-4. The muck disposal sites are shown in Figure-1.

Table-4: Component-wise details of Muck utilized

S. No.	Description of items	Backfill & wire crates	Construction material (Aggregate & sand)
1	Barrage Area Filling & Wire crates	103120.00	60000.00
2	HRT (shotcrete)		10422.00
3	Power House Complex		2864.00
4	Surge Shaft, BVC etc.		19728.00
5	Aggregate and sand under R & R scheme		10000.00
6	Protection works in Dumping area	38060.0	14853.00
	Total	1,41,180.00	1,17,867

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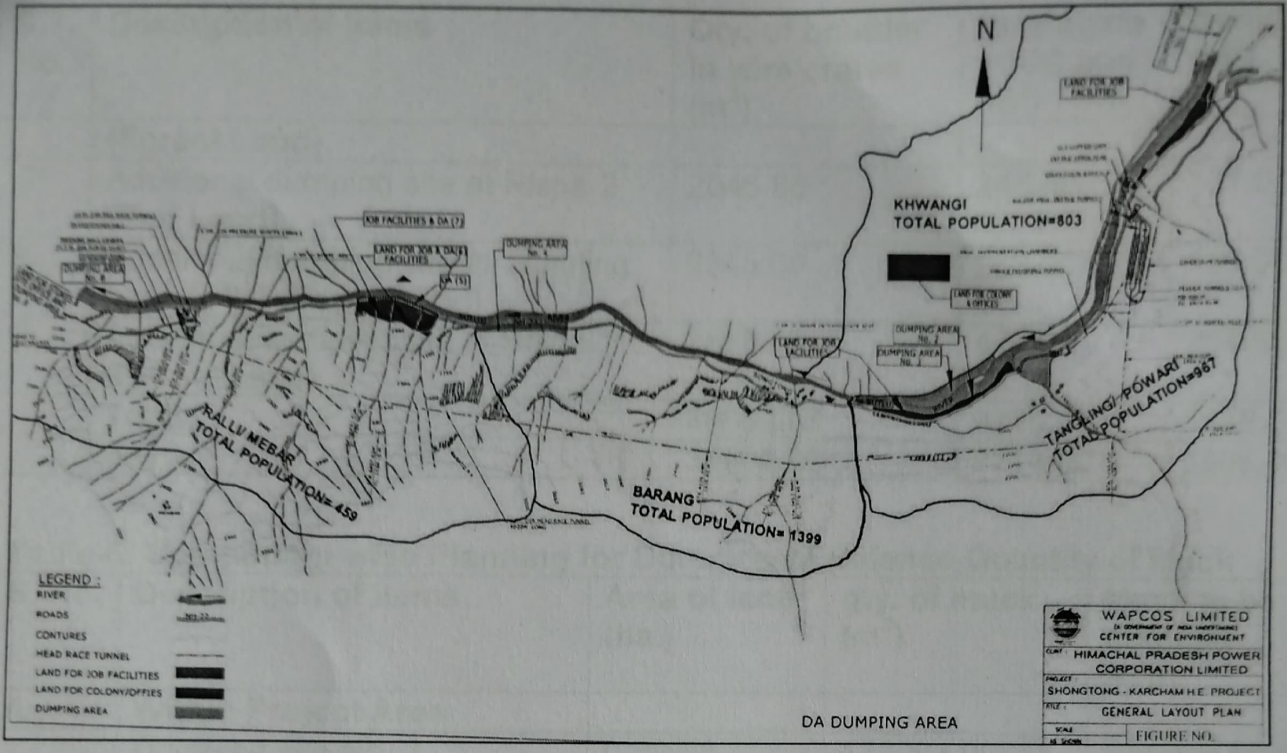


Figure-1 Location of Muck Dumping Sites

Normally, muck is disposed in low-lying areas or depressions. Trees, if any, are cut before muck disposal, however, shrubs, grass or other types of undergrowth in the muck disposal at sites perish. The total area earmarked for muck disposal is 10.0944 ha.

The detail of muck dumping sites along with much utilization are given in Table-5. The component wise planning for disposal of balance quantity of muck is given in Table-6.

