

**Scrutiny Comments on draft ‘Modification of Review & updation of Mining Plan’ in respect of Venkatagiri Iron Ore Mine, ML No.2551 of M/s Lakshmi Minerals covering 21.73 Ha of area in Venkatagiri Village, Sandur Taluk , Ballari District of Karnataka State.**

**COVER PAGE:**

1. Name of the document may be corrected as “Modification to the approved Review & updation of Mining Plan including Progressive Mine Closure Plan” at all places in the text, certificates & plates quoting their respective rule numbers.
2. Date of grant, Execution and date of expiry of mining lease area as per the lease deed may be given.
3. Break up of Forest & Non Forest land may be furnished.
4. Under Category, it may be given as A-FM/Opencast/Proprietary firm/Non captive/Forest.

**INTRODUCTION:**

5. Environment Clearance, Forest clearance and Consent for operation (CFO) of the mining lease may be discussed in brief. EC, FC & CFO letters may be attached as a part of annexure.
6. Specific orders/ guidelines or notifications received from the regulatory bodies if any pertaining to this ML may be discussed in this chapter briefly.
7. Temporary discontinuance period & reasons may be enumerated in this chapter.
8. Reasons for non working of ML No.2545 & 2561 may be specified clearly with the updated status under each of the ML held.

**LOCATION & ACCESSIBILITY**

9. Para 2.0(b) : The latitude & longitude furnished for the boundary pillars may be given as mentioned in the DGPS map.

**DETAILS OF APPROVED MINING PLAN:**

10. Para 3.1: (i) Modification to the approved review & updation of mining plan was approved on 13.06.2018. The same may be incorporated. (ii) Reasons for modification in the mining plan/scheme of mining may be given in the remarks column.
11. Para 3.2: Specific reasons for modification in the last approved mining plan may be given in this para.
12. Para 3.3: Review of approved proposals in respect of explorations, production, development & reclamation may be given in the appended table separately.

For exploration:

Year	No of bore holes /Pits/trenches planned	Total meterage proposed	No of bore holes achieved	Total meterage achieved	Deviation in % (+/-)	Reasons for deviation

For Production, Development & reclamation: (reviewed in separate tables)

Year	Production/Development /reclamation Proposed	Achieved	Deviation in % (+/- )	Reasons for deviation

13. Para 3.6: All the reasons may be discussed for modification with reasons & justification for modification.

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

14. Para 1.0 (a): Drainage pattern may also be discussed in this para.
15. Para 1.0(c): Local geological setup of the lease area may be given in detail.
16. Para 1.0 (e): (i) Information furnished in table no.17 & 18 on exploration carried out in the past may be reviewed as no such information was submitted in the past as per the modified RMP. (ii) Under Sample Analysis, Total number of samples collected in each exploration activity viz. boreholes samples, Trench samples, Pit samples etc and samples analysed may be provided in tabular format. Findings in terms of quality of Iron ore, Hematite siliceous ore & Float ores may be enumerated in brief.
17. Para 1.0(k): Float ore of spread over an extent of 7.72Ha is considered for Reserve estimation in proved (111) category, however, there is no sufficient exploration data (trenches/pits) to consider this area in Reserve category, the same may be verified and rectified and exploration (pitting/trenching) may be carried out in the float area to bring into Reserve category
18. Para 1.0 (j): (i)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 & discussed based on the exploration carried out in the past. The same may be shown in the geological plan and sections as well.(ii) Bulk density & recovery factor of each of the material handled in the mine given in this para may be supported by field test report from NABL accredited /Govt. authorised Laboratory.(iii) Ratio of Lumps to fines may be discussed in brief.

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

19. Para 2.0(A) (a): (i) Grade of the ore may be mentioned in each of the temporary mineral stocks furnished. (ii) HSIO has been considered as mineral and the same has been furnished under dumps. The same may be corrected. The location & dimensions of the dump for shale & HSIO may be verified & corrected.
20. Para 2.0 (b): (i) The proposed production proposals for the year the year 2021-22 may be given as per the capping fixed by the CEC & letter issued by the DMG, Govt. of Karnataka. Copy of the same may also be enclosed as annexure. (ii) The information furnished in table no.33 may be given in tons. (iii)Bulk density & recovery factor of each of the material proposed to be handled in the mine may be tabulated.
21. Para 2.0 (e): (i) The no of benches furnished with respect to top & bottom mRL may be verified & corrected. (ii) The details of working may be furnished in the below appended table.

