

**Scrutiny Comments on draft 'Review & updation of Mining Plan' in respect of Donimalai Iron Ore Mine, ML No.2396 of M/s NMDC Ltd., covering 597.54 Ha of area in Donimalai Village, Sandur Taluk , Bllari District of Karnataka State.**

Table Nos. may be given corresponding to each of the table.

All the necessary changes may be made as per the terms & conditions of the Extension of the mining lease granted by the State Government.

**COVER PAGE:**

1. Name of the document may be corrected as "Mining plan including Progressive Mine Closure Plan" along with rule no. at all places in the text, certificates & plates.
2. Date of grant of ML, date of execution & Expiry of the ML may be given.
3. Lease period mentioned up to 03.11.2038 may be supported by the letter from the State DMG, Karnataka.
4. Proposed period of Review & updation of Mining Plan may be corrected and proposals may be given of only three years.
5. Under Category, it may be given as A-(FM)/Opencast/CPSU/Forest/Non captive.

**INTRODUCTION:**

6. The date of validity of the earlier approved Review & updation of mining plan may be corrected.
7. State wise leases already held by the lessee, other than the said lease may be furnished in this chapter.

**GENERAL:**

8. Para 1.0 (a): Para 1(a): In this para, the details like phone no., Fax, Mobile No and E-mail ID of the nominated owner may be given.
9. Para 1.0 (b): (i)The details of board of directors may be furnished in this para. (ii)In page no.9, it is mentioned as Modification & Review of Mining Plan, the same may be corrected.
10. Para 1.0 (c): In this para only one topo sheet no 57A/12is given where as in key plan (plate no.II) 57B/9 is also furnished. Clarification on the same may be given.

**LOCATION AND ACCESSIBILITY:**

11. Para 2.0(b): The co-ordinates in which the mining lease is bounded may be verified & corrected accordingly.

**DETAILS OF APPROVED MINING PLAN:**

12. Para 3.1:The details of the all the scheme/RMP/modification since the inception of the Mining Plan may be furnished. In remarks column, reasons for modification in brief may be given accordingly.
13. Para 3.4:The details of violations & its compliance may be given in this para.

## **PART-A; GEOLOGY & EXPLORATION:**

14. Para 1.0 (d): Name, address, E-mail ID & phone no of the exploration agency may be given.
15. Para 1.0 (e): (i) Year wise exploration (Pits & trenches) carried out in the past (since the inception of the mine) may be tabulated indicating year, dimensions, spacing etc along & across the strike/foliation with reference to geological plan may be furnished. (ii) Year wise boreholes carried out in the past (since the inception of the mine) may be tabulated indicating number of boreholes, type (Core/RC/DTH), diameter, grid interval, inclination, collar level, maximum depth and total meterage duly marked on the geological plan/sections. (iii) Grid pattern may be furnished in the details of year wise core drilling. (iv) Under details of sample analysis, findings in terms of quality may be enumerated in brief.
16. Para 1.0 (i): (i) Future exploration proposed may be tabulated indicating the year, type, no of boreholes, grid interval, depth, location & total meterage. (ii) Proposed future exploration may be aligned as per Rule 12(3) of MCDR, 2017 which requires detailed exploration (G1 level) to be carried out over the entire potentially mineralised area under the mining lease, within a period of five years from the date of opening of the mine.
17. Para 1.0 (j): The area under G-1, G-2, G-3 and G-4 with respect to the threshold value notified by IBM may be given in a tabular form based on the exploration carried out in the past. The same may be shown in the geological plan and sections as well.
18. Para 1.0 (K): (i) Section wise detailed calculation of reserve/resources may be furnished in this para. (ii) Reserves may be estimated by slice plan & cross sectional area method separately & variance may be analyzed & explained.
19. Para 1.0 (l): (i) Mineral reserve/resources may be furnished as per the format specified in the standard guidelines as given in “IBM Manual on Appraisal of Mining Plan 2014” & be corrected as per the section wise calculation. (ii) Recovery factor may also be discussed in this para.

## **MINING; OPEN CAST MINING:**

20. Para 2.0(A) (b) (I): (i) Dimension of the deposit given may be deleted from this chapter and placed in Geological chapter at the appropriate place. (ii) Permission of deep hole drilling & blasting from DGMS may be enclosed in respect of secondary blasting. (iii) The existing details of mine pit, OB dumps, backfilled area & tailing pond may be furnished indicating the location (co-ordinates), quantity, area covered and other details may be enclosed in a tabular column.
21. Para 2.0 (b): (i) As half of the year has been passed, the proposed quantity of production & development in FY 2020-21 may be reviewed and corrected accordingly. (ii) Bulk density & recovery factor of each of the material proposed to be handled in the mine may be tabulated below the in-situ excavation table. (iii) The future mining proposals may be given for the remaining period, as the lease had expired on 03.11.2018. Necessary corrections may be made at all places in the text & plates.

22. Para 2.0 (b) (II): (i) A table may be inserted giving the tailing stack identification no., year wise handling, estimated recovery of saleable ore & quantity of waste likely to be generated in case of tailing re-handling, along with opening & closing stock.(ii) It must be ensured that the total production of mineral from mine & tailing dump may not exceed the approved quantity by the CEC.

