



Government of India/ भारत सरकार
Ministry of Environment, Forest & Climate Change/ पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
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SPEED POST

No.5-ORA052/2007-FCE

Date: 30.10.2017

To

The Assistant Inspector General of Forests (FC)
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhawan, Agni Block,
Jor Bagh Road, Alliganj, New Delhi – 110 003.

Sub: Site inspection report in respect of in respect of diversion of balance forest land of 401.782 ha including 7.2807 ha of safety zone out of total forest land of 519.7472 ha within total mining lease area of 618.576 ha for iron ore mining in Gandhamardan (Block-A) mining lease in Keonjhar District, Odisha of M/s Odisha Mining corporation Ltd. during 2nd renewal of mining lease period (likely to extended up to 31.03.2020 as per amended provision of MMDR Act, 2015) – reg.

Ref.: Ministry's letter No.8-27/2016-FC dated 6th July, 2017

Sir,

With reference to the subject cited as above, I am directed to inform you that the site inspection of the above mentioned project was carried out by the Conservator of Forests (Central) of this office on 28th July, 2017 and the site inspection report along with enclosures is enclosed herewith for favour of information and necessary action.

Yours faithfully,


30.10.17

(R. K. Samal, IFS)
Conservator of Forests (C)

Encl: As above

Site inspection report in respect of diversion of balance forest land of 401.782 ha including 7.2807 ha of safety zone out of total forest land of 519.7472 ha within total mining lease area of 618.576 ha for iron ore mining in Gandhamardan (Block-A) mining lease in Keonjhar District, Odisha of M/s Odisha Mining corporation Ltd. during 2nd renewal of mining lease period (likely to extended up to 31.03.2020 as per amended provision of MMDR Act, 2015).

The site inspection of the above diversion proposal was conducted by me on 28th July, 2017. During site inspection Shri Rohit Kumar Lenka, DFO, Keonjhar, Shri Prasanna Pattanaik, ACF, Keonjhar, Shri D K Pattanaik, DGM (Env.), OMC Ltd., Shri P K Sahu, Regional Manager, Gandhamardan Region and Shri A P Mohapatra, Mines Manager, Gandhamardan Mines were present.

1. Legal status of the forest land proposed for diversion

Proposed Reserve Forest-375.5607 ha.

Village Forest - 26.2217 ha.

Total - 401.7824 ha

2. Item-wise break-up details of the forest land proposed for diversion:

Purpose of utilisation	Forest area in Ha. (virgin)		Forest area in Ha. (pre-80 broken)	Total forest land in Ha.
	PRF	VF		
Mining	306.2866	12.3715	19.51	338.1681
Dumping of overburden	3.5016	0	3.97	7.4716
Stacking of ore	0.4280	4.3597	0	4.7877
Sub-grade ore stacking	11.1385	0	0	11.1385
Processing and stacking	24.9305	3.9962	0	28.9267
Safety zone area of magazine (3.0 MT capacity)	4.0091	0	0	4.0091
Safety zone of the mining lease	1.7864	5.4943	0	7.2807
Total	352.0807	26.2217	23.48	401.7824

3. Whether proposal involves any construction of buildings (including residential) or not. If yes, details thereof:

No. Does not involve construction of buildings including residential areas.

4. Total cost of the project at present rates:

Rs.109.62 crores

5. **Wildlife:**
Whether forest area proposed for diversion is important from wildlife point of view or not:

No rare or endangered flora and fauna is noticed in this area but movement of mega fauna like elephant is often noticed in the fringe area. The area comes under the elephant habitat Zone-2 of ORSAC, Bhubaneswar. Apart from elephant, sloth bear and spotted deer are also seen in the area. Earlier there has been report about death of two elephants by falling into the pits of Gandhamardan-B mine during July, 2005.

6. **Vegetation:**

The applied forest land is a part of Gandhamardan PRF which comes under the type 3C/C_{2e} (ii) Moist Peninsular low level Sal forest type under Champion & Seth classification with canopy density 0.3 to 0.4 at the lower reaches and little higher at higher reaches and with site quality-IV.

- (a) **Total number of trees to be felled.**

As per the sample plot estimation an estimated 87,591 number of trees above 30 cm girth and 2,054 number of poles have been enumerated over the applied forest area, which include 86,100 number of trees and 1,804 number of poles over virgin forest land of 378.3024 ha and 1,491 trees and 250 number of poles over broken up forest land of 23.48 ha.

Effect of removal of trees on the general ecosystem in the area:

The hills are having steep slopes and the area contains a lot of biodiversity and is very fragile. There will be loss of biodiversity as well as soil erosion.

