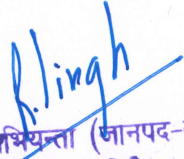


MUCK MANAGEMENT PLAN
FOR
JIMBAGAD SMALL HYDRO PROJECT
(3 X 4 MW)

प्रारूप -

मक डम्पिंग प्रमाण पत्र

प्रमाणित किया जाता है कि जनपद पिथौरागढ़ के तहसील बंगापानी अन्तर्गत जिम्बागाड़ लघु जल विद्युत परियोजना (क्षमता 3X4000 किलोवाट) के नवनिर्माण से उत्सर्जित मलवे को उचित प्रक्रियानुसार डम्पिंग किया जायेगा। मलवा प्रस्तावित मक साइटों में ही डाला जायेगा।


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Name of Project : 3 x 4 MW Jimbagad Small Hydro Project, Munsyari, District : Pithoragarh

Quantity of material to be excavated

S.No.	Description of work	Quantity	Unit
1	Material excavated at Diversion and Intake structure	10525	Cum
2	Material excavated from Power Channel	459.34	Cum
3	spillway	5062.44	Cum
4	Material excavated from Head race tunnel	19556.85	Cum
5	Material excavated from Surge Shaft	1494.46	Cum
6	Material excavated from Penstock	3421.19	Cum
7	Material excavated from Power House and Switchyard	3428.12	Cum
8	Material excavated from roads in the project area	28125	Cum
Total quantity of material to be excavated (A)		72072.4	Cum
Adding swell factor of 40 %		28828.96	Cum
Total quantity to be disposed off		100902.00	Cum

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पिथौरागढ़ जल प्रवाह
पिथौरागढ़

**Name of Project : 3 x 4 MW Jimbagad Small Hydro Project, Munsyari, District :
Pithoragarh**

Disposal and use of excavated material

S.No.	Description of work	Quantity	Unit
1	Diversion and Intake structure		
a	M-10	372.6	Cum
b	M-25	4492.8	Cum
c	Wire crates	848.25	Cum
e	H.P. Boulder filling	253.28	Cum
f	Back filling	358.77	Cum
g	Slope protection works	500	Cum
h	Flood protection works	2500	Cum
i	C.C block - M-15	495	Cum
2	Power Channel		
a	M-10	58.71	Cum
b	M-25	148.7	Cum
c	Earthfilling in trenches	100.5	Cum
3	D-Tank		
a	M-10	70.97	Cum
b	M-25	990.58	Cum
c	Plum	276.79	Cum
4	HRT		
a	M-10	410.64	Cum
b	M-15	39.64	Cum
c	M-20	65.86	Cum
e	M-25	3998.65	Cum
5	Surge Shaft		
a	M-10	11.48	Cum
b	M-25	352.93	Cum
c	Back filling	249	Cum
6	Penstock		
a	M-10	58.64	Cum
b	M-15	747.57	Cum
c	Protection works	500	Cum
7	Power House		
a	M-10	91.99	Cum
b	M-15	279.57	Cum
c	M-25	665.34	Cum
d	Back filling	681.45	Cum
e	Flood protection works	15000	Cum
8	Roads		
	Quantity to be used in soiling, walls and protection works	25312.5	Cum
9	Sum (A)	59932.21	Cum
10	Total quantity of Muck generated (B)	100902.00	Cum
Total quantity of muck to be dumped in dumping zones		40970.00	Cum

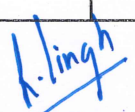
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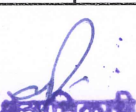
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Name of Project : 3 x 4 MW Jimbagad Small Hydro Project, Munsyari, District : Pithoragarh

