Checklist No 28

DIVERSION OF 3.7463 HA.OF FORESTLAND FOR CONSTRUCTION OF GHATOR TOP SMALLHYDRO PROJECT 4.98MW IN TEHSIL BHARMOUR, DISTRICT CHAMBA (H.P)
FILE NO .. : **FP/HP/HYD/156603/2022**
DATE OF PROOSAL : 9/6/2022

RECLAMATION PLAN
GHATOR TOP HYDRO PROJECT(4.98MW) DISTRICT CHAMBA (H.P)

Dumping site for disposal of muck have been identify with due consideration of its distance and suitability of the area and topography point of view.
Accordingly the following sites have been identified

Sr.no	Description	Mohal	Khasra No.	Area in Sqm
1	Dumping site –I	Urei	1673/2	146.00
2	Dumping site –II	Urei	1673/3	99.00
3	Dumping site--III	Urei	1908/2	113.00
4	Dumping site-IV	Dhar Panhetri	2/3	894.00
5	Dumping site-V	Dhar Jhariyun	11/2	1190.00
6	Dumping Site –VI	Dhar Jhariyun	11/6	894.00

Rehabilitation proposal
Since there is no displacement of any population due to the construction of the road there will be no rehabilitation problem

Afforestation
Compensatory Afforestation shall be carried out by the forest department for compensation shall be paid by the user agency. Area to be taken for Afforestation shall be twice the forest land required for the construction of project.

Retaining Walls
RR Masonry/GI wire crate filled with boulders/ stones reclaimed fro, excavation of road shall be used for construction of retaining walls for retaining the surplus excavated earth /muck as per standard design of HPPWD with due consideration to site condition.

Use of muck /debris
Most of the excavation muck/debris obtained from the project components shall be used for manufacture of aggregates for construction work, filling in wire crates, stone masonry work breast wall, switchyard, etc. the remaining muck/debris will be neatly stacked in dumping areas identified for the purpose.

Plantation
The dumping area and various sites be properly leveled after the completion of the project. The area will be landscaped the plantation carried out so to merge with the nature surroundings.

Location of dumping	Area in Sqm.	Slop of dumping place in degree	Qty. of muck generated (CU.MTR)	Qty. with Swell Factor(CU.MTR) @45%	Qty. muck to used(CUM.Mtr)	Qty.of muck deposited (Cu.mtr)	Height of dumping expected in mtr.
Dumping site –I	146.00	15	985	1428.25	571.30	270	2.45
Dumping site –II	99.00	15				235	2.45
Dumping site—III	113.00	15				352	2.45
Dumping site—IV	894.00	14	2264	3282.80	1147.91	2134.8	2.40
Dumping site—V	1190.00	14	3400	4930	1972	2958	2.50
Dumping site—VI	894.00	14	2760.40	4002.58	1601.03	2401.54	2.70
TOTAL	**3336**		**9409.40**	**13643.63**	**5292.24**	**8350.29**	**2.49(Standard)**

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Sr.no	Description	Mohal	Khasra No.	Area in Sqm	Height	Capacity of dumping site Qty.in cu. mtr
1	Dumping site –I	Urei	1673/2	146.00	2.45	357.70
2	Dumping site –II	Urei	1673/3	99.00	2.45	242.55
3	Dumping site--III	Urei	1908/2	113.00	2.45	276.85
4	Dumping site –IV	Dhar Panhetri	2/3	894.00	2.40	2145.60
5	Dumping site - V	Dhar Jhariyun	11/2	1190.00	2.50	2975
6	Dumping site - VI	Dhar Jhariyun	11/6	894.00	2.70	2413.80