- (b) **Important species:**

The prevailing vegetation consists of Sal and its associates like Bija (*Pterocarpus marsupium*), Asan (*Terminalia alata*), Amla (*Emblica officinalis*), Kasi (*Bridelia retusa*), Gambhar (*Gmelina arborea*), Karada (*Cleistanthus collinus*), Kumbhi (*Careya arborea*), Kendu (*Dispyros melanoxylon*), etc. The main climbers associated with Sal (*Shorea robusta*) in these areas are Atundi (*Combretum decandrum*), Latapalash (*Butea superba*), Siali (*Bauhinia vahlii*), *Smilax tetraphylla*, etc. The important grass species are Sinkula (*Heteropogon contortus*), *Aplida mutica*, *Dicanthium caricosum*, Duba (*Cynodon dactylon*), *Chrysopogon aciculatus*, etc.

Number of trees of girth below 60 cm.

As reported by DFO Keonjhar the total Number of trees below 60 cm to be felled is 71,191.

Number of trees of girth above 60 cm.

As reported by DFO Keonjhar the total Number of trees above 60 cm to be felled 18,454.

7. Background note on the proposal:

The mining lease was granted for a period of 30 years in the name of Gandhamardan (Block-A) iron mines in favour of M/s OMC Ltd. for exploration of iron ore over an area of 618.5760 ha. in the revenue villages of Suakati & Daonra and Gandhamardan proposed reserved forest under Banspal Tahasil of Keonjhar district, Odisha vide letter No.III (A) A-11/13 dated 21st May, 1963, Mining & Geology Deptt., Govt. of Odisha. Thus, original mining lease was valid till 20.05.1993. The first renewal of mining lease application was filed by the lessee for iron ore over 618.5760 ha on 04.04.1992 i.e. one year prior to the expiry of lease. However, the renewal could not be obtained till the year 2012 and in the meantime the 2nd RML application was filed on 01.05.2012 for another period of 20 years.

The total mining lease area of Gandhamardan (Block-A) iron ore mines of M/s OMC Ltd. is 618.5760 ha. which involves 486.1340 ha. Proposed Reserved Forest, 33.6132 ha of Village Forest Land, 85.5772 ha non-forest Government land and 13.2516 ha non-forest tenanted land. The mining lease area is located within latitude 21° 36' 08.58286"N to 21° 37' 41.89734"N and longitude 85° 29' 13.06230" E to 85° 31' 16.78446" E of Survey of India toposheet No.73 G/6 and 73 G/10. The northern ML boundary of Gandhamardan Block-A Iron Ore Mines of M/s OMC Ltd. is common with the southern boundary of Gandhamardan Block -B Iron Ore Mines of M/s OMC Ltd.

The extent of land broken prior to 1980 in this lease is 73.291 ha. that includes 64.7242 ha. of forest land (57.3327 ha. PRF and 7.3915 ha. village forest) and 8.5672 ha of non-forest land. During 1st RML period, the State Government vide its letter dated 11.05.2007 had recommended for diversion of 117.9648 ha. of forest land (virgin forest land 76.7206 ha. and broken up forest land of 41.2442 ha.) out of 216.3617 ha of forest land proposed for diversion by the user agency considering wildlife concerns especially movement of elephants in the area. MoEF &CC, Government of India vide letter dated 17.02.2009 accorded State-I approval under Section-2 (ii) of FC Act, 1980 over 117.9648 ha. Now MOEF, Govt of India has accorded stage-II clearance for 41.2442 Ha of broken up forest land only a d to consider the balance 76.7206 ha of virgin forest land after getting the carrying capacity study report is available. Besides the above the User agency needs 2.270 Ha of area for making a haulage road for carrying of materials from Top Quarry of Gandhamardan -B

OMC Ltd. had earlier approached the Hon'ble Supreme Court in IA No.3402/2012 with the prayer to restore the entire Gandhamardan-A mining lease in their favour and diversion of balance forest land in the lease taking note of Wildlife Institute of India vetting the required Wildlife Management Plan. On the basis of Hon'ble Supreme court order dated 16.04.2012 the user agency has filed forest diversion proposal for the remaining forest land i.e. 401.7874 ha. (total forest land 519.7472 ha – 117.9648 ha. already agreed for diversion in principle. The proposed forest land for diversion of 401.7824 ha. now consists of virgin PRF-352.0807 ha., Virgin VF-26.2217 and 23.48 ha.

pre-1980 broken up forest land.

8. Compensatory afforestation:

Total forest land involved in this mining lease:	519.7472 ha.
(-) Forest land for which Stage-I approval order has been accorded and CA cost deposited:	117.9648 ha.
(-) Forest land broken up prior to 1980 for CA is not required:	64.7274 ha.
(-) Forest land coming within safety zone for which CA is not required:	7.2807 ha.
Non-forest land required for compensatory afforestation:	329.7743 ha.