Table-5: Details of Muck Dumping sites along with utilization of muck

S. No.	Description of items	Qty. of boulder in wire crates (m ³)	Aggregate 10-20 mm (m ³)	Sand (m ³)
1	Dumping site No. 3	6078.13	2214.71	1183.83
2	Dumping site No. 4	10226.58	4777.34	2522.87
3	Additional dumping site adjoining to dumping site No- 3 (Forest land)	5664.06	643.00	341.00
4	Additional dumping site near Adit No. 2 (Forest land)	2683.59	250.00	132.00
5	Additional dumping site at Thopan(Pvt. Land)	2250.00	582.00	307.00
6	Additional dumping site at Rispa-2	3867.19	332.78	172.13

S. No.	Description of items	Qty. of boulder in wire crates (m ³)	Aggregate 10-20 mm (m ³)	Sand (m ³)
	(Forest Land)			
7	Additional dumping site at Rispa-2 (Pvt. Land)	2046.88	245.60	127.04
8	Additional dumping site at Tangling near Adit-1 (Forest Land)	2345.00	256.00	135.00
9	Additional dumping site at Rispa-1 (Private Land).	2898.44	414.99	214.65
	Total	38059.87	9716.42	5135.52
	Say	38060.00	9716.00	5508.00

Table-6: Component-wise Planning for Dumping of Balance Quantity of Muck

S. No.	Description of items	Area of land (ha.)	qty. of muck (m ³)	Muck to be dumped from
A	Within Project Area			
1	Dumping site No. 3	0-89-28	183063.00	Barrage Head Race Tunnel Power House Complex & Surge Shaft
2	Army reclamation site No. 4	2-45-84	20,4545	...do....
3	Dumping site adjoining to dumping site No- 3 (Forest land)	1-44-70	83,423	...do....
4	Dumping site near adit No. 2 (Forest land)	0-29-60	45,271	...do....
5	Dumping site at Tangling near Adit-1 (Forest Land)	03-39-18	18,500	Barrage Head Race Tunnel (Adit-1)
6	Pvt. Land near DS -3.	1-10-97	1,00,236.71	-do-
	Sub Total	09-59-57	6,35,038.71	
B	Out of Project Area			
1	Dumping site at Thopan (Pvt. Land) -9 Km	0-54-62	(72074-27396) = 44,678	...do....
2	Additional Dumping site at Rispa-1 (Pvt. Land) - 19 Km.	7-32-12	(443137-36409.96) = 1,06,727.04	Barrage Head Race Tunnel
3 (i)	Dumping site at Rispa-2 (Pvt. Land) - 19 Km.	0-25-60	1,21,660	...do....
(ii)	Dumping site at Rispa-2 (Forest Land) - 19 Km.	5- 22-25	2,04,482	...do....

S. No.	Description of items	Area of land (ha.)	qty. of muck (m ³)	Muck to be dumped from
	Sub Total	13-34-59	4,77,547	
	Grand Total A + B	21-83-19	11,12,585	

Muck generated from excavation of any project component is required to be disposed in a planned manner so that it takes a least possible space and is not hazardous to the environment. In the hilly area, dumping is done after creating terraces thus usable terraces are developed. The overall idea is to enhance/maintain aesthetic view in the surrounding area of the project in post-construction period and avoid contamination of any land or water resource due to muck disposal. It is always preferable to dump the mucks within the project area. The Dumping site near DS-3 is not usable as the Forest Clearance is yet to be received. The additional mucks to be generated are proposed to be transported outside of project area and dumped identified dumping sites. The contractor shall charge for carrying of muck @Rs.99/m³/km. The details of muck handling charges are given in Table-7 below:

Table-7: Details of Muck Handling charges

S. No.	Name of the disposal site	Quantity (m ³)	Amount (Rs. lakh)
1	Dumping site at Thopan (Pvt. Land) -9 Km	44,678	398.0
2	Additional Dumping site at Rispa-1 (Pvt. Land) - 19 Km.	1,06,727	2007.5
3 (i)	Dumping site at Rispa-2 (Pvt. Land) - 19 Km.	1,21,660	2288.4
(ii)	Dumping site at Rispa-2 (Forest Land) - 19 Km.	2,04,482	3846.3
	Total		8540.3

There are two muck dumping sites no.1 and 6, which are un-utilized as on date.

4. MUCK MANAGEMENT PLAN

Suitable retaining walls shall be constructed to develop terraces so as to support the muck on vertical slope and for optimum space utilization. Loose muck would be compacted layer wise. The muck disposal area will be developed in a series of terraces of boulder crate wall and masonry wall to protect the area/muck from flood water during

monsoons. In-between the terraces, catch water drain will be provided.