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

(ii) 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

22. Para 2.0 (f): Backfilling, plantation, fencing of the worked out pit, converting into water reservoirs & re-grassification of the entire mined out area at the conceptual stage of mining may be discussed, proposed & few sections of the same may be given.
23. Para 3.0 (b): The maximum & minimum depth indicated in this para is not aligned with the information furnished in table no.39.
24. Para 4.0(b): In this Para, it has been stated that the dumping ground is on non mineralized area. The same may be supported by exploratory data.
25. Para 8.1: The existing land use pattern furnished may be given as per the FA table at all relevant places.
26. Para 8.3: (i) Mitigation measures to control air pollution, water pollution, noise & vibration may be given in this para. (ii) Proposed environmental monitoring station for air, water, noise, soil and vibration in core zone & buffer zone may be tabulated indicating the no of samples & frequency of monitoring.
27. Para 8.3.1: Land use pattern at the end of plan period & conceptual stage may be tabulated and discussed in this para including the manner in which the actual site of the pit will be restored for future use.
28. Para 8.3.5: The information on protective measures for reclamation & rehabilitation works may be provided as on date & also be proposed in this para.
29. Para 8.6: (i) The FA table no.35 may be reviewed wrt to green belt, mineral storage & others at the start of plan period & additional area requirement during the plan period so as to arrive the net area considered for FA calculation. The same may be corrected at all places in the text. (ii) For financial assurance calculation, Rule 27 (1) of Mineral Conservation and Development Rules, 2017 may be referred & accordingly Bank Guarantee may be submitted.
30. The format of the Consent letter/Undertaking /Certificate from the lessee may not be changed and all the points to be covered.

**PLATES:**

- a) Key Plan (Plate No. I /b): The approach road to the lease area may be marked & indexed.
- b) Surface Plan (Plate No.3): (i) Temporary mineral stacks, OB dump & subgrade mineral dump may be shown prominently & indexed accordingly.
- c) Geological Plan (Plate No.4): (i) UPL may be shown and indexed accordingly. (ii) This plan may duly be signed by the surveyor. (iii) In the Geological plan, it is observed

that, there is only one isolated bore hole (LMK 33) in the eastern side orebody and there are no boreholes in the near vicinity (i.e. 50m range), however, the stage of exploration shown has been considered as G1. As per MEMC Rule, 2015, the isolated borehole is not recommended for resource estimation. Hence, the same may be rectified and detailed exploration may be proposed to bring the entire area in G1 stage

- d) Geological cross sections (Plate No. 5): (i) As per MEMC Rule 2015, for General (G2) and detailed (G1) stages of exploration the depth continuity of mineralisation may be considered limited to the depth upto which direct evidence of mineralization is established. However, in many Geological Cross sections, depth evidence considered for Reserve/Resources calculations beyond the limit of drilling depth, the same may be rectified and Reserve/Resources may be recalculated and ultimate pit limit may be drawn accordingly. (ii) This plate may be signed by the surveyor. (iii) Section B-B' : at 250 – 280m section line, the surface geological area is not matching with the geological section, the same may be verified and rectified.
- e) Production & Development Plan (Plate No.6A - Plate No.6E): (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) The year wise production & development plans are not aligned with the information furnished in table no.15 of the text.
- f) Production & Development section (Plate No.7): (i) The UPL may be corrected in all the sections. (ii) The working pit top & bottom mRL may be projected & figure to be furnished. (iii) All the mineral stack & OB dump falling on respective section line may be shown.
- g) Reclamation Plan (Plate No.IV): (i) All the existing engineering measures may be shown prominently with different colours. (ii) The proposed garland drain & retaining wall may be shown in dark & the same needs to be mentioned in the text part as well.
- h) Conceptual plan & sections (Plate No.VI): Comments placed at Para 2.0(f) may be referred to draw this plate.

-----XXXXXX-----