329.7743 ha. has been identified in village Khamarpadar under Thuamul Rampur Tahasil of Kalahandi district in Kalahandi (South) Forest Division.

(a) Whether land for compensatory afforestation is suitable from plantation and management point of view or not:

Yes. Suitability certificate given by Forest and Revenue authorities.

(b) Whether land for compensatory afforestation is free from encroachment/other encumbrances:

Yes.

(c) Whether land for compensatory afforestation is important from Religious/Archaeological point of view:

No.

(d) Land identified for raising compensatory afforestation is in how many patches, whether patches are compact or not:

Land identified for raising CA is in 3 patches. The patches are compact.

(e) Map with details:

Enclosed in the diversion proposal.

(f) Total financial outlay:

The approved CA scheme has provisions for barbed wire fencing, special soil conservation measures, etc. tree species to be planted under the scheme are Teak (*Tectona grandis*), Karanj (*Pongamia pinnata*), Neem (*Azadiracta indica*), Amla (*Emblica officinalis*), Bahada (*Terminalia belerica*), Mahul (*Madhuca indica*) and Sisoo (*Dalbergia sisoo*), etc. Total cost of CA is Rs. 3,19,61,400/-.

9. **Whether proposal involves violation of Forest (Conservation) Act, 1980 or not. If yes, a detailed report on violation including action taken against the concerned officials:**

Violation:

- (i) Illegal dumping of ores on forest land (Gandhamardan PRF) extracted from adjoining lease Gandhamardan Block-B in the lease hold area of Gandhamardan Block-A having dimension 200 mt x 40 mt (approx. 3.00 ha) at the common boundary with GPS location.

Latitude : N 21° 37' 04.5"

Longitude : E 85° 30' 47.2"

- (ii) 2 ha. of forest land (Gandhamardan PRF) has been illegally used for road purpose in Gandhamardan Block-A without approval in violation of the FC Act, 1980.

Action taken:

- (i) Show cause notice has been issued to the Regional Manager, Gandhamardan Iron ore mines, M/s OMC Ltd. vide letter No. 9513 dated 19.12.2011 by DFO Keonjhar.
- (ii) OR Case No. 23BJ of 2015-16 has been booked. Prosecution sanctioned and submitted vide PR No.12 of 2016-17 in the Court of SDJM, Keonjhar by DFO Keonjhar.

Present status:

- (i) Removal of dump from the OB dump site in Block-A is under progress as per the direction of the Hon'ble Supreme Court of India vide their order dated 16.04.2012 and subsequent direction of Steel and Mines Department, Govt. of Odisha.
- (ii) The lessee has represented and submitted a proposal for use of the road under question which has been furnished to MoEF&CC, Govt. of India for consideration.

10. **Whether proposal involves rehabilitation of displaced persons. If yes, whether rehabilitation plan has been prepared by the State Government or not :**

No.

11. **Reclamation plan:**

Details and financial allocation:

Reclamation will be carried after exhaustion of the mined out areas as per the mining plan.

12. Details on catchment and command area under the project:

Not applicable. However, it contains the Gndhamardan hills which are steep hills.

Catchment area treatment plan to prevent siltation of reservoir:

Not applicable.

13. Cost benefit ratio:

1:13.60

14. Recommendations of the Principal Chief Conservator of Forests/State Government:

Yes. Recommended.

15. Recommendations of Addl. Principal Chief Conservator of Forests (Central) along with detailed reasons:

Annexed separately.

16. Conservator of Forests shall give detailed comments on whether there are any alternative routes/alignment for locating the project on the non-forest land:

It is site specific and it cannot be shifted to any other forest or non forest land.

17. Utility of the project:

It has been stated by the project authorities that about 377 people will get direct and 2000 people will get indirect employment.

Numbers of Scheduled Caste/Scheduled Tribes to be benefited by the project:

The area has a lot of Scheduled Tribes population and is expected many of them to be benefited directly and indirectly.

18.

(a) Whether land being diverted has any socio-cultural/ religious value:

Not reported.

(b) Whether any sacred grove or very old growth trees/forests exist in the areas proposed for diversion:

Yes, the area contain old growth trees existing in the natural state.

(c) Whether the land under diversion forms part of any unique eco-system:


Yes, the area exhibits an undulated topography with varying elevations from 620 to 1009 metre above mean sea level. This is the southward extension of the North-South trending Gandhamardan hill and is a prominent physiographic unit with highest elevation 1061 metre above mean sea level occurring towards north of this area. It is stated that the local population depend this forest for various herbs and shrubs and firewood for meeting their day to day lives.

19. Situation with respect to any Protected Area:

There is no protected area nearby. Similipal Tiger Reserve is around 60 km away.