The terraces of the muck disposal area will be ultimately covered with fertile soil and suitable plants will be planted adopting suitable bio-technological measures. The basic aim and objectives of the muck management plan are to:

- Protect these areas from soil erosion
- Develop these areas by afforestation
- Develop them into parks, gardens etc.
- Utilize the maximum quantity of muck for development of infrastructure of the project
- Develop these areas in harmony with the landscape of the project area.

Various activities proposed as a part of the management plan are given as below:

- Land acquisition for muck dumping sites
- Civil works (construction of retaining walls, boulder crate walls etc.)
- Dumping of muck
- Levelling of the area, terracing and implementation of various engineering control measures e.g., boulder, crate wall, masonry wall, catch water drain.
- Spreading of soil
- Application of fertilizers to facilitate vegetation growth over disposal sites.

For stabilization of muck dumping areas following measures of engineering and biological measures have been proposed

Engineering Measures

- Wire crate wall
- Boulder crate wall
- R.C.C
- Catch water Drain

Biological Measures

- Plantation of suitable tree species and soil binding species
- Plantation of ornamental plants
- Barbed wire fencing

Muck generally lacks nutrients and therefore, are difficult to re-vegetate. However, if no attempts to vegetate the slopes are made, the muck could slide lower down during rain and may eventually wash off the check dams also. Since, top soils are not available in

large quantities in Himalayas, it may not be possible to apply a thin layer of soil over the muck. Bio-fertilizer technique developed by National Environmental Engineering Research Institute (NEERI) can be adopted in the proposed project. NHPC has successfully used this technique in Uri hydroelectric project. Similar approach can be utilized in the proposed project as well. In this process, the unused excavated material is piled and stacked with proper slopes at the designated muck disposal sites. The slopes are broken up by creating benches across them. This is done to provide stability to the slopes and also to provide ample space for planting of trees that would further help in holding and consolidating biotechnological approach. The traditional methods of afforestation of these areas would be supplemented with the use of fungus, i.e. Vesicular Arbuscular Mycorrhizae (VAM) and nitrogen fixing bacteria that form partnership with plant roots. These grow on plant roots and provide water and nutrition especially phosphorus to plants at faster rate. The seeding of plants would be inoculated with VAM and nitrogen fixing bacteria before planting. It has been found that plants inoculated with bio-fertilizers grow at faster rate especially in the medium where the soil/rock is devoid of nutrients.

The afforestation with suitable plant species shall be done. About 1000-1200 trees/ha shall be planted. Major species recommended for plantation are listed in Table-8.

Table-8: Species recommended for plantation over muck disposal site

Botanical Name	Local Name
Trees	
<i>Populus ciliate</i>	Popular
<i>Pinus roxburghii</i>	Chir
<i>Cedrus deodara</i>	Deodar
<i>Salix acutifolia</i>	Bhains
Shrubs	
<i>Artemisia nilgarica</i>	Kunja
<i>Berberis aristata</i>	Kingor
<i>Berberis lyceum</i>	Kingor
<i>Rosa Moschata</i>	Ban gulab

5. BUDGET

The total expenditure required for stabilization of muck disposal sites for 402 MW has been estimated to be in the order of Rs. 1650.3 lakh, say Rs. 16.50 crore whereas the

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total expenditure required for 450 MW has been estimated to the tune of Rs.94.92 crore including haulage for transportation of muck for the balance works. The details for the revised Muck Management Plan for 450 MW are given in Table-9.

Table-9: Break-up of cost for Muck Management Plan

S. No.	Items	Cost (Rs. lakh)
1.	Construction of check dams along river banks @ Rs. 250 lakh/ km for a stretch of 3.0 km.	750
2.	PCC cladding @ Rs. 1689/m ² for 16,000 m ²	32.0
3.	Preparation of muck disposal site@ Rs.5 lakh/ha for 10.09 ha	50.5
4.	Provision of 15 cm soil layer over an area 10.09 ha @ Rs. 4 lakh/ha	41.0
5.	Development of vegetation (10 ha) @5 lakh/ha	50.0
6.	Barbed wire fencing @30000/ha (10ha)	3.0
7.	Watch and ward 5 no. @ Rs. 7000 p.m.	21.0
8.	Maintenance of vegetation (Table-10 to 17)	3.93
9.	Muck transportation charges for dumping muck outside the project area	8540.3
	Total	9491.73