Place : Bharmour
Dated : 28/5/22

For Chamba Hydro Ventures

Chamba Hydro Ventures
Authorised Signatory

Authorised Signatory

MUCK DUMPING PLAN FOR GHATOR TOP SMALL HYDRO PROJECT 4.98 MW

Sr. No.	Name of Component From Where Muck is To Be Produced	Actual Size Of Component In sqm.	Total Qty. Of Muck is to be Produced (in cum)	Factor of Increase in volume after excavation (45%)	Total Qty. Of Muck is to be Dumped on The Basis Of Increased Qty (in cum)	Qty.Of Muck TO Be utilised (in cum)	Total Qty. Of Muck Remaining After Utilisation	Nme of Dumping place	Size of Dumping Sites	Area of Dumping place in sqm	Remaining Height of Muck Dumped	Capacity of Muck To be Dumped	Quantity to be Dumped	Remarks
1	Intake/Trench Weir	30*19.83=595	595	595*45/100=267.75	862.75	301.96	560.78	Dumping Site-IV	40*22.35	894	2.4	2145.6	560.78	Out of total Muck Generated About 35% Shall Be Used In Construction of Crates, Agreegates, Road R/Walls, B/Walls, . Rest Of The Muck Including Swell Factor (45%) shall be Dumped in muck Dumping sites IV
2	Feeder Chennel	18*2.50=45	45	45*45/100=20.25	65.25	22.83	42.41						42.41	
3	Silt Flushing	16*2=32	30	30*45/100=13.50	43.5	15.22	28.27						28.27	
3	D-tank	26x11.42=297	594	594*45/100=267.30	861.3	301.45	559.84						559.84	
4	HRT INLET	250*2.50=625	1000	1000*45/100=450	1450	507.5	942.5						942.5	
5	HRT OUTLET	491.60*2.50=1229	1966.4	1966.40*45/100=884.88	2851.28	1140.51	1710.76	Dumping Site-VI	40*22.35	894	2.7	2413.8	1710.76	Out of total Muck Generated About 40% Shall Be Used In Construction of Crates, Agreegates, Road R/Walls, B/Walls, Filling, . Rest Of The Muck Including Swell Factor (45%) shall be Dumped in muck Dumping sites VI
6	Shurge Tank	20x19.85=397	794	794*45/100=357.30	1151.3	460.52	690.78						690.78	
7	Penstock	1398*2.84=3970	425	425*45/100=191.25	616.25	246.5	369.75	Dumping Site-V	40*29.75	1190	2.5	2975	369.75	Out of total Muck Generated About 40% Shall Be Used In Construction of Crates, Agreegates, Protection works i.e R/Walls, B/Walls, Filling, . Rest Of The Muck Including Swell Factor (45%) shall be Dumped in muck Dumping sites V
8	Power House	60*39.65=2379	2025	2025*45/100=911.25	2936.25	1174.5	1761.75						1761.75	
9	Switch Yard	30*19.83=595	950	950*45/100=427.50	1377.5	551	826.5						826.5	
10	Road	1231.50*4=4926	985	985*45/100=443.25	1428.25	571.3	856.95	Dumping Site-III	11.30*10	113	2.45	276.85	270	Out of total Muck Generated About 40% Shall Be Used In Construction of Crates, Agreegates, Protection works i.e R/Walls, B/Walls, Filling, . Rest Of The Muck Including Swell Factor (45%) shall be Dumped in muck Dumping sites I to III
								Dumping Site-II	11*9	99	2.45	242.55	235	
								Dumping Site-I	14.60*10	146	2.45	357.7	352	
	Total		9409.4		13643.63	5293.29	8350.29			3336	2.49	8411.9	8350.29	

Chamba Hydro Ventures
Authorised Signatory

DIVERSION OF 3.7463 HA.OF FORESTLAND FOR CONSTRUCTION OF GHATOR TOP SMALLHYDRO PROJECT 4.98MW IN TEHSIL BHARMOUR, DISTRICT CHAMBA (H.P)
FILE NO .. : **FP/HP/HYD/156608/2022**
DATE OF PROOSAL : 9/6/2022

COST ESTIMATION OF DUMPING SITES & PLANTATION GHATOR TOP (4.98MW) SHEP

SR. NO.	DESCRIPTION	UNIT	QTY.	RATE (IN Rs.)	AMOUNT (Rs.)
1	Cost of Surveying and Investigation	Lumsum	1	25000	25,000
2	Cost of Carrying of muck to the dumping site and properly stacking.	Cum	8350.29	50	5,42,769
3	Earth work for the excavation of Gabion wall i.e trenches of different sizes with proper depth, removal of bushes and stumps, shoring and bracing etc.	Cum	245	450	1,10,250
4	Cost of crate wire of 4mm dia with carriage upto site.	Kg	1563	83	1,32,855
5	Providing RR Massionary and Stone Filled Gabion Wire Crates for protection Work.	Cum	423	750	3,17,250
6	Plantation of 480 plants @ Rs 35/- per plant.	Nos	480	35	16,800
7	Digging of pit for plantation.	Nos	480	55	26,400
8	Cost of Barbed wire Fencing for protection of Plants @ Rs. 145/- per plant with carriage and labour	kg	480	145	69,600
9	Salary for Gardener (1) for 4 years (48 Months) @ Rs.8800/- per month .	Months	48	8800	4,22,400
10	2 Nos. Beldar for protection of plantation for 2 years @ Rs.350/- per day.	Year	2	2,55,500	5,11,000
11	Reclamation and restoration.	Lumsum	1	1,50000	1,50,000
12	Landscaping and Beautification.	Lumsum	1	1,60000	1,60,000
13	Carriage of soil from road site	Cum	100	500	50,000
14	Collection of Grass seed	Kg	100	600	60,000
15	Broadcasting of grass seed plants	Nos.	100	400	40,000
				Total	**26,34,324**

