

Sub: Diversion of 315.813 ha of forest land (originally applied 413.745 ha) of forest land for Bailadila iron ore mining project in favour of M/s NMDC Limited in Dantewada Forest Division in Dantewada district of Chhattisgarh

1. This relates to diversion of above mentioned proposal. The proposal was last considered by the FAC in its meeting held on 29th to 30th April, 2014 and the Committee, recommended as under:
 - (i) In view of the contradiction in observation of the user agency and the Nodal Officer of the State Government and the Regional Office of the MoEF about the physical status of the forest land Regional Office may be asked to re- inspect the site along with some senior officer of the State Government and submit a detailed Site Inspection Report along with Clear and unambiguous recommendations.
 - (ii) The State Government may submit their comments on the observation of the Site Inspection Officer in Site inspection Report of 2011 about the requirement of the forest land for some of the item of works.
 - (iii) The User Agency should also furnish the status of reclamation of mined areas in the deposit 14 of Bailadila complex which is being mined since 1963 and now exhausted of the minerals.
 - (iv) The State Government may also require to submit following information
 - a. Compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 in accordance with MoEF's guidelines dated 3/8/2009 and 5th July 2013
 - b. Duly authenticated Differential GPS maps of the land proposed for diversion and land identified for CA, 10 Km radius map indicating the position of the Protected Areas and other mines and forest cover map of the proposed area.
 - c. Revised CA scheme after identifying non forest land for CA, along with site suitability certificate.
2. The above recommendations of the FAC were communicated to the Regional Office of this Ministry and State Government of Chhattisgarh by the Ministry vide its letter dated 26.05.2014. The Regional Office, Bhopal vide its letter dated 24.06.2014 has submitted the site inspection report of the area.
3. As per the site inspection report the user agency has revised the area required for mining project to the tune of 315.813 ha (413.745 ha proposed originally). Out of the 315.813 ha area for environment conservation shall not be disturbed by the project proponent and tree felling will be limited to 216.26 ha only. Total number of trees proposed to be removed shall be limited to 36,332. However felling will limited to 194.80 ha involving 17,142 trees over a period of 30 years of mining lease.
4. The Principal Chief Conservator of Forests, State Government of Chhattisgarh, Raipur vide their letter No. *Bhu-Praband/Khanij/331-42/1634* dated 23.07.2014 has also furnished the compliance in respect of Ministry's letter dated 26.05.2014. Summary of the same is given as under:

- (i) Regarding contradiction in the area as observed by the FAC (Para 1 (i)) above, the State Government has informed that the Regional Office, Bhopal has in its Site Inspection Report (SIR) dated 24.06.2014 informed that the proposed diversion area of 413.745 ha reduced after site inspection to 315.813 ha.
- (ii) The State Government has submitted their comments on the SIR of the Regional Office, as given under:

a) Para no: 20 of page no 8 of SIR

Observation of Regional Office: it may be seen in table 3 in point no: 2 that an area of 29.538 ha has been proposed for mining roads”. This area is over and above about 3.5 kms of “approach road” proposed over 6.79 ha of forest land. Assuming a width of 20m for these roads as proposed for approach road in the same table (which is in itself unrealistic given the mountainous terrain of the location of the proposal) the length of the mining road works out to be 14.769 kms, which appears to un realistic.

Comment: the user agency has clarified that the “mining roads’ shall become part of area under mining and no separate area under mining roads is required. However, approach road is required within mine lease. The area required for approach road within M.L is 7.93 ha the user agency has submitted revised land use plan. Details are given in table below.

Table: Revised land use

S. No.	Particulars	Area in ha
1	Area under mining	122.000
2	Approach road	7.930
3	Infrastructure	36.330
4	Waste dumps	45.450
5	toe wall for waste dumps	4.550
6	area for environmental conservation works	99.553
7	Revised area	315.813

Observation of Regional Office: an area of 16.00 ha has been sought for infrastructure (S.no: 5 in Table 3 on page 3) however, structure-wise detailed breakup of the same not been provided.

Comment: Earlier, the user agency has proposed an area of 16:00 ha & 48.067 ha totaling 64.067 ha for creating infrastructure facilities. During site inspection by APCCF (Central), Bhopal the area has been reduced by the user agency by from 64.067 ha to 36.330 ha. The detailed break-up of the infrastructure area is given in Table below.

Break up of infrastructure area (36.33 ha)

S. No.	Particulars	Area in ha
1	Mineral storage	6.00
2	Dumper repair shop	4.00

3	Road, conveyor, site office, water pipeline	12.00
4	Electric sub-station	2.00
5	Central stores	3.00
6	Mining office, first Aid room training & safety office, time office and industrial canteen	3.53
7	Security barrack and watch towers	3.00
8	Dumper and HEM washing platform	1.50
9	Dumper platform	1.05
10	Effluent treatment plant	0.25
	Total	36.33

- a) **Observation of Regional Office:** An area of 182.22 ha has been sought as “undisturbed area between infrastructure facilities (Ref. Table 3 pg. 2-3 of this report). There appears to be no need for this area to be transferred to the user agency and this can be deleted from the proposal.

Comment: It is to clarify that earlier, user agency applied for mining lease over an area of 613.34 ha in respect of Bailadila deposit-13. After joint inspection with local forest department authorities, the area was reduced to 413.745 ha by deleting the areas falling towards east and western side of earlier applied lease area in view of non-mineralized zone. As per approved mining plan of IBM, an area of 182.228 ha is categorized as un-disturbed area (to be afforested) within M.L. area of 413.745 ha. As the 182.228 ha is falling in patches between infrastructure facilities and below waste rock dump areas within mining lease. Purpose wise breakup of 182.228 ha area is given in Table below.