Table-10: Cost of Afforestation over muck disposal sites

S.No.	Particular	Area (ha)	Unit Rate (Rs/ha)	Amount (Rs.)
1.	1 st year Maintenance (Refer Table-11)	10.0	7010	70100
2.	2 nd year Maintenance (Refer Table-12)	10.0	6035	60350
3.	3 rd year Maintenance (Refer Table-13)	10.0	5020	50200
5.	4 th year Maintenance (Refer Table-14)	10.0	5020	50200
6.	5 th year Maintenance (Refer Table-15)	10.0	3265	32650
7.	6 th year Maintenance (Refer Table-16)	10.0	2725	27250
8.	7 th year Maintenance (Refer Table-17)	10.0	2725	27250
			Total	318000
9.	Contingencies (5% of Total Cost)			15900
	Total			333900
10.	Departmental Charges @ 17.5%			58432
	Grand Total			392332

Table-11: Maintenance cost for 1st year (25% mortality)

S. No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
1.	Re-digging of pits 45x45x45 cms	110	267.336	per hundred	294.07
2.	Re-digging of pits 30x30x30 cms	165	133.632	per hundred	147.00
3.	Filling of pits 45x45x45 cms	110	153.168	per hundred	168.48
4.	Filling of pits 30x30x30 cms	165	106.872	per hundred	117.56
5.	Planting of polythene bags plants	175	122.22	per hundred	134.44
6.	Planting of Naked root plants	100	103.044	per hundred	113.35
7.	Carriage of polythene bags plants over a distance of 2 km up hills	175	122.136	per hundred	134.35
8.	Carriage of Naked root plants over a distance of 2 km	100	19.74	per hundred	21.71
9.	Nursery cost of plants	275	5.16	per plants	1419.00
10.	Repair of fence	180	0.9	per Rmt	162.00
11.	Repair of inspection path			L/S	387.60
12.	Repair of soil and moisture conservation works			L/S	546.00
Total:					3645.56
Added 42.85% on account of increase on wage rate					1560.30
Total:-					5205.86
Add Tribal increase - 25%					1301.47
Grand Total:-					6507.33
Or Say:-					6510.00

Table-12: Maintenance cost for 2nd year (25% mortality)

S. No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
1.	Re-digging of pits 45x45x45 cms	88	267.336	per hundred	235.26
2.	Re-digging of pits 30x30x30 cms	132	133.632	per hundred	176.39
3.	Filling of pits 45x45x45 cms	88	153.168	per hundred	134.79
4.	Filling of pits 30x30x30 cms	132	106.872	per hundred	141.07
5.	Planting of polythene bags plants	140	122.22	per	171.11

S. No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
				hundred	
6.	Planting of Naked root plants	100	103.044	per hundred	103.04
7.	Carriage of polythene bags plants over a distance of 2 km up hills	140	122.136	per hundred	170.99
8.	Carriage of Naked root plants over a distance of 2 km	80	19.74	per hundred	15.79
9.	Nursery cost of plants	220	5.16	per plants	1135.20
10.	Repair of fence	180	0.9	per Rmt	162.00
11.	Repair of inspection path			L/S	387.60
12.	Repair of soil and moisture conservation works			L/S	546.00
				Total:	3379.24
					1446.32
	Added 42.85% on account of increase on wage rate			Total:-	4825.56
					1206.39
	Add Tribal increase - 25%				6031.95
				Grand Total:-	6035.00
				Or Say:-	6035.00

Table-13: Maintenance cost for 3rd year (25% mortality)

S.No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
1.	Re-digging of pits 45x45x45 cms	66	267.336	per hundred	176.44
2.	Re-digging of pits 30x30x30 cms	99	133.632	per hundred	132.30
3.	Filling of pits 45x45x45 cms	66	153.168	per hundred	101.09
4.	Filling of pits 30x30x30 cms	99	106.872	per hundred	105.80
5.	Planting of polythene bags plants	105	122.22	per hundred	128.33
6.	Planting of Naked root plants	60	103.044	per hundred	61.83
7.	Carriage of polythene bags plants over a distance of 2 km up hills	105	122.136	per hundred	128.24
8.	Carriage of Naked root plants over a distance of 2 km	60	19.74	per hundred	11.84
9.	Nursery cost of plants	165	5.16	per plants	851.40