20. Any other information relating to the project:

The validity of the lease is till 31st March, 2020. The lease is adjacent to another lease of the same agency i.e. Gandhamardan-B. Total area of the Gandhamardan-B lease is 1590.87 ha. containing 1409.649 ha of forest area and out of this forest clearance has been given for 232.438 ha. and Stage-I clearance has been given for balance area of this lease. The ecosystem of Gandhamardan hills will be severely damaged if mining is also taken up in the hill tops of the Gandhamardan-A area, rather the foot hills of Gandhamardan-A lease is covered with Lantana and Eupatorium weeds and mining has already been done and being used for storage of ore. This also includes the roads that lead to Gandhamardan-B lease. For storage of iron ore and proper transportation from Gandhamardan-B mines the remaining broken up forest land prior to 1980 i.e. 23.48 ha. along with 2.270 ha for construction of haulage road will be sufficient for meeting the needs of the user agency as on date. The balance virgin areas with natural forests may be kept intact and shall be operated once the Gandhamardan-B lease is exhausted of the stock of iron ore and progressively reclaimed. This will ensure containing the damage to the environment in this area and meeting the needs of the local people. The mitigative measures proposed in the Wild Management Plan prepared by user agency and vetted by Wildlife Institute of India will reduce the ill-effects for movement of elephants and other wildlife in the region. The DSS report of the proposed mine is enclosed.


(R. K. Samal, IFS) 27-10-2017
Conservator of Forests (C)

WEB - GIS BASED DECISION SUPPORT SYSTEM RESULT

File no: ORA105/2006-FDC (ORA052)

Date: 23.12.2016

Proposal: GANDAMARDAN-A MINES BY M/S OMC

Location:

State: ODISHA

District: KEONJHAR

Decision Support System (DSS) Analysis:

Area of the forest land (Software calculated): 400.26 hectare.

➤ **Decision Rule I:**

Layer Info	Details	Result/Remarks
Hydrological Info (Major River, Wetland)	NA	Not Inviolate
VDF	NA	Not Inviolate
Last Remnant FTM	NA	Not Inviolate
Protected Area Info	NA	Not Inviolate
Wildlife Info	Sloth Bear	Inviolate

➤ **Decision Rule II (Analysis based on 50% Rule)**

✓ **FOREST COVER MAP:**

Forest Cover Map Statistics (Software Calculated):

SL No	Forest Cover	Area in Hectare (Approx.)
1.	MDF	143
2.	Open Forest	181
3.	SCRUB	02
4.	Non-Forest	74

✓ **FOREST TYPE MAP:**

Forest Type Map Statistics (Software Calculated):

SL No	Forest Type	Area in Hectare (Approx.)
1.	3C/2e(ii)Moist Peninsular Low level Sal Forests	38
2.	3C/2e(iii)Moist Peninsular Valley Sal Forests	179
3.	3C/2S1 Northern Secondary Moist Mixed Deciduous Forests	149
4.	Non-Forest	35

➤ **DSS Final Score Result:**

GRIDID	SCOREFCM	SCOREFTM	SCOREBR	SCORELANDSCAPE	AGGREGATESCORE
2134725	60.41	72.52	74.93	59.67	66.88

DESCRIPTION	RESULT
Total Number of Grids	1
Total no. of (1 Km X 1 Km) Grids having total score above 70	0
Final Status (based on 4 out of 6 parameters)	Not Inviolate

- ⊕ The proposed area can be treated as **Not Inviolate** in accordance with Decision Rule-I and Decision Rule-II of GIS based Decision Support System (DSS) (**Not Inviolate:** Can be diverted for any non-forest Activity)

**RECOMMENDATION OF THE ADDL. PRINCIPAL CHIEF CONSERVATOR OF
FORESTS (CENTRAL)**

The site inspection report of CF (Central) for the proposal of application for diversion of balance forest land of 401.782 ha including 7.2807 ha of safety zone out of total forest land of 519.7472 ha within total mining lease area of 618.576 ha for iron ore mining in Gandhamardan (Block-A) mining lease in Keonjhar District, Odisha of M/s Odisha Mining corporation Ltd. is forwarded for consideration of the Ministry.

The proponent has one mine adjacent to this proposed site and both the sites are situated in the Gandhamardan hills, which is a pristine forest ecosystem of the State. Which is a habitat of wildlife including the flagship species, the elephants. There had been alarming incidence of elephants death due to drowning in the dangerously exposed mining pits of OMC.

Gandhamardan hills also cater to river Baitarani, through the feeder streams, which shall also be affected by mining activities. The Ministry may keep in mind these serious issues while considering this proposal.


(R. K. Dey)
Addl. PCCF (Central)