Carrying capacity of muck dumping sites

S.No	Item	No	L	W	H	Capacity of dumping site	Unit	Quantity to be dumped (m ³)	Elevation of muck dumping site (m)	Nearest HFL (m)	Remark
1	Muck disposal site near Headworks/ D-tank	1	40	40	3	4584	m ³	4500	1640	1597	Muck dumping site is to be developed from below the ground level by providing 4.5 m high crate walls. The site is about 90 m away from the intersection of HFL of the river with the hill slope and top surface shall be vegetated.
2	Muck disposal site near Adit no -01	1	50	50	3	6750	m ³	6500	1585	1470	Muck dumping site is to be developed from below the ground level by providing 4.5 m high crate walls and top surface shall be vegetated.
3	Muck disposal site near Adit no -02	1	60	60	3	9720	m ³	9000	1697	1385	Muck dumping site is to be developed from below the ground level by providing 4.5 m high crate walls. Top surface shall be vegetated.
4	Muck disposal site near Surge Shaft	1	75	75	3	15750	m ³	14500	1555	1295	Muck dumping site is to be developed from below the ground level by providing 4.5 m high crate walls. Top surface shall be vegetated.
5	Muck disposal site near power house	1	50	50	3	7163	m ³	6470	1410	1330	Muck dumping site is to be developed from below the ground level by providing 4.5 m high crate walls. Top surface shall be vegetated.
Total						43967	m ³	40970			


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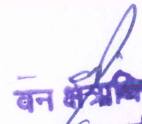
Name of Project : 3 x 4 MW Jimbagad Small Hydro Project, Munsyari, District : Pithoragarh

Details of measurements for development of muck dumping sites

S.No	Item	No	Length	Width	Height	Qty	Unit
1	Excavation in foundation for retaining wall in all types of soil and rocks including lead, lift and disposal of surplus material as per direction of Engineer in Charge.						
a	Muck disposal site near Headworks/ D-tank	1	40	1.5	0.5	30	m ³
		2	40	1.5	0.5	60	m ³
b	Muck disposal site near Adit no -02	1	60	1.5	0.5	45	m ³
		2	60	1.5	0.5	90	m ³
c	Muck disposal site near Surge Shaft	1	75	1.5	0.5	56	m ³
		2	75	1.5	0.5	113	m ³
d	Muck disposal site near power house	1	50	1.5	0.5	38	m ³
		2	50	1.5	0.5	75	m ³
e	Muck disposal site near Adit no -01	1	50	1.5	0.5	38	m ³
		2	50	1.5	0.5	75	m ³
Total						620	m³

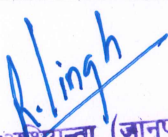
2	Providing and laying of wire crates 3.0 x 1.5 x 1.5 in size with a 10 guage BWG GI wire conforming to IS 280 in 150 mm x 150 mm mesh laid with stone boulders, As per direction of Engineer in Charge						
a	Muck disposal site near Headworks/ D-tank	1	40	1.5	4.5	270	m ³
		2	40	1.5	3	360	m ³
b	Muck disposal site near Adit no -02	1	60	1.5	4.5	405	m ³
		2	60	1.5	3	540	m ³
c	Muck disposal site near Surge Shaft	1	75	1.5	4.5	506	m ³
		2	75	1.5	3	675	m ³
d	Muck disposal site near power house	1	50	1.5	4.5	338	m ³
		2	50	1.5	3	450	m ³
e	Muck disposal site near Adit no -01	1	50	1.5	4.5	338	m ³
		2	50	1.5	3	450	m ³
Total						4332	m³