Break up of undisturbed area of 182.228 ha

S. No.	Particulars	Area in ha
1	Buttress wall, contour drain, etc at toe of waste dumps (8 no.s)	13.020
2	Area under check dams & soil erosion control measures	90.485
3	Area in between infrastructures to be retained within M.L.	11.39
4	Other areas to be retained within M.L for soil erosion control measures.	57.773
5	Safety zone area (7.5m inside ML Boundary)	9.560
	Total	182.228

Note: soil erosion control measures includes works such as construction of brushwood check dams, loose boulder check dams wrapped in chain link mesh, contour trenching / contour bunds, sowing of seeds and plantation to protect downstream area.

As per the observation made by APCCF (Central), Bhopal during site inspection, the user agency has excluded 97.932 ha thickly wooded area from 182.228 ha meant for

un-disturbed areas between infrastructure facilities, etc. An area of 99.553 ha which is falling below waste rock dumps is proposed to be retained by user agency for undertaking soil conservation works. The detailed break up of 99.553 ha is given in Table below:

Break up of area for Environmental conservation works

S. No.	Particulars	Area in ha
1	Buttress wall, contour drain, etc at toe of waste dumps	13.020
2	Area under check dams & soil erosion control measures	20.000
3	Area in patches retained between waste dumps and mining area for soil conservation works.	60.233
4	Safety zone area	6.300
	Total	99.553

b) Observation of Regional Office: the para 20 of site inspection report of 2011 recommended that area requirement for active mining would be only 29.31 ha (19.23 ha for mining & 10.08 ha for OB dumping) in the forest 20 years.

Comment : the user agency has provided area to be broken (required) for mining and area required for waste dump in Tabular column for different time periods say 1st year, 2nd to 5th year, 6th to 10th year, 11th to 15th year, 16th to 20th year like so on till 36th to 40th year. While considering the area required for mining and waste dump for first 20 years, the cumulative area from 1st year to 16th to 20th year shall be added instead of recommending only the area to be broken in 16th to 20th year period. The cumulative area requirement for mining and waste dump in first 20 years till life of mine is given below:

S. No.	Year	Production in million ton	Area to be broken for mining in Ha	Cumulative Area in Ha	Area required for waste dump in Ha	Cumulative area in Ha
1	1 st year	0.70	8.65	8.65	0.33	0.33
2	2 nd to 5 th year	8 (2.0 every year)				
3	6 th to 10 th year	44.00	25.11	33.76	3.41	3.74
4	11 th to 15 th year	50.00	16.06	49.82	9.21	12.95
5	16 th to 20 th year	50.00	19.23	69.05	10.08	23.03
6	21 st to 25 th year	50.00	23.30	84.97	6.03	29.06
7	26 th to 30 th year	50.00	23.30	108.27	9.79	38.85
8	31 ST to 35 th year	40.00	12.87	121.14	6.60	45.45
9	36 th to 40 th year	37.993	0.86	122.00	-	45.45

From the above Table, it may be seen that the area requirement for active mining and OB dumping would be 92.03 ha (69.05ha for mining & 23.03 ha for OB dumping)

instead of only 29.31 ha in first 20 years. However, Government of India, Ministry of Mines, New Delhi vide letter no: 5/166/2006-M-IV dated 13/02/2007 addressed to the Secretary to the Govt. of Chhattisgarh, MRD, Raipur has conveyed the approval of Government of India to the grant of Mining lease for iron ore over an area of 413.745 ha of Biladila Deposit no: 13 in favour of NMDC Limited for a period of 30 years. The period of Forest clearance will be co-terminus with period of Mining Lease. Hence, the area requirement upto 30 year shall be considered for diversion of forest land for mining, OB dumping part from the area required for various infrastructure facilities which shall come up in forest 5 years period. However, the area required for mining and OB dumping beyond 30th year till life of mine i.e. upto 40th years can't be excluded as the area forms within ultimate pit boundary. It is to further clarify that user agency shall undertake tree felling in a phased manner over a period of time with prior approval of Forest Department as per the requirement of area for mining, OB dumping and for other facilities. Further, trees felling will be done only in case of necessity.

During the field visit, it was felt that there are certain wooded area that need not be disturbed and can be excluded from the earlier extent of forest land proposed for diversion of 413.745 ha. Thus, the diversion can be considered for only 315.813 ha.

(iii) Regarding status of reclamation of mined out area of Baildila deposit 14 complex, the State Government has submitted the following:

Since 1966, NMDC is mining of Bailadila No.14 with a production capacity of 2 million ton per annum. The original reserves proved at Deposit no: 14 at the time of opening of the mine in 1965 were 101 Million tones upto 1005 MRL. During the initial period, there were limitations on mining & explorations in Deposit no: 14 due to Hard Ore Zone, demand for High grade lump ore only, exploration was limited to lesser depth (<100m) due to constraints in drilling technology. Later on, the development of technology like pelletization (fine ore as raw material) in blast furnace has resulted in demand of fine ore in the market from the year 1990 onwards.