23. Para 2.0 (c): (i) Year wise, section wise calculation of production & development quantities may be given in this para aligned to the summary of in situ excavation table for plan period & discussed in brief. (ii) The part of the mine proposed to be outsourced for production or development may be discussed in year wise proposal. (iii)The details of working may be furnished in the below appended table.

Year	Area	Sections	Advancement	No of Benches		Level mRL		Working depth	UTM coordinates	
				Ore	Waste	Top	Bottom		Northing	Easting

(iii) Details of dumping may be given in the table given below:

Year	Extent (Ha)	Quantity (Tons)	Top mRL	Bottom mRL	No of Stages	Slope angle	Northing coordinates	Easting coordinates

24. Para 2.0 (e): In this para discussion on site for disposal of Overburden, ground preparation, dumping inside/outside the UPL may be discussed citing the reference of the section line & plate no.

25. Para 2.0 (f): (i) Re-grassification of the entire mined out area at the conceptual stage of mining may be proposed & few sections of the same may be given. (ii) Land use pattern at the conceptual stage of mining may be furnished.

26. Para 4.0(b): In this Para, it is to clearly state that the dumping ground is proved for presence or absence of mineral supported by bore hole data and be outside/inside the UPL.

24. Para 4.0 (c): (i) Year wise proposed environment protective measures like construction of retention wall, gully plugs and check dams as per the approved R & R plan may be furnished in this chapter, in particular to dump ID AD1. (ii) In case the height of the dump or backfilling area is in excess of 10-15 mts, suitable terracing may be proposed for the existing dumps/backfilled areas. (iii) Manner of disposal of waste, configuration and sequence of year wise build up of dumps & other details may be furnished in the appended table

Year	Dump No	OB Quantity proposed	Area in Ha	No. of Stages	Level in MSL, Top RL & Bottom RL	Location Coordinates	Slope Angle

27. Para 6.0(a): In this para, it may be mentioned if the processing plant is within or outside the mining lease area.

28. Para 6.0(c): The disposal method for tailing or reject generated from the processing plant may be clearly mentioned in this para.

29. Para 6.0(g): Activity wise breakup of the requirement of water may be given to form a water balance chart.

30. Para 8.2: (i) A tabular column may be inserted for monitoring the environment parameters of air, water, noise & soil in the core & buffer zone with their respective locations and no of samplings proposed in core & buffer zone. The frequency of the monitoring may also be indicated. (ii) In the table of year wise afforestation, details like survival rate, area covered, species proposed to be planted & cost may be given. (iii) Mitigation measures to control air pollution in the working pit may be reviewed and corrected accordingly.(iv) Mitigate measures for blasting may also be given.
31. Para 8.3.1: Land use pattern at the end of plan period & conceptual stage may be tabulated and discussed in this para.
32. Consent letter/Undertaking /Certificate may be complete in all respect as per the format specified.
33. Address of the Qualified Person's may be removed.

**34. PLATES:**

- a) Surface Geological Plan (Plate No.IV, IV-A & IV-B): (i) Area under G-1, G-2, G-3, G-4 & non mineralized area may be shown prominently & tabulated.(ii) Previous boreholes ,pits & trenches made for exploratory purpose may also be shown and indexed accordingly. (iii) The feature proposal of exploration may be marked year wise in different colours & tabulated. (iv) Only geological features may be depicted on this plan. Other surface features may be removed.
- b) Geological Cross Sections (Plate No.V-A to V-G): (i) Previous & proposed boreholes, pits & trenches made for exploratory purpose may be shown on the section lines indexed accordingly. (ii) All the features like existing workings, dumps & backfilled areas may be shown on the respective section lines. (iii) Year wise, pit wise proposed workings sections may be given in production & development sections.
- c) Production & Development Sections (Plate No.VI-A to VI-F): (i) UPL at the end of Plan period may be shown in each of the section line. (ii)Year wise progress of dumping & backfilling may be shown on the respective section lines & indexed accordingly.
- d) Production & Development Plan (Plate No.VI-A1 to VI-E4): (i) the 1<sup>st</sup> year production & development plan should be aligned with surface plan & from 2<sup>nd</sup> year onwards with the previous year proposal showing the updated position of the previous year. (ii) Proposed waste dump area with location may be shown on year to year basis along with plantation proposal. The same may be indexed accordingly.
- e) Environment Management Plan (Plate No.VII B): Year wise proposed engineering measures as approved in R & R plan & afforestation proposed may be shown prominently & indexed.
- f) Conceptual Plan & Sections (Plate No. IX, IX-A & IX-B): (i) In this plate only the details pertaining to conceptual land use pattern may be shown with outlines and the activity proposed to be conceptualised may be shown. (ii) Re-grassification of the entire mined out area at the conceptual stage of mining may also be proposed & shown in sections.
- g) Conceptual Section (Plate No IX-C): (i) This plate may be renamed as Dump management plan. (ii) Year wise progress of dumping & backfilling may be shown on the respective section lines & indexed accordingly.

h) Financial Assurance Plan (Plate No.X): (i) Only the outline may be marked for different land use particulars at the end of plan period as per the Financial assurance table with solid fill colours and indexed. (ii) All the other features may be deleted.

**35. Annexure:**

Copy of the lease deed/Extension of the mining lease.

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