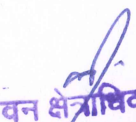

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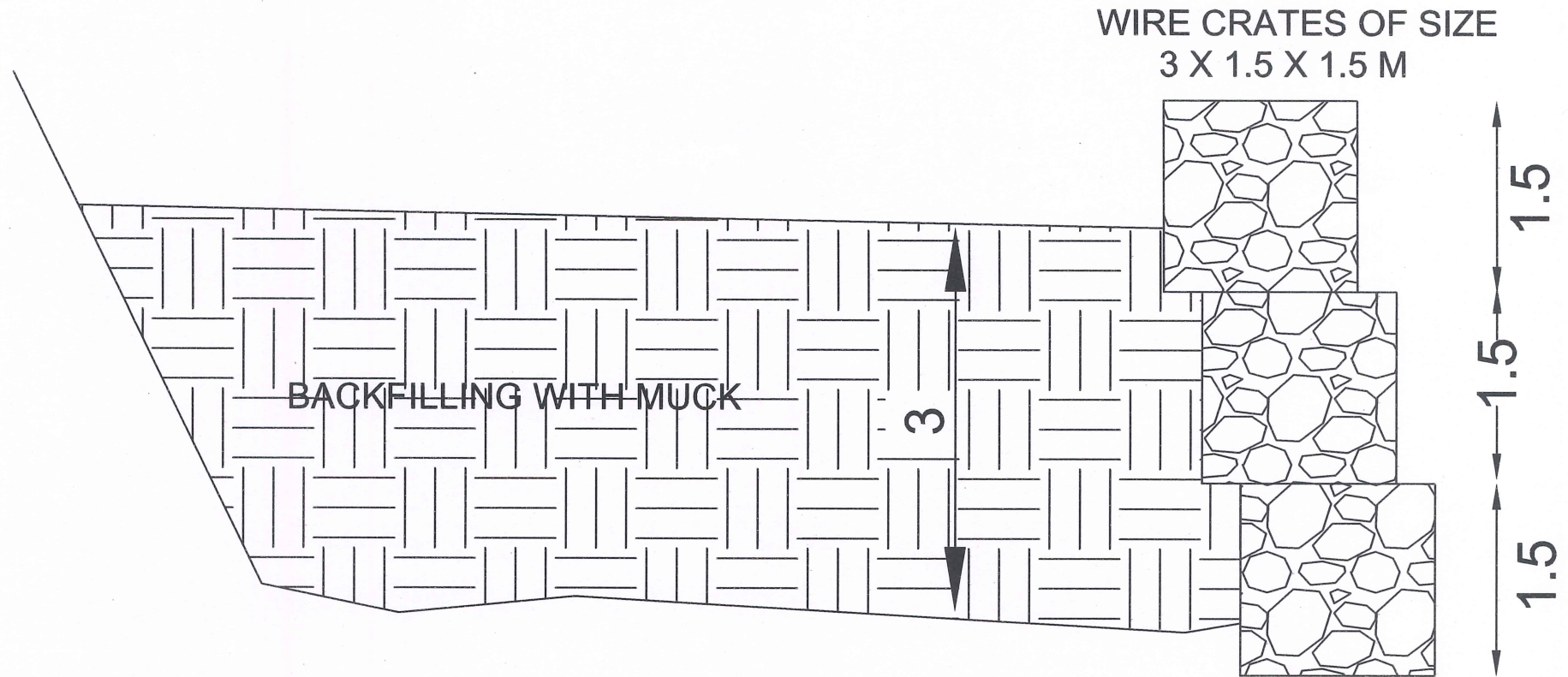

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 मुनस्यारी

Name of Project : 3 x 4 MW Jimbagad Small Hydro Project, Munsyari, District : Pithoragarh
BOQ FOR DEVELOPMENT OF MUCK DUMPING SITES

S.No	Item	Qty	Unit	Rate in Rs.	Amount in Rs.
1	Excavation in foundation for retaining wall in all types of soil and rocks including lead, lift and disposal of surplus material as per direction of Engineer in Charge.	620	m ³	509	315580
2	Providing and laying of wire crates 3.0 x 1.5 x 1.5 in size with a 10 guage BWG GI wire confirming to IS 280 in 150 mm x 150 mm mesh laid with stone boulders, As per direction of Engineer in Charge.	4332	m ³	2343	10149876
3	Plantation of grass	L.S.			500000
Total					10965456