Meanwhile, NMDC proved additional iron ore reserves of 44.89 million tones upto 1005 MRL as on 1994 and 337.89 million tones upto 813 MRL as on 2013 at Bailadila Deposit-14. till 31/3/2013, the ore excavated is 142.54 million tones and balance iron ore reserves available are 341.24 million tones. The production capacity of Deposit-14 mine is 5 million tones per annum. Based on current iron ore reserves and production capacity of mine, the life of mine is 68 years. Thus, the Deposit no: 14 is not going to be exhausted shortly.

Since the deposit throughout is not homogeneous, ore is being mined from several blocks simultaneously and is blended from mineral conservation point of view. Mining of iron ore in the Deposit-14 mine is remaining active and is moving laterally and vertically from top to bottom benches with bench height of 12m. Excavation for iron ore continues till date within the broken land, reclamation could not be done in the position during different periods is given at Plate no:1.

However, NMDC has proposed reclamation programme over 199.195Ha of Bailadila Deposit-14 based on progressive Mine Closure Plan of Mining Scheme of Bailadila Deposit-14 which is duly approved by IBM. The Plan showing reclamation programme of mined out areas and waste rock dumps as approved by IBM is given in Plate no. 2.

- (iv) The State Government has submitted a certificate issued by the District Collector, South Bastar Dantewada regarding the compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 vide letter dated 248/Khanij/2014-15 dated 14.07.2014 and resolution of Gram Sabha.

Examination of the same revealed that the compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has been submitted in accordance with the MoEF&CC's letter dated 3.08.2009 read with Guidelines dated 5.02.2013 and 5.07.2013. The District Collector, Dantewara has issued certificate dated 11.07.2014 (Pg 51-52/c) certifying that complete process for identification and settlement of rights under the Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has been carried out and proposal was discussed in the meeting of concerned Gram Sabha (s) maintaining the prescribed quorum. The Gram Sabha has given its consent/NOC issued to the project. Documentary evidences in support of settlements of rights under the Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 may kindly be seen at Pg 51-56/c.

- (v) Regarding revised CA scheme, as per the recommendation of the FAC, the State Government has informed that as per share holders agreement and joint venture agreement between NMDC and CMDC, the ratio of equity holding of NMDC and CMDC in the company is 51% and 49% respectively. Thus, NMDC is a major share holder in the Joint venture company and being a central Public Sector Undertaking is eligible for carrying out the compensatory afforestation over degraded forest land twice to the extent forest area proposed for diversion. The revised forest area proposed for diversion is 315.813 ha. The cost of CA works out to Rs. 29 Cr at the prevailing rates of Government of Chhattisgarh, Forest Department @ Rs. 4,51,000 per ha.

A copy of Survey of India troposheet depicting the area identified for CA along with the geo-graphical coordinates and CA scheme of 10 years has also been submitted by the State Government (59/c).

REVISED SITE INSPECTION REPORT SUBMITTED BY THE REGIONAL OFFICE, BHOPAL IS GIVEN AS UNDER:

- 1. Legal status of the forest land proposed for diversion:**
Reserved Forest
- 2. Item-wise break-up of the forest land proposed for diversion:**
The revised item wise break up detail of forest land as provided by user agency after site inspection is as follows:-

Table 1 (Revised Land use)

S. no	Particulars	Area in ha
1	Area under mining	122.00
2	Approach road	7.930

3	Infrastructure	36.330
4	Waste dumps	45.450
5	Toe wall for waste dumps	4.550
6	Area for environmental conservation works	99.553
7	Revised area	315.813

Table 2 (Break-up of infrastructure area (36.33Ha))

S. no	Particulars	Area in ha
1	Mineral storage	6.00
2	Dumper repair shop	4.00
3	Road, Conveyor, Site office, water pipeline	12.00
4	Electric sub-station	2.00
5	Central stores	3.00
6	Mining office, First Aid room, Training & Safety office, Time office and Industrial Canteen	3.53
7	Security barrack and watch towers	3.00
8	Dumper and HEM washing platform	1.50
9	Dumper platform	1.05
10	Effluent Treatment Plant	0.25
	Total	36.33

Table 3 (Break up of area for Environmental Conservation works (99.553 ha))

S. no	Particulars	Area in ha
1	Buttress wall, contour drain, etc at toe of waste dumps	13.020
2	Area under check dams & soil erosion control measures	20.000
3	Area in patches retained between waste dumps and mining area for soil conservation works.	60.233
5	Safety zone area	6.300
	Total	99.553

User agency proposes to undertake following works under soil conservation works:

- Afforestation with local species
- Brushwood check dams
- Loose boulder check dams wrapped in chain-link mesh
- Contour trenches / contour bunds

Plan showing the revised land use pattern excluding the thickly wooded areas (97.932 ha) of the above area is enclosed as **Plate: 1**.

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

No residential building will be constructed in the area. Details of other buildings for providing infrastructure facilities are given in Table 2 above

4. Total cost of the project at present rates:-

Rs. 2194.42 Cr.

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

No.