13/18

S.No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
10.	Repair of fence	200	0.9	per Rmt	180.00
11.	Repair of inspection path			L/S	387.60
12.	Repair of soil and moisture conservation works			L/S	546.00
Total:					2810.88
Added 42.85% on account of increase on wage rate					1203.05
Total:-					4013.93
Add Tribal increase - 25%					1003.48
Grand Total:-					5017.41
Or Say:-					5020.00

Table-14: Maintenance cost for 4th year (25% mortality)

S.No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
1.	Re-digging of pits 45x45x45 cms	66	267.336	per hundred	176.44
2.	Re-digging of pits 30x30x30 cms	99	133.632	per hundred	132.30
3.	Filling of pits 45x45x45 cms	66	153.168	per hundred	101.09
4.	Filling of pits 30x30x30 cms	99	106.872	per hundred	105.80
5.	Planting of polythene bags plants	105	122.22	per hundred	128.33
6.	Planting of Naked root plants	60	103.044	per hundred	61.83
7.	Carriage of polythene bags plants over a distance of 2 km up hills	105	122.136	per hundred	128.24
8.	Carriage of Naked root plants over a distance of 2 km	60	19.74	per hundred	11.84
9.	Nursery cost of plants	165	5.16	per plants	851.40
10.	Repair of fence	200	0.9	per Rmt	180.00
11.	Repair of inspection path			L/S	387.60
12.	Repair of soil and moisture conservation works			L/S	546.00
Total:					2810.88
Added 42.85% on account of increase on wage rate					1203.05
Total:-					4013.93
Add Tribal increase - 25%					1003.48

S.No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
Grand Total:-					5017.41
Or Say:-					5020.00

Table-15: Maintenance cost for 5th year (25% mortality)

S. No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
1.	Re-digging of pits 45x45x45 cms	44	267.336	per hundred	117.63
2.	Re-digging of pits 30x30x30 cms	66	133.632	per hundred	88.20
3.	Filling of pits 45x45x45 cms	44	153.168	per hundred	67.39
4.	Filling of pits 30x30x30 cms	66	106.872	per hundred	70.54
5.	Planting of polythene bags plants	70	122.22	per hundred	85.55
6.	Planting of Naked root plants	40	103.044	per hundred	41.22
7.	Carriage of polythene bags plants over a distance of 2 km up hills	70	122.136	per hundred	85.50
8.	Carriage of Naked root plants over a distance of 2 km	40	19.74	per hundred	7.90
9.	Nursery cost of plants	110	5.16	per plants	567.60
10.	Repair of fence	200	0.9	per Rmt	180.00
11.	Repair of inspection path			L/S	258.00
12.	Repair of soil and moisture conservation works			L/S	258.00
Total:					1827.52
Added 42.85% on account of increase on wage rate					782.18
Total:-					2609.69
Add Tribal increase - 25%					652.42
Grand Total:-					3262.12
Or Say:-					3265.00

Table-16: Maintenance cost for 6th year (25% mortality)

No.	Activity	Quantity	Unit Rate (Rs.)	Unit	Total Cost (Rs.)
1.	Re-digging of pits 45x45x45 cms	44	267.336	per hundred	117.63
2.	Re-digging of pits 30x30x30 cms	66	133.632	per hundred	88.20
3.	Filling of pits 45x45x45 cms	44	153.168	per hundred	67.39
4.	Filling of pits 30x30x30 cms	66	106.872	per hundred	70.54
5.	Planting of polythene bags plants	70	122.22	per hundred	85.55
6.	Planting of Naked root plants	40	103.044	per hundred	41.22
7.	Carriage of polythene bags plants over a distance of 2 km up hills	70	122.136	per hundred	85.50
8.	Carriage of Naked root plants over a distance of 2 km	40	19.74	per hundred	7.90
9.	Nursery cost of plants	110	5.16	per plants	567.60
10.	Repair of fence	150	0.9	per Rmt	135.00
11.	Repair of inspection path			L/S	130.00
12.	Repair of soil and moisture conservation works			L/S	130.00
Total:					1526.52
Added 42.85% on account of increase on wage rate					653.35
Total:-					2179.87
Add Tribal increase - 25%					544.97
Grand Total:-					2724.83
Or Say:-					2725.00

