

COST BENEFIT ANALYSIS

PARAMETER FOR EVALUATION LOSS OF FOREST HAS BEEN ACCORDED FOR A PERIOD OF 50 YEARS AS PER GOVERNMENT DIRECTIVES.

Mining of Mine : Hindusthan Lalpeth Opencast (Expansion) Project

Quantum of forest : 36.980 Ha. (All Right)
land applied for

Life of Project : 12 Years

Division : Chandrapur Forest Division, Chandrapur (M.S.)

1) FOREST LOSS CALCULATIONS

Present N.P.V. for 1 Ha. of forest land	=	6.26 Lakhs
Present N.P.V. for 36.980 Ha. forest land	=	36.980 x 6.26
	=	231.495 Lakhs
Rate of C.A. for 1 Ha. of forest land	=	2.26624 Lakhs
Rate of C.A. for 36.980 Ha. forest land	=	36.980 x 2.26624
	=	83.8056 Lakhs
Double the amount of C.A.	=	2 x 83.8056
	=	167.6112 Lakhs
Total loss	=	231.495 + 167.6112
	=	399.1062 Lakhs

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| 2 | Loss of animal husbandry productivity including loss of fodder | There is no any loss of animal husbandry productivity. |
| 3 | Loss of human re-settlement | Part encroachment in HLC, WCL Land & part in Forest land (about 300 houses), Encroachment (Nandgaon Basti) (21 Houses) & Waghoba Mandir will be affected due to diversion of forest land in this project. There will be no loss involved on account of human resettlement. |
| 4 | Loss of public facilities and administrative infrastructure (roads, building, schools, dispensaries, | Public / Colliery road to Nandgaon UG Mine & Nandgaon village and electric power line belonging to WCL is affected due to |

electric line, railways etc.) on forest land or which would required forest land if these facilities were diverted due to this project.

- 5 Environmental losses (soil Erosion effect on hydrological cycle, wild life habitat, microclimate, upsetting of geological balance).

diversion of forest land due to this project. No administrative infrastructures such as buildings, schools, dispensaries, railway line etc. is affected due to diversion of forest land by this project. There will be no loss involved on this account.

The details of environmental losses are determined as per given thumb rule and for the forest area required for the project is as shown below.

- (i) Density of the forest – 0 to 0.4
- (ii) Average density for the area proposed to be acquired for the project – 0
- (iii) Environmental value per Ha. for density 1.0 (Rs.in Lakhs) – 126.74
- (iv) Environmental loss per ha. of the forest of density 0 to be acquired (Rs.in Lakhs) – 0.00
- (v) Total forest area required for the project 36.980 Ha.
- (vi) Total Environmental loss for the forest area to be acquired for the project. –
Rs. 0.00 Lakhs x 36.980 Ha.=Rs 0.0 Lakhs.

- 6 Suffering of an Oustees.

Part encroachment in HLC, WCL Land & part in Forest land (about 300 houses), Encroachment of Nandgaon Basti (21 Houses) will be affected due to diversion of forest land in this project. Population of about 321 houses is affected due to construction of this project and hence there will be Rs. 3.00 Lakhs / Family i.e. Rs. 963.00 Lakhs losses on this account.

Date : 01/07/2014

Place : Chandrapur

Name in Block Letters : (R.K. MISHRA)

Designation : Area General Manager

Address : WCL, Chandrapur Area,
Chandrapur (MS) 442403

Annexure - III**COST BENEFIT ANALYSIS****PARAMETERS FOR EVALUATION OF BENEFIT****[NOT WITH STANDING LOSS OF FOREST]**

Mining Project : Hindusthan Lalpeth Opencast (Expansion) Project

Quantity of forest land : 36.980 Ha.
Applied for

Life of Project : 12 years

Parameters for : Total mineable Reserve 5.870 Million Tes
calculation Coal price for P “Rom” Coal has been uniformly adopted.