6. Vegetation:-

(i) Status:

During the inspection of the site it was seen that the forest land falls in different beats and compartments. Density of vegetation in these areas is given in the **Annexure 4**. The CCF, Jagdalpur informed that density of vegetation varies between 0 to 0.5 as we move from the top of the hill having deposit 13 down to the depressions. As per the earlier proposal, no. of trees to be felled was as given below:-

- | | |
|--|-------|
| a) Total number of trees to be felled: | 36332 |
| b) Number of trees to be felled of girth below 60cm: | 26210 |
| c) Number of trees to be felled of girth above 60cm: | 10112 |

During the field visit, it was felt that there are certain well wooded areas that need not be disturbed and can be excluded from the earlier extent of forest land proposed for diversion of 413.745 ha. Thus diversion can be considered for only 315.813 ha. Out of this an extent of 99.553 ha, meant for environment conservation works, will not be disturbed by the user agency and tree felling will be limited to 216.26 ha only and that also if unavoidable. The number of trees to be removed shall be limited to 17142 over an extent of 194.80 ha during period of the lease i.e. 30 years.

It is also pertinent to note that felling of trees is proposed to be carried out in a phased manner as given below.

Table 4 (Phase wise Tree felling plan)

Phase	Period of felling	Extent of forest involved in ha.	Number of trees to be cut
I	1 st to 5 th year	53.81	4735
II	6 th to 10 th year	29.09	2560
III	11 th to 15 th year	25.84	2274
IV	16 th to 20 th year	29.88	2629
V	21 st to 25 th year	22,52	1982
VI	26 th to 30 th year	33.66	2962
	Total	194.80	17142

The remaining trees over an extent of 21.46 ha shall be removed if and when the lease is renewed.

(ii) Effect of removal of trees on the general ecosystem in the area

There is no doubt that removal of trees will have adverse impact on the local ecosystem. But as the felling will take place in a phased manner, the negative impact will be minimised to large extent. In the meantime mitigative measures will also be carried out by way of planting local species in and around the forest land proposed for diversion.

Important species:

Predominant tree species in the area include the following:

Phyllanthus emblica, Pterocarpus marsupium, Semecarpus anacardium, Anogeissus latifolia, Terminalia chebula, Syzygium cumini, Anathocephalus cadamba, Dillenia pentagyna, Garuga pinnata, Mangifera indica, Terminalia alata, Diospyros tomentosa

7. Back ground note on the proposal

- NMDC, the user agency, conducted initial exploration in 1977 and subsequently detailed exploration at Bailadila Iron Ore Deposit-13 at Kirandul, Chhattisgarh. Mining Plan has been approved by IBM, Nagpur on 21/4/2010 for development of Deposit-13 project.
- Iron ore from existing mines in the area is being used for catering to the requirement of long term customers and major Iron and steel plants of Country such as Visakhapatnam Steel Plant, KIOCL, Essar Steel, JSW Ispat Steel, etc.
- The user agency proposes to develop the Bailadila Deposit-13 project to meet the iron ore requirement of the state of Chhattisgarh.
- As per the current assessment, the total mineable reserve of Bailadila Deposit-13 is 324.698 million tonnes. The production capacity of the project will be 10 million tons of Iron ore over a period of 40 years including initial 5 years of mine development with a production rate of 2 MTPA.
- Mining will not intersect ground water table as the elevation of lease is more than 1200m above MSL. The method of mining is highly open cast.

8. Compensatory afforestation

- Compensatory afforestation area on account of forest land diversion of 315.813 ha over degraded forest land is 640 ha. C.A areas are identified in the Geedam Forest Range. Cost of C.A worked out Rs.29 Cr at the rate of Rs.4,51,314/- per hectare for 640 ha as per the prevailing rates of C.G. State Forest Department for revised mining lease area of 315.813 ha.
- The user agency has furnished fresh undertaking to bear cost of C.A charges. The revised C.A scheme spread over ten years is also enclosed. **(Annex-1)**

i. Whether land for compensatory afforestation is suitable from plantation and management point of view or not.

Yes.

ii. Whether land for compensatory afforestation is free from encroachments/other encumbrances.

Yes.

iii. Whether land for C.A is important from religious / archaeological point of view?

No.

iv. Land identified for raising compensatory afforestation is in how many patches, whether patches are compact or not.

C.A is envisaged over 640 ha of land falling in Geedam forest range in 14 patches ranging from 30 to 100ha.

v. Map with details

C.A map along with DGPS Co-ordinates of forest land identified for C.A are enclosed as **Plate no: 2**.

vi. Total Financial outlay:

Rs. 29.00 cr.

- 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.**

No violation.

- 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**

As per the information contained in approved Mining Plan, the top and lowest bench of the ultimate pit will be 1152 MRL and 828 MRL respectively. 5 pits will be formed till the end of the life of mine. Out of 5 pits, 1 pit will be formed as water body and rest 4 pits will be backfilled by waste generated during normal production period. The total backfilled area will be around 15.14 ha.

There will be 8 waste dumps around the ultimate pit area. The final spread of the waste dumps will be 44.45 ha. The toe wall, buttress wall, contour drain and check dams will be constructed below waste rock dumps to arrest soil erosion from dumped material.

Mined out areas will be taken up for afforestation as soon as they become passive. Afforestation will be started in the 3rd phase i.e from 11th year onwards on the exhausted mine benches.

Mining Plan along with Progressive Mine closure plan has been duly approved by IBM, Nagpur.

- 12. Details on catchment and command area under the project. Catchment area treatment plan to prevent siltation of reservoirs.**

Not Applicable

- 13. Cost benefit ratio**

1:33 (mentioned in the proposal).

- 14. Recommendations of the Principal Chief Conservator of Forests (PCCF) / State Government**

The proposal is duly recommended by the Nodal officer, the PCCF and the state Govt.

- 15. Regional APCCF shall give detailed comments on whether there are any alternative routes/alignments for locating the project on non-forest land.**

Mining being site specific activity, alternatives have not been explored.

