COST BENEFIT ANALYSIS

1 .**Increase in productivity attributable to the specify project.**

   a. Saving due detention of diesel locomotive in both direction per year = 1.335+1.335=2.67 Cr per year

   b. Saving due to detention of wagon per year =0.9656+0.9656 =1.93 Cr per year

   c. Saving on capital cost of locos on account of avoidance of detention per year= 6.05+6.05 = 12.10 Cr. per year.

   d. Saving on capital cost of locos on account of avoidance of detention per year= 1.958+1.958= 3.91 Cr. per year.

Total Saving per year = 2.67+1.93+12.10+3.91=20.61cr

2. **Benefits to economy:**

Faster goods traffic will result smooth coal movement to power plant and will lead to GDP of India Improve punctuality of trains & less wear and tear of existing rail line will benefit to overall growth to the country.

3. **Employee potential**

The project will employ an average of 1200 labors with average days of 250 of work in and year for 04 years.

Therefore total man days generated=1200*250*4=1200000

Value of man days generated assuming the labour cost of Rs.200 per man days=200*1200000=240000000/-=24.00Cr.

4. **Cost of acquisition of facility on non-forest land wherever feasible**
      Nil

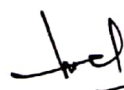   iii)   Loss of Agriculture
           Nil

   iv)   Animal husbandry products due to diversion of forest land
           Nil

5 **Cost of rehabilitating the displaced persons as different from compensatory from compensatory amounts given displacement.**
       Nil

6 Cost of supply of tree fuel wood to workers residing in or near forest area during the period of construction.

   Nil

EVALUATION OF LOSS OF FOREST

Calculation as per MOEFCC circular no. 7-69/2011- FC(PT) Dtd. 01 Aug. 2017

i.Ecosystem services losses due to proposed forest diversion

Economic value of loss of ecosystem services due to diversion of forest= NPV of forest land being diverted as prescribed by central govt. (MOEFCC) i.e 8.03lacs . As the forest land proposed does not fall in National park & Wildlife sanctuary

Therfore ecosystem services lossess due to proposed diversion of 35.6 Ha is= 35.6*8.03= 286.224 lacs , say 2.86 cr

ii. Loss of animal husbandry productivity, including loss of folder.

   Nil

iii.Cost of human resettlement.

   Nil

iv.Loss of public facility and administrative infrastructure.

   Nil

v. Possession value of forest land diverted – 30% of NPV i.e 2.86*0.03=0.0858 cr

vi .Cost of suffering to oustees

   NIL

vii. Habitant fragmentation cost - 50% of NPV i.e 2.86*0.5= 1.43 cr

viii. Compensatory afforestation and soil & moisture conservation cost is
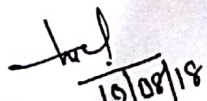
   35.6* (176009+ 1269*50)=8586999.74 Lacs , say 0.86 cr

   For the purpose of Cost benefit analysis

   Total Estmated cost = i+ii+iii+iv+v+vi+vii+viii = 2.86 +0+0+0+.086+0+1.43+0.86 = 5.236 cr

   Total estimated benefit = 1+2+3+4+5=20.61+0+24+0+0 =44.61cr

   Cost Benefit Ratio= 2.86:44.61 = 1:15.59 = 1:16(say)

Thus the construction of new doubling rail line would be advantageous in monetary terms.

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