Table-10: The details of Muck Generation and dumping as on date

S. No.	Description	Quantity (m ³)
1	Total Quantity of muck to be generated	23,63087.00
2	Quantity of muck generated and dumped up to 31.01.2022	16,46,459.00
3	Balance to be excavated /generated	7,16,628.00
4	With swelling factor @ 40%	10,03,279.20
5	Consumption of muck (Utilization/ recycling)	2,59,047.00
6	Balance to be dumped	7,44,232.20

Table-11: Expenditure Details on Muck Management Plan

Description	Amount (Rs. lakh)
Total Expenditure on protection works provided at Muck disposal sites till date	1634.71
Total Expenditure incurred for haulage of muck beyond project area (i/c applicable GST)	14030.18
Balance expenditure to be done on account of Muck Disposal	9487.8
Total	25152.69

7. RESPONSIBILITY

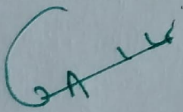
The Muck Management Plan, specifies mitigation measures to be covered as a part of Annual and periodic activity plans for project implementation. An abstract of muck management plan for the project has been prepared and presented in Table-12

Table-12: Abstract of Muck Management Plan (MMP)

S. No.	Impact	Mitigation Measures	Responsibility
1	Muck generation due to excavation activities	Stabilization of Muck disposal sites	Contractor/ Project Proponent
2	Disposal of Muck at various Muck dumping sites	Leveling of sites before dumping	Contractor/ Consultant
		Catch water drain	Contractor/ Consultant
		Plantation on the top soil after levelling of site and laying of soil cover	Consultant
3	Spillage of Mucks	Construction of retaining walls	Contractor
4	Fugitive emission due to	Regular sprinkling of water	Contractor

10/18

S. No.	Impact	Mitigation Measures	Responsibility
	increased movement near dumping sites	Vehicular	
	Maintenance after Plantation / Biological treatment of the designated dumping sites	Watering, guarding of saplings, replacement of dead/ dried plants	Project Proponent


Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P


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

UNDERTAKING FOR MUCK MANAGEMENT PLAN

I, General Manager, Shongtong Karchham HEP, HPPCL Reckong Peo Distt. Kinnaur H.P. do hereby submit that the Final Muck Management Plan of the proposed site has been attached and same has also been sent for approval to H.P. State Pollution Control Board (HPSCB). The approved Muck Management Plan will be submitted before Stage-II approval.

K. D. D. D. D.
General Manager,
Shongtong Karchham HEP
HPPCL, Reckong-Peo,
Distt. Kinnaur (HP).

C/S
[Signature]
Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P

Annexure - D

PROFORMA

1 State/District/Forest Division to which the proposal relates	HP/Kinnaur/Kinnaur Forest Division
2 Name of User Agency, nature of proposal	H.P. POWER CORPORATION LTD.
3 Extent of forest land involved	
4 Whether original or extension	
5 If extension of lease, pl. clarify if proposal involves additional forest area and if so specify	
6 Date of 1st stage clearance	
7 Amount realized:(In Rs.)	
8 Compensatory Afforestation	
9 Additional CA	
10 Total CA	
11 Catchment Area Treatment (CAT) Plan	₹ 6044,00,000/=
12 Wildlife Management Plan	
13 Additional charges for diversion of area falling under Notified/protected areas	
14 Net Present Value	
15 Any other charges/levies (pl. specify)	
	Total:- ₹ 6044,00,000/=
16 Details of Bank Draft(Bank, Draft. No., Date & Amount) Head-wise against items indicated in paragraph 7 above.	
17 Whether deposited by RTGS, if so, the particulars & date of remittance.	UTR No.: UCBAH12275077542 dated 1-10-2012.
18 Bank (Corporation Bank, Lodhi Complex/Union Bank of India Sundernagar) in which deposited with date of deposition.	CORPORATION BANK, LODHI COMPLEX on dated 1-10-2012.
19 Any other remarks	

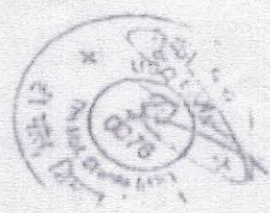
UPI BAL
REPORT OF ATSS MESSAGES SENT MAIL

DL D : 0073
 FROM REC : SUTLA MAIL
 FROM DATE : 27-09-2012
 TO DATE : 01-10-2012
 USER ID : EMO00716
 SYS DATE : 01-10-2012
 TIME : 10:19:53
 STATUS : A