- 16. Utility of the project:**

Number of Scheduled caste / tribes to be benefitted by the project

The user agency has informed that with the development of the project there will be a huge employment opportunity for the local people. The project provides direct and indirect employment to around 1500 people permanent employees and a large number

of works during the construction stage. It is also informed that about 400 to 500 local people of SC/ST will be benefitted directly / indirectly by this project.

The iron ore removed from this site will be utilised by various industries for production of iron ore and subsequent use by other industrial concerns. The initial period of the project is 30 years which is likely to be extended further. Therefore, it provides huge opportunity for employment to the local people as well as skilled labour coming from various part of the country.

17. Whether land being diverted has any socio-cultural/religious values. Whether any sacred group or very old growth trees / forests exists in the areas proposed for diversion.

No

18. Whether the land under diversion forms part of any unique eco-system.

No

19. Situation with respect to any Protected Area:

The proposed forest land for diversion is lying more than 50 kms away from the nearest protected area. i.e. Bhairamgarh Buffalo Sanctuary in NW direction from Bailadila Deposit No: 13.

20. Any other information relating to the project :

a) With regard to the issues raised in para-20 of the earlier site inspection report of Regional Office, Bhopal, the following is submitted.

20(a) The user agency has excluded mining roads from earlier land use plan as these roads shall become part of proposed active mining area. However, approach road is required for entering into this mine lease from nearby Bailadila Deposit-11C mine. The distance is 2.60km and width of the road is taken as 30m. Area required is 7.93 ha.

20(b) Earlier, the user agency has proposed an area of 16.00 ha & 48.067 ha totalling 64.067 ha for creating infrastructure facilities. During site inspection by APCCF (Central), Bhopal, the area has been reduced by the user agency from 64.067 ha to 36.330 ha. The detailed break-up of the infrastructure area is given in Table-2.

20(c) As per observations made by APCCF (C), Bhopal during site inspection, the user agency has excluded 97.932 ha thickly wooded area from 182.228 ha meant for un-disturbed areas between infrastructure facilities, etc. An area of 99.553 ha which is falling below waste rock dumps is proposed to be retained by user agency for undertaking soil conservation works. The detailed break up of 99.553 ha is given in Table-3.

20(d) It was observed that there was some confusion with regard to requirement of forest land. In this connection, Table-1 may kindly be seen which clearly shows the revised requirement of forest land by user agency.

20(e) The observation made by this Regional Office during its earlier site inspection is alright. However, user agency has explained that due to the advancement in

the technologies for extraction of mineral from the mines, the production targets have been revised upwards and therefore mining is still in progress in these project sites. The user agency has promised that as soon as mining work is completed, reclamation works on mined out areas and waste dumps will be taken up on top priority basis.

- b) An aerial view of the deposits 11 and 14, which are being worked by NMDC clearly shows that OB dumps were not being managed properly and that soil and silt are seen flowing into the adjoining forest land area. Preventive measures have to be taken by the user agency immediately. It was also observed that for afforestation purpose exotic species have been used in deposit 14. This has to be discouraged. Only local indigenous species have to be used for afforestation purposes and formation of green belt etc.

21. Recommendations of Regional APCCF along with detailed reasons:

The user agency i.e. NMDC being a Central Government Public Sector undertaking under the Ministry of Steel, Government of India produces over 22% of the country's iron ore requirement and therefore is a major producer of iron ore.

The existing operating mines of NMDC in Bailadila region, Chhattisgarh are presently catering to the requirement of iron ore to various major Steel plants of the country.

Even though huge quantities of iron ore is being mined in the Chhattisgarh State, a major quantity is being exported to the other part of the country leaving a huge shortfall against the demand of iron ore in the state of Chhattisgarh for local sponge/pellet/steel plants. The user agency proposes to develop Bailadila Deposit-13 for full fledged mining to cater to the requirement of local steel plants in the state.

After inspection by APCCF (Central), Bhopal, it was decided to exclude 97.932 ha thickly wooded forest land from originally applied area of 413.745 ha by user agency. The mining area and infrastructure facilities areas are right on top of the hill are found to have very little vegetation. There is hardly any soil on the top of the hill and whatever tree growth is seen along the slopes, as we go down, is stunted. Thick vegetation is seen only in the lower reaches of the slopes and these areas have been excluded wherever possible. Areas that could not be excluded from the proposal have been retained as environment conservation areas. The user agency shall not do any damage to the existing vegetation here. Instead, all efforts shall be made to augment the vegetal cover with the local species.

Due to exclusion the thickly wooded areas, the remaining extent of forest land is 315.813 ha from originally applied area of 413.745 ha by the user agency. A map showing the wooded areas excluded is also annexed (Plate – 1).

The number of trees proposed to be removed shall be limited to 17142 over an extent of 194.80 ha during period of the lease i.e. 30 years. This will minimise the negative impact on the ecosystem of the area.

Afforestation works and other soil conservation measures have been included in the revised land use plan which has to be strictly adhered to by the User agency. Only

local indigenous forestry species shall be planted as part of the afforestation programme.

A detailed conservation plan for Bailadila Deposit-13 mining lease prepared by M/s. Indian Institute of Bio-Social Research and Development, Kolkata has been approved by the Chief Wildlife Warden, Forest Department, Govt. of C.G, Raipur vide letter S.No-113/2014/973 dated 01/04/2014. User agency has committed to undertake the conservation at a total cost of Rs.839.445 lakh over a period of 10 years.