Place : Bharmour
Dated : 28/5/22

For Chamba Hydro Venture
Chamba Hydro Ventures
Authorised Signatory
Authorised Signatory

Divisional Forest Officer
Bharmour Forest Division
Bharmour (H.P.)

" ABSTRACT OF COST"

Name of work :- Construction of Ghator Top SHEP (4.98MW) in Tehsil Bharmour Distt. Chamba being executing by M/s Chamba Hydro Ventures .

(Sub Head :- CONSTRUCTION OF WIRE CRATES TO THE DUMPING SITES)

S.NO	Item	Qty.	Rate	Unit	Amount
1	Earthwork in excavation for structure as per drawing and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50m, dressing of sides and bottom and backfilling in trenches with excavation suitable materials ordinary soil upto standard depth.	245	450	Per cubic Metre	1,10,250
2	RR Massionery and laying of boulder apron laid in wire crates with 4 mm dia GI wire conforming to IS:280 and IS :4826 in 100 mm X 100 mm mesh (woven diagonally) including 10 per cent extra for laps and joint laid with stone boulders weighing not less than 25 Kg each as per drawing and technical specifications Clause 1301.	423	750	Per cubic Metre	3,17,250
3	Provoide the GI wire of dia 4mm with all costs at site including Transportation and other charges.	1563	83	Kg	1,32,855
				Total	5,60,355.00

Er. Vijay Singh(Civil)

Naman Engineers and Consultants

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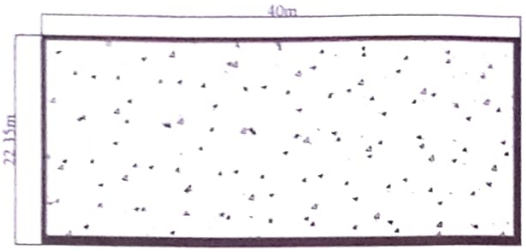
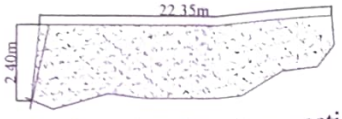
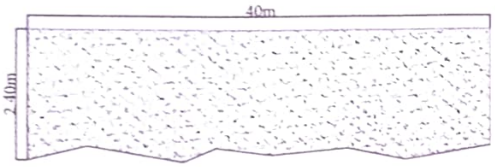
Dumping Site No.IV (Along the Intake/TrenchWeir,Feeder Channel,Silt Flushing. D/Tank,and hrt inlet)



Plan



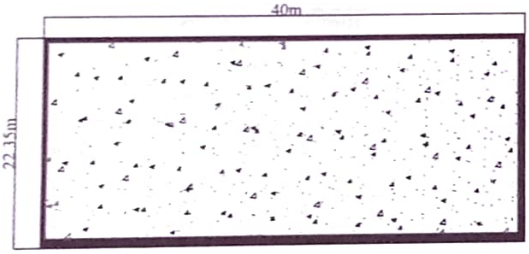
Section at Y- Y (Cross-section)



Section at X- X (L-section)

Area=40mX22.35m=894Sqm
Averag height=2.40m
Capacity of Muk Dumping Site
894X2.40=2145.60 Cum

Dumping Site No.VI (Along the hrt outlet,and Shurg Tank)



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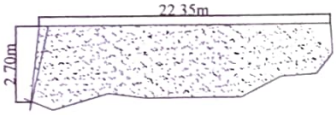
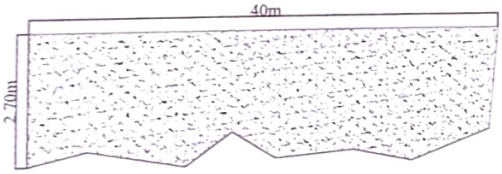