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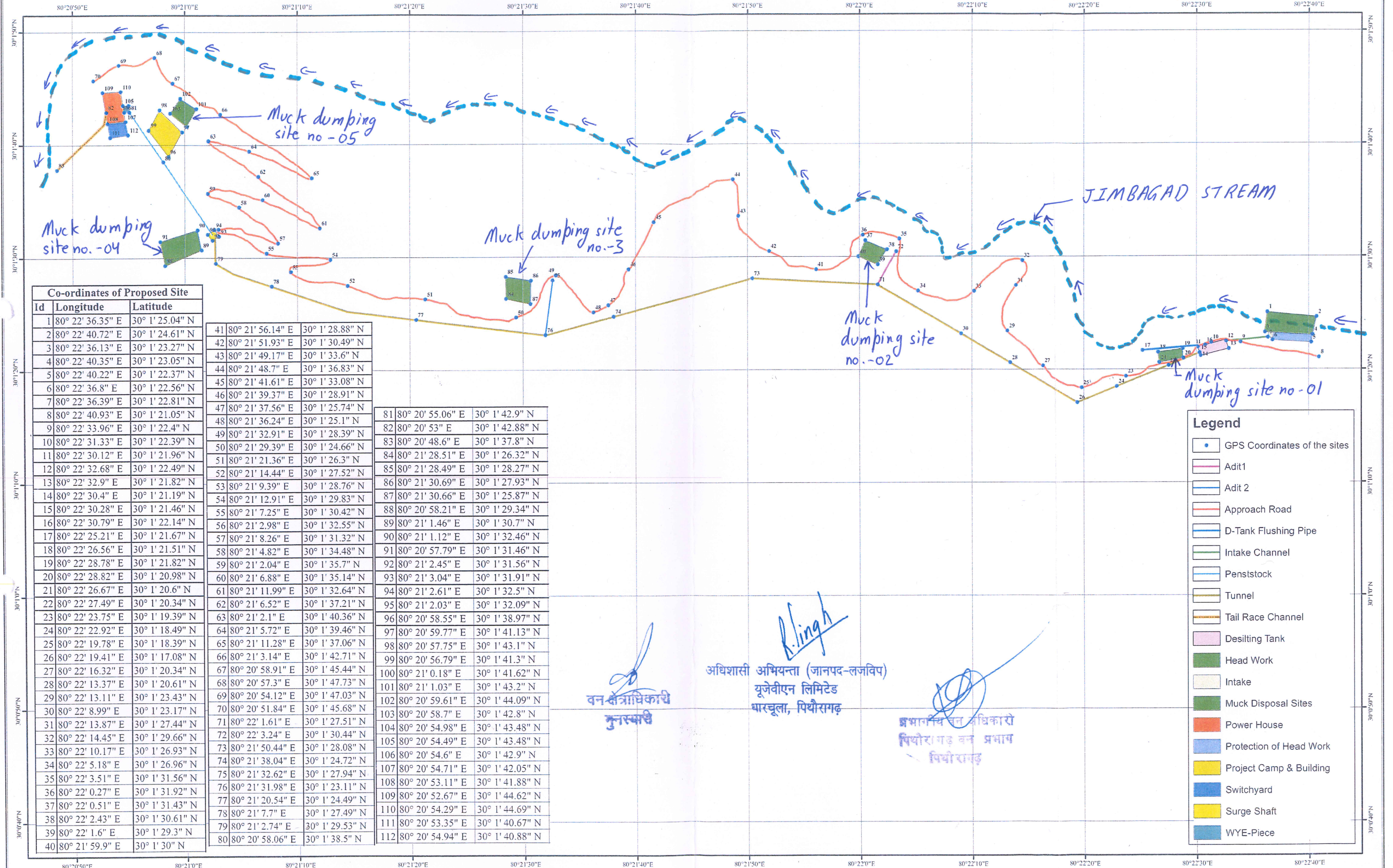


DETAILS OF TYPICAL X -SECTION OF MUCK DISPOSAL SITE
AT JIMBAGAD SHP (3 X 4 MW)

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Georeference map for 3x4 MW Jimbagad SHP in Tehsil Bangapani of District Pithoragarh with Location of muck dumping sites.



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