It has to be ensured that OB dumps are managed properly and that there is no spillage of the same into the adjoining forest land. Also only local forest species shall be used for afforestation works wherever required.

The Dantewada district is one of the most backward areas in the country and is dominated by tribal population which mainly depends on NMDC for direct and indirect employment for their livelihood. As the area is affected by left wing extremism, it is important that some industrial and mining activities are continued to be encouraged here to generate gainful employment and to wean away the youth from indulging in extremist activities.

The Addl. PCCF (Central), the Regional Office, Bhopal has recommended the proposal for diversion.

In view of the above, it is proposed that proposal may be placed before the FAC in its forthcoming meeting.

Factsheet of the proposal is also enclosed.

Sub: Diversion of 413.745 ha of forest land for Baildila iron ore mining project in favour of M/s NMDC Limited in Dantewada Forest Division in Dantewada district of Chhattisgarh.

1. The State Government of Chhattisgarh vide its letter dated 19.11.2010 submitted the above mentioned proposal seeking prior approval of the Central Government under Section-2 of the Forest (Conservation) Act, 1980. The Iron ore to be produced from this mining had been proposed to be used in the Vizag Steel Plant, Essar Steel and other Pig Iron Plants likely to come up in the area.
2. The proposal was considered by the Forest Advisory Committee (FAC) in its Meeting held on 26.08.2011 and the Committee, on the ground that area is located deep in undisturbed forest area, high biodiversity value, hilly terrain (involving 122 ha), no reclamation in any of the earlier mined areas by the NMDC, adequacy of the existing reserve of NDMC to meet their need, the Committee recommended the proposal for rejection. The above recommendations of the FAC were accepted by the Ministry and accordingly, the State Government was informed about the rejection of the proposal vide this Ministry's letter dated 9th January, 2012.
3. The State Government of Chhattisgarh vide its letter dated 5.06.2013 forwarded the justification furnished by the user agency to the observation of the FAC along with Approved progressive Mine Closure Plan, Biodiversity Survey and Conservation Plan. The State Government has also submitted that proposed iron ore project will be implemented by the Joint Venture Company (51:49) set up by the Chhattisgarh Mineral Development Corporation (CMDC) and National Mineral Development Corporation (NMDC) with an objective of the project is to provide iron ore to the iron based in the State of Chhattisgarh.
4. The project proponent, regarding reclamation of earlier mines, has indicated that all mining leases are active and presently no mined out area is available for reclamation. As such excavation is continuing till date within the broken land. It is also mentioned that proposed reclamation strategy is covered in the progressive mine closure Plan. Mined out area of 591.125 ha has been proposed to be covered under the reclamation as per the Mining scheme.
5. With regards to adequacy to existing mining reserve of NDMC to meet their iron ore needs, it has been mentioned that NMDC has been working in the Bailadila Iron complex since 1968. The State Government of Chhattisgarh has more than 85 sponge iron ore plants and given the external commitments of supplying iron ores, NMDC is able to meet only a part of iron ore requirements of the plants located in the State of Chhattisgarh. Beside this a new 3 MTPA Integrated Steel Plant at Nagarnar, Bastar, Chhattisgarh is also coming up shortly. The current production capacity of iron ore from Bailadila Sector is 36 MTPA against the projected demand of 50 MTPA leaving a shortfall of 14 MTPA. Existing production of iron from existing mines of NMDC cannot meet the total requirement of ore. Thus there is need of opening new iron ore mines in the Bailadila.
6. Further, with regards to biodiversity value of the area, NDMC has suggested a Habitat Development Programme over 412 ha to be divided into 20 annual working areas. A plan of worth Rs. 8.05 crores for a period of 20 years has been submitted by the

NMDC for covering soil and water conservation, improvement of fodder and grass lands, improvement of tree cover, conservation awareness and ecological monitoring etc.

7. Detailed development of the case may kindly be seen at pg 15-17/N.
8. In view of the above justification, the State Government has further requested this Ministry for re-consideration of the project.
9. The relevant guidelines issued under the Forest (Conservation) Act, 1980 are given at F/X.
10. It is also to mention that Hon'ble Chief Minister of Chhattisgarh vide his DO letter dated 23.01.2014 (F/A) has requested this Ministry to grant forest clearance to the project approval. Hon'ble Chief Minister has made following submissions for the consideration of this Ministry:
 - i. Subsequent to approval of Ministry of Mines, Government of India on 13.02.2007, Mineral Resources Department Government of Chhattisgarh conveyed its in-principal approval to the NMDC with a condition to obtain the required permission under FC Act, 1980.
 - ii. Bailadila iron ore deposit No. 13 will be developed jointly by a joint venture company of NMDC and CMDC Limited and the iron ore produced from this mine would be used for meeting the requirement of local sponge iron/steel making units which are facing problems in getting sufficient supply of Iron ore from the existing Mines of NMDC in Chhattisgarh.
 - iii. Country is gearing up for increasing of its steel production capacity, the State of Chhattisgarh, being a major iron ore producing state of the country has to play a major role in supply of iron ore to the industries based in the state generating ample opportunities of direct and indirect employment particularly in the naxal affected tribal region of Bastar (C.G.)

In view of the above submission, Hon'ble Chief Minister of Chhattisgarh has requested this Ministry for interventions to grant forest clearance to the Bailadila Deposit-13 iron ore mining project of Chhattisgarh State.