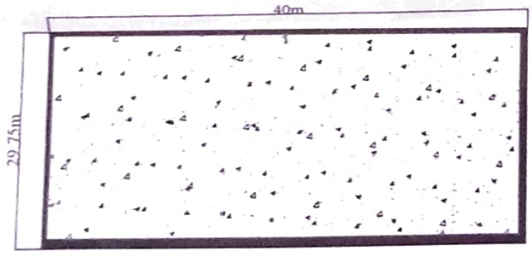
Section at Y- Y (Cross-section)



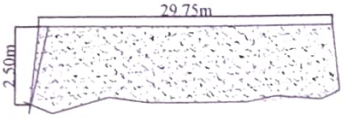
Section at X- X (L-section)

Area=40mX22.35m=894Sqm
Averag height=2.70m
Capacity of Muk Dumping Site
894X2.70=2413.80 Cum

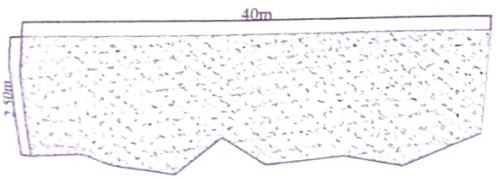
Dumping Site No.V (Along the penstock,Power House, and Switch Yard)



Plan



Section at Y- Y (Cross-section)



Section at X- X (L-section)

Area=40mX29.75m=1190Sqm
Averag height=2.50m
Capacity of Muk Dumping Site
1190X2.50=2975 Cum

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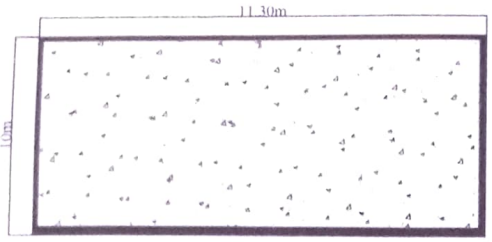
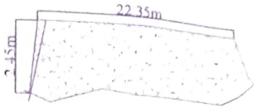
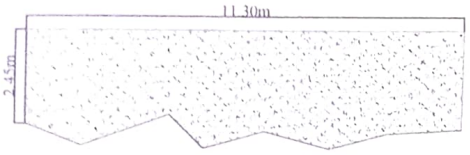
Dumping Site No.III (Along the Road)



Plan



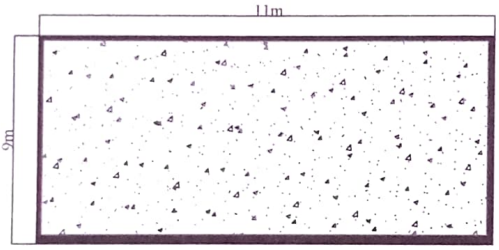
Section at Y- Y (Cross-section)



Section at X- X (L-section)

Area=11.30mX10m=113Sqm
Averag height=2.45m
Capacity of Muk Dumping Site
113X2.45=276.85 Cum

Dumping Site No.II (Along the Road)



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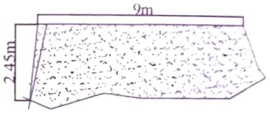

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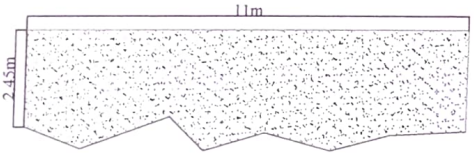
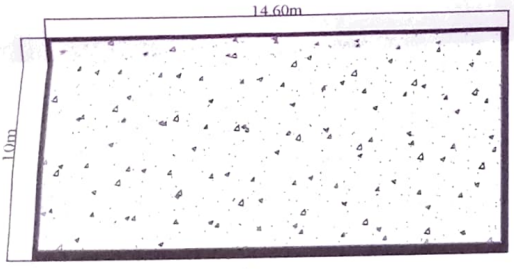


Section at X- X (L-section)

Area=11mX9m=99Sqm
Averag height=2.45m
Capacity of Muk Dumping Site
99X2.45=242.55 Cum

Dumping Site No.I (Along the Road)



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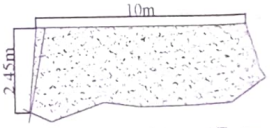
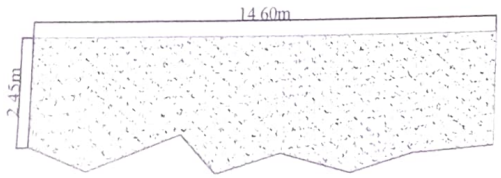


Section at Y- Y (Cross-section)



Section at X- X (L-section)

Area=14.60mX10m=146Sqm
Averag height=2.45m
Capacity of Muk Dumping Site
146X2.45=357.70 Cum

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