S. N.	Parameters	Evaluation benefits	Qualified in Monitory terms per annum (0.65 Million Te)	Qualification of Benefit in monitory terms connected to the period (50 years) evaluation of coal benefit ratio.
1.	Increasing of productivity attributed to specific project.	Sale Price of P “ROM” @Rs.1108.01 per te.	Rs.7202.065 Lakhs	Rs.360103.25 Lakhs.
2.	Benefit of company.	1)A)1.Royalty @Rs.108.45 /te B)SED @ Rs.10/te. C) Sales tax @ Rs.53.34 D)Central Excise duty Rs. 57.06 E) Clean Energy cess Rs.50.00 2) Elect. Generation 1 Te. = 1248 units @Rs.5.00/ unit B) Other benefit not quantified in monitory Terms 1.Growth ancillary Industries 2.Dev.of surrounding Area 3.Increased per capital 4.Compensatory afforestation	Rs.704.925 Lakhs Rs.65.00 Lakhs Rs.346.71 Lakhs Rs. 370.89 Lakhs Rs. 325.00 Lakhs Rs. 1812.525 Lakhs Rs. 40560.00 Lakhs Total Not expressed in monetary terms	Rs. 90626.250 lakhs Rs.2028000.00 lakhs Rs.2118626.25 Lakhs
3.	Population benefited.	.Population indirectly benefited	Not quantified in Monitory terms	

4.	Employment potential	639 persons	Rs. Lakhs	Rs.262639.165 Lakhs
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5.	Cost of acquisition of facility on non forest land where ever feasible.	Occurrence of coal is a natural phenomena and alternate site is not feasible.	NIL	NIL
6.	Loss of (a) agricultural and (b) husbandry production due to diversion of forest land.	a) Agricultural – NIL b) Animal - NIL	- -	NIL NIL
7.	Cost of rehabilitation of displaced persons as different from compensatory amount given for displacement.	Forest land applied for is devoid of human habitation.	-	NIL
8.	Cost of supply of tree fuel wood to workers residing in or near forest area during the period of construction.	The user agency is given the cost of one gas cylinder to the workers for domestic use, as such supply of fuel wood does not arise.	-	NIL
TOTAL			Rs. 54827.373 Lakhs	Rs. 2741368.65 lakhs

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III CALCULATION OF BENEFIT / COST RATIO

Total Benefits (As per II calculation) = 2741368.650 Lakhs

Total Loss (As per I Calculation) = 1899.89 Lakhs

Hence, Benefit / Cost ratio = 1442.91 Lakhs

Thus, the project gives positive Benefit / Cost ratio. The monetary returns of the project are positive over the Environmental Losses.

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BENEFIT COST ANALYSIS
I – Calculation of Cost
(A)
PARAMETERS FOR EVALUATION OF LOSS OF FOREST

Name of Mine : Hindusthan Lalpeth Opencast (Expansion) Project

Quantum of Forest Land

Applied for

(a) Reserve Forest : 36.98 Ha.
(b) Protected Area : -
(c) Zudpi Jungle : -
Total : 36.98 Ha.

Life of Project : 12 Years

Division : Chandrapur Forest Division, Chandrapur

PARTICULAR	EVALUATION OF LOSSES	Annual Losses (Lacs)	Quantified in Monitory Terms for a period of 50 years in Lacs
PARAMETER No. 1 Loss of value of Timber, fuel wood and minor forest produce on an annual basis, including loss of Man hours per annum of people who derive livelihood & wages from harvest of these commodities (to be quantified and expressed in Monitory terms	The details of loss of timber, fuelwood and minor forest produce etc. for the forest land required for opencast coal mining project are given below : A) Timber, Fuelwood & Bamboo i) Non teak timber ii) Non teak beat B) M.F.P. :- Tendu Leaves C) Loss of Man-days of employment to people dependent on this forest patch for livelihood. (Due to no trees available in the proposed land)	NIL NIL NIL NIL	NIL NIL NIL NIL
PARAMETER No. 2 Loss of animal husbandry productivity including loss of fodder.	Grazing of 50 cattle approx. for 6 months per year fodder worth ` 1000/- per cattle.	0.50 Lakh	25.00 Lakh
PARAMETER No. 3 Loss due to Human resettlement	About 321 Human resettlement exist on the forest land (approx. 300 houses near HLC No. 1 mine and 21 houses	NIL	NIL

	in Nandgaon Bsti , Waghoba Madir) which would be required to be diverted. (Provision will be made by user agency)		
PARAMETER No. 4 Loss of public facilities and administrative infrastructure.	Public facility and administrative infrastructure like road to Nadgaon village etc exist on forest land which would required to be diverted. (Provision will be made by user agency)	NIL	NIL
PARAMETER No. 5 Environmental Losses	Average Density of the forest area proposed to be acquired for the project is zero (0) Environmental value per Hector for average density 0 (zero) considering @ 50.70 lakh per Ha.= 36.98 Ha. X 50.70 = 1874.89		1874.89
PARAMETER No. 6 Suffering to oustee	No Human habitation exist on forest land hence, no oustee from forest land	NIL	NIL
Grand Total :-			1899.89

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