FACT SHEET

1.	Name of the Proposal	Diversion of 413.745 ha of forest land for Baildila iron ore mining project in favour of M/s NMDC Limited in Dantewada Forest Division in Dantewada district of Chhattisgarh.
2.	Location	
	i) State	Chhattisgarh
	ii) District	Dantewada
3.	Particulars of Forests	
	a) Name of Forest Division	Dantewada Forest Division
	b) Forest area involved	413.745 ha
	c) Legal Status/Sy. No	Reserve Forest
	d) Map	SOI toposheet -Enclosed (p-173 &186/c) DGPS Map – Not enclosed. 10 KM radius map – Not enclosed.
	e)	

4.	Topography of the area	-
5.	(i) Vegetation (ii) No. of trees which will be affected (iii) Density	<i>Amla, Beeja, Bhilma, Dhaora, Harra, Jamun, Kadamb, Karka, Karmotha, Kakkad, Kusum, Mango, Sajja, Tendu</i> , etc. at p-29/c. 36,323 trees to be felled at p-112/c. 26,208 below 60 cm 0.4 to 0.6
6.	Whether area is significant from wildlife point of view	Panther, bear, Sambhar, wild boar, wild dog and hare are occasionally spotted. Cattle kill by leopard reported in the area. Avifauna includes peacock, jungle fowl, spur fowl and titar (Pg 69/c). It does not form part of any National Park, Sanctuary or Biosphere Reserve. Nearest Protected Area is Indravathi Tiger Reserve at 75 Km (197/c).
7.	Details of Mining	
	i. Total project area	413.745 ha
	ii. Notified forest land	413.754 ha
	iii. Private land	Nil
	iv. Period of mining lease proposed	Thirty years (Pg 73/c).
	v. Total reserve	250 MT (p-66/c)
	vi. Reserves in forest area	250 MT
	vii. Reserves in non-forest area	NA
	viii. Annual estimated production	8 MTPA (73/c)
	ix. Nature of mining operation	Open cast
	x. Reclamation plans	-
	xi. Gradient of the mining area	30-35 degree Slope
	xii. No of labourers to be employed	Approx. 500 persons regular work force will be recruited on the rolls of NMDC
8.	Compensatory Afforestation	Compensatory Afforestation has been proposed over double degraded forest land i.e. 827.490 with total financial outlay is Rs.6,59,33,651/- with 7 years maintenance at p- 79-87/c. In 18 patches in PF.
9.	Catchment Area Treatment	-
10.	Rehabilitation of Oustees a) No of families involved b) Category of families c) Details of rehabilitation plan	Not applicable
11.	Reclamation of mined areas	The phased Reclamation Plan plans upto the abandoning stage would be prepared and submitted with the EMP to MoEF in due course at p-73/c.
12.	Cost Benefit Ratio	1:33 at p-104/c
13.	Recommendation i. DFO ii. PCCF iii. State Government	All have recommended the proposal. p-41/c. p-43/c. p-44/c.
14.	District Profile	

	(i) Total Geographical area of District	1560871.00 ha
	(ii) Total forest area of District / Divisional forest area	836185.50 ha
	(iii) Total area diverted since 1980	6043.564 ha in 11 of cases
	(iv) Total CA stipulated	Forest land : 7860.00 ha Non-forest land : Nil
	(iv) Total CA done since 1980 (as on 29.03.2003)	Forest land : 7860.00 ha Non-forest land : Nil ha
15	Compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	Compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has not been submitted by the State Government.

Other Remarks:

1. Deposit no. 14 of Bailadila complex started operation in 1968 and is exhausted. Deposit no. 13 is replacement. The existing infrastructure of the deposits 14 and 11 will be used.
2. There is no historic site located in the area.
3. The user agency has given an undertaking to bear the cost of CA, NPV and safety zone conditions
4. The total cost of the project is 2000 crores (g 192/c).
5. The Mining Plan has been submitted with progressive Mine Closure Plan.
6. The nearest State Highway is originating at Kirandul, which is about 14 KM from the proposed ML area.
7. No violation of the Forest (Conservation) Act, 1980 has been reported.

Site inspection Report:

1. The site inspection has been done by the Regional Office, Bhopal.
2. The proposed area includes
Dense forest (0.6 to 0.8) -60%
Open forest (0.4 to 0.1) – 30%
Forest Blank (< 0.1 %) -10 %
3. The total cost of the project is Rs 2,000 crores.
4. The life of mine is 45 years and reclamation to be taken up only therefore.
5. The detailed breakup provided the user agency:

Sl no.	Item	Total Area (ha)	Remarks/corridor
1	Infrastructure		
	Conveyor	6.462	(Width too wide)
	Electric line	4.880	30 m
	Pipe line	0.217	20 m
	Approach road	6.970	1 m

	Mining Road	29.538	20 m
	Total Infrastructure	48.067	
2.	Main mining Area	122.00	
3.	Waste dump	45.45	
4.	Infrastructure	16.00	Break not given
	Undisturbed area infrastructure facilities	182.228	(Not needed)
5.	Grand Total	413.745	

6. Out of the total area, 167 ha (122 ha for mining and 42.45 ha for OB dump) is needed in 45 years. Till 20th year only 29.31 ha needed (19.23 ha mining and 10.08 ha OB dump). So only this is recommended.
7. There are 6 mining lease of 2696.224 ha in the area and all active. No over dump plantation/leveling or reclamation is carried out.
8. NMDC justified new area for meeting projected demand of 43.5 MTPA from the present 34 MTPA.
9. During the course of S.I. certain issues (para 20 of the report) pertaining to requirement of land, item wise usage of forest lands for various activities, periodic requirement of forest lands were raised were not replied satisfactorily by the user agency. Regional CCF has recommended for consideration subject to the condition the NMDC shall furnish suitable justification against the issues raised.