S	TRAN DATE	TRAN REF NO	UTR	TRAN AMT	STAT	DEBIT/ CREDIT A/C (TR)	DEBIT/CREDIT LINE	ISD/RES USDC	ICC BRND	SEE TO REC DRT
1	01-10-2012	5A0111797Z	UD0411277507TS02	80440000.00	S	001801100084431C A F KUNALCHAL FRANCH	DEBIT			
2	01-10-2012	5A0111795Z	UD0411277507TS05	37733.00	S	001802100007861STUDIA HOLDING CORPORATION OF I	DEBIT			

TOTAL AMOUNT : 80,47,73,330.00
 Status : 'R' - Ready, 'T' - Transmitted, 'P' - Processed, 'U' - Unprocessed, 'S' - Settled, 'F' - Failed.
 TX : No Active Operating Session for Receipt at RLI.

Handwritten Signature
 GENERAL MANAGER
 SHRIJAYAN
 HPP-00116
 DOWNTOWN, CHENNAI



Annexure - D

AGENCY COPY

यूनियन बैंक Union Bank of India
317667 Andhra

NEFT / RTGS CHALLAN for CAMPA Funds
Date : 12-07-2023

Agency Name.	SHONGTONG KARCHHAM HYDRO ELECTRIC PROJECT, HPPCL
Application No.	5685100616
MoEF/SG File No.	NA
Location.	HIMACHAL PRADESH
Address.	Shongtong Karchham HEP, HPPCL, Reckong peo, Distt. KinnaurKinnaur
Amount(in Rs)	97557500/-

Amount in Words :Nine Crore Seventy-Five Lakh Fifty-Seven Thousand Five Hundred Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	HIMACHAL PRADESH CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150705685100616 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India FCS Centre,21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027

* This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

BANK COPY

यूनियन बैंक Union Bank of India
317667 Andhra

NEFT / RTGS CHALLAN for CAMPA Funds
Date : 12-07-2023

Agency Name.	SHONGTONG KARCHHAM HYDRO ELECTRIC PROJECT, HPPCL
Application No.	5685100616
MoEF/SG File No.	NA
Location.	HIMACHAL PRADESH
Address:	Shongtong Karchham HEP, HPPCL, Reckong peo, Distt. Kinnaur Kinnaur
Amount(in Rs)	97557500/-

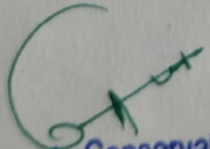
Amount in Words :Nine Crore Seventy-Five Lakh Fifty-Seven Thousand Five Hundred Rupees Only

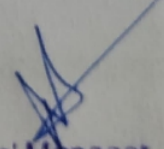
NEFT/RTGS to be made as per following details;

Beneficiary Name:	HIMACHAL PRADESH CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150705685100616 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027

* This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Note:After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: fcsblr@unionbankofindia.bank , epurse@unionbankofindia.bank, ubin0903710@unionbankofindia.bank


Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P


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

Progress report on activities implemented under "Regeneration of Equal amount of degraded forest" under Shongtong-Karchham HEP. during the year 2016-17.

Sr.No.	Name of Activity.	Name of Beat.	Name of Area.	Phy. Ach.	Financial Ach.
1.	New plantation.	Lippa.	C-216	10 ha.	625000
2.	New plantation.	Pangi.	C-234	5 ha.	312500
3.	New plantation.	Rogi.	C-245	10 ha.	625000
4.	New plantation.	Rarang.	UF-Thopan	10 ha.	625000
5.	New plantation.	Moorang.	UF-Shurting.	10 ha.	625000
6.	New plantation.	Leo.	UF-Chulling.	5 ha.	312500
7.	New plantation.	Kalpa.	C-239	10 ha.	625000
8.	Total.			60 ha.	37,50,000
9.	Cost of Plants in Nurseries.			66000 No.	14,85,000
10.	Cost of material i.e. B/wire etc.				Rs. 8,16,300/-
	Grand Total item No. 8, 9, 10				Rs. 60,51,300/-

fl:

Divisional Forest Officer,
Kinnaur Forest Division,
Reckong Peo.

Ar
Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P

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

Progress report on activities implemented under "Regeneration of Equal amount of degraded forest" under Shongtong-Karchham HEP. during the year 2017-18.