Recommendation of Regional CCF alongwith details reasons:

The 413.745 ha reserve forest area proposed for diversion in favour of NMDC for iron ore mining in Dantewada Forest Division, Chhattisgarh was inspected by this office on 08.03.2011. The area in question comprises of good teak and miscellaneous species forest (Para-6 of the report). The dense forest (0.6-0.8 crown density) makes 60% of the total area and remaining area is open forest and blanks. Based on plot enumeration, it was estimated that about 36,323 trees will have to be felled out of which, 26,208 (>72%) are below 60 cm girth or small size trees. The exploration surveys and prospecting exercise carried out in past has indicated that the area has rich deposit of iron ore of high grade. It is estimated that the about 281 million tones of reserves are available in the area. The iron ore from this area will feed some steel plants in teharea besides export to other countries. The area is not very significant from wildlife point of view, the details are at pare-5 of the report. The mine will have life of 45 years. There is no displacement of any tribal/forest dwellers/persons involved. The user agency has not done violation of FCA, as reported.

During the course of S.I. certain issues (para 20 of the report) pertaining to requirement of land, item wise usage of forest lands for various activities, periodic requirement of forest lands were raised which have not been replied satisfactorily by the user agency. Further, the user agency is already having a number of existing lease over 2696.224 ha area and justification for applying for fresh lease was not given.

The proposal is recommended for consideration of the Ministry subject to the condition that, NMDC, a Govt. of India undertaking shall furnish suitable justification against the issues raised in para-20 of this report.

Comments of Regional CCF regarding site-specify of the project:

The presence of iron ore in terms of quantity and quality as certified by the competent agencies makes the present proposal for mining a site specific activity.

Utility of the project:

The proposed project would generate 10 million tonnes of iron ore per annum.

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

No

Situation in respect of any Protected Area:

It was informed that the nearest PA is Indravati Tiger Reserve located about 75 kms away.

Recommendation of the Site Inspecting officer:

- a. It may be seen in Table 3 in point no. 2 that an area of 29.538 ha has been proposed for “mining roads”. This area is over and above about 3.5 kms of “approach road” proposed over 6.970 ha of forest land. Assuming a width of 20 m for these roads as proposed for approach road in the same table (which is in itself unrealistic given the mountainous terrain of the location of the proposal), the length of the mining road works out to be 14.769 kms, which appears to be unrealistic.
- b. An area of 16.00 ha has been sought for infrastructure (S. No. 5 in table 3 on page 3). However, structure-wise detailed bread-up of the same has not been provided.
- c. An area of 182.228 ha has been sought as “**Undisturbed area between infrastructure facilities**” (Ref. Table 3, pg. 2-3 of this report). There appears to be no need for this area to be transferred to the user agency and this can be deleted from the proposal.
- d. Out of the total area required for the project, the requirement of forest land for active e mining would be 167.45 ha (122.00 ha for mining and 42.45 ha for OB dumping). This area requirement for mining would be **for a period of 45** years.

The user agency was asked to provide the periodic requirement of area for active mining. The information provided by the user agency is shown in Table -6 below:

Table -6

S. No.	Year	Production in Million tone	Area to broken for mining (ha)	Area for Waste Dump (ha)
1.	1 year	0.70	8.65	0.33
2.	2 to 5 year	2.0 every year		

3.	6 to 10 year	44	25.11	3.41
4.	7 to 15 year	50	16.06	9.21
5.	16 to 20 year	50	19.23	10.08
6.	21 to 25 year	50	15.92	6.03
7.	26 to 30 year	50	23.30	9.79
8.	31 to 35 year	40	12.87	6.60
9.	36 to 40 year	37.993	0.86	Nil
	Total	324.693	122.00	45.45

It may be seen from the above table that the area requirement for active mining would be only 29.31 ha (19.23 ha for mining and 10.08 ha for OB dumping) in the forest 20 years. Since the proposed area has dense forests in majority of the area, it is recommended that if at all the proposal is considered for approval, it should be first allowed for a period of a maximum period of 20 years only over a period of 29.31 ha. Extension of the area can be considered after the expiry of this period.

- e. It was informed that at present, there are six approved mining leases of NMDC in on forest land. The total area under these leases is 2696.224 ha. The location of these mining leases is provided in Map-3. None of these mines have been exhausted and hence, no reclamation activity has been undertaken so far. No overburden dump plantation/leveling have also been undertaken by the user agency and it was informed that all dumps are active.
- f. Justification for opening new mine when older mines of NMDC are already in operation, some of them for about 40 years, was sought from the user agency. It was informed that the total production of NMDC mines situated in Bailadila totals to 34 MTPA (million tonnes per annum) whereas, the projected demand from Bailadila sector is 43.5 million tones. The proposed iron ore mine with a production capacity of 10 MTPA is supposed to meet this shortfall between demand and supply.
- g. The proposed area is to be operated under Joint Venture agreement between the user agency (NMDC) and Chhattisgarh Mineral Development Corporation (CMDC).