Sr.No.	Name of Activity.	Name of Beat.	Name of Area.	Phy. Ach.	Financial Ach.
1.	New plantation.	Rarang.	UF-Rarang.	15 ha.	937500
2.	New plantation.	Pangi.	C-237	5 ha.	312500
3.	New plantation.	Rogi.	C-244	10 ha.	625000
4.	New plantation.	Rarang.	UF-Khadra.	10 ha.	625000
5.	New plantation.	Moorang.	C-197	10 ha.	625000
6.	New plantation.	Skibba.	C-187	5 ha.	312500
7.	New plantation.	Kalpa.	C-240	10 ha.	625000
8.	Total.			65 ha.	40,62,500
9.	Cost of Plants in Nurseries.			71500 No.	16,08,750
10.	Maint. Of old plantation- 2016-17			60 ha.	Rs. 5,28,000
11.	Cost of material.				Rs. 14,23,650
	Grand Total item No. 8,9,10,& 11.				Rs. 76,22,900/-

[Signature]
 Divisional Forest Officer,
 Kinnaur Forest Division,
 Reckong Peo.

[Signature]
 Deputy Conservator of Forests,
 Kinnaur Forest Division at R/Peo H.P

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

No. UC.(S-K HEP)/ 8845
H.P. Forest Department.

Dated, R/Peo, the 31.3.2018

From:

Divisional Forest Officer,
Kinnaur Forest Division.

To:

The General Manager,
Shongtong-Karchham HEP. at Reckong Peo.

Subject: Shongtong Karchham HEP- Progress report on activities implemented under "Regeneration of Equal amount of degraded forest" thereof.

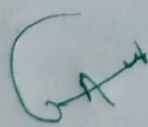
Sir,

Please refer to your letter No. HPPCL/GM-STKHEP/Forest-X/2018- 5849-51 dated 01.12.2018, on the subject cited above.

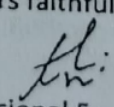
As desired the final progress report alongwith "Utilization certificate on Form GFR-19A" on activities implemented under "Regeneration of Equal amount of degraded forest" for the year as mentioned below is sent herewith for favour of information and necessary action please.

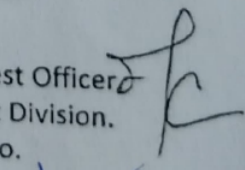
Year.	Amount Utilized during the year.	Remarks.
2016-17	Rs. 60,51,300	Progress report attached.
2017-18	Rs. 76,22,900	Progress report attached.
Total.	Rs. 1,36,74, 200	Amount of Rs. 1,36,73,737/- has been fully utilized as per progress report for the year 2016-17 & 2017-18. The Utilization certificated is attached.

Encl :- As above.


Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P

Yours faithfully,


Divisional Forest Officer,
Kinnaur Forest Division.
At Reckong Peo.


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

FORM GFR 19-A

[See Government of India's Decision (1) below Rule 150]

Form of Utilization Certificate

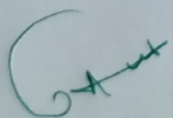
Sr. No.	Letter No. & date of sanction scheme	Total Amount sanctioned
1.	HPPCL/GM-STKHEP/Forest-X/2011 Demand Draft No. 630174 dated 21.4.2011	1,36,73,737/-
	Total	1,36,73,737/-

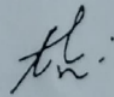
Certified that **Rs. 1,36,73,737-** (Rs. One Crore, thirty six lac, seventy three thousand seven hundred & thirty seven) only grants-in-aid sanctioned under head "Shongtong-Karchham HEP" fund during the financial year 2011-12 in favour of Divisional Forest Officer, Kinnaur at Reckong Peo under this Ministry/Department letter No. given in the margin and Rs. _____ Nil _____ on account of unspent balance of the previous year, an amount of **Rs. 1,36,73,737/-** only has been utilized for the purpose of "Regeneration of Equal amount of degraded forest" (As per progress report enclosed) for which it was sanctioned andnil..... amount is lying balance for utilization.

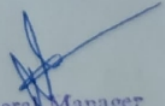
2. Certified that I have satisfied myself, that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised that following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised:-

1. 100% by concerned beat Guard, Block Officer & Range Forest Officer.
2. 50% by Assistant Conservator of Forests.
3. 25% and randomly by DFO Kinnaur


Deputy Conservator of Forests,
Kinnaur Forest Division at R/Peo H.P


Divisional Forest Officer,
Kinnaur Forest Division,
Reckong Peo.


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