

Scrutiny Comments on Examination of Draft Review and Updation of Mining Plan in respect of Jaisingpur Iron ore Mine (ML No. 2545) over an area of 34.14ha located in Jaisingpur Village, Sandur Taluk, Ballari District, Karnataka State, Submitted by M/s Lakshmi Minerals for approval Under Rule 17(1) of MCR, 2016

GENERAL

1. No cells may be left blank. Either “Nil” or “Not applicable” may be furnished.
2. If any relevant information pertaining to the ‘calculation’ or ‘supporting information’ or ‘clarification’ may be provided as foot note in the respective table/para.
3. Wherever additional information or supporting document is given in Annexure, Annexure no may be specified in respective paras.
4. Undertaking/Consent letter from the lessee may be digitally signed by the lessee.
5. Serial Numbers of all the chapters and sub paras should be as per the prescribed format. This may be verified and maintained as per the formats issued on FAQ on New Mining Plan format vide letter No.R-11011/1/IBM-M-A-MP/2012-CCOM-Vol-II dated 08/09/2021.

Chapter 1: GENERAL INFORMATION

6. Para 1.3.4.2: SBCB Approval validity is upto 23/04/2022, the same needs to be renewed and copy of the same may be submitted.
7. Para 1.3.4.5 Details of Annual Permissible production may be provided in Tabular form and mineral name may be specified.
8. Para 1.3.5.1 Location of Boundary Pillars details may be provided as per the New Mining Plan format.

Chapter-2: Geology & Exploration

9. **Para 2.1.4.6 Nature/Form of Ore:** Details given in bracket next to the lumps and fines ratio is not relevant, the same may be deleted.
10. **Para 2.1.4.8 Deposit Type:** may be specified as Iron ore float
11. **Para 2.2.1.5 Pitting:** Graphical litholog given for few pits as Annexure, the same may be provided in plan for all the exploratory pits along with chemical analysis (particularly Fe grade)
12. **Para 2.2.1.10 Chemical Analysis:** Total Number of samples analyzed may be specified in Sample ID.
13. **Para 2.2.1.13 Bulk Density:** Bulk Density Study is not conducted, the same may be conducted as per M(EMC) Rules, 2015 and SOP of CGPB and detailed study report may be enclosed.
14. **Para 2.2.1.14:** Area covered under exploration:**(i)** From the Geological Plan, it is observed that, the pit interval in general is about 100m x 100m and some pits are 100m x 80m interval. As per MEMC Rule 2015, for G1 level of exploration, the grid interval of the Pit should be 100m along the trend and 50m across. Hence, most part of the area explored comes under G2 level. Hence, the given information may be

reviewed in detail and updated in this para and respective calculations, Plans and sections may be updated. **(iii)** Mineralized area, non-mineralized area and area explored under different level (G1/G2/G3/G4) exploration may be marked on the Geological plan with polygon (area) feature and area details may be given in the Geological Plan.

15. **Para 2.2.2.5 Pitting:** Comments given in Para 2.2.1.5 also applicable to this para, information may be provided accordingly.
16. **Para 2.2.2.14 Area Covered under Exploration:** **(i)** Area details may be reviewed for its correctness and corrected suitably **(ii)** In the 2nd Table, details of area converted G1 from G2, G3 and G4 level may be given for the plan period and percentage of up-gradation in exploration during plan period w.r.t. exploration carried out before plan period may be specified.
17. **Para 2.2.4.1 Methodology:** **(i)** Recovery considered in the float ore and waste may be briefly explained. **(ii)** Average grade of Fe in float ore, lumps and fines ratio may be specified in this para.
18. **Para 2.2.4.2 Resource Calculation:** **(i)** Average grade of Fe may be provided in grade column. **(ii)** The calculation details given combined for the resources estimated in G1, G2 and G3 level, calculation may be made separately w.r.t. level of exploration and details may be provided as per the format. **(iii)** while considering the area explored under G1/G2/G3 level of exploration, grid spacing for pitting/drilling given in Para III of MEMC Rules, 2015 may be strictly followed.
19. **Para 2.2.4.5: Mining Factors or Assumptions:** Float ore deposits are considered to be of loose material and therefore the mine bench height may be restricted to maximum of 3 m and width of the benches 3 times of the bench height. Accordingly, the proposed bench height in this para may be corrected and all the excavation proposals be modified keeping the above recommended bench parameters in loose material float ore mining.
20. **Para 2.2.4.11 and Para 2.2.4.12:** **(i)** Reserves blocked in Safety Zone and 50m safety barrier for Public Road may be separately estimated. **(iv)** Foot note information of para 2.2.4.12 may be reviewed, the RMP submitted in the month of March 2022, however, the calculations are updated upto November, 2021. The same may be updated upto February 2022.
21. **Para 2.2.4.13:** **(i)** The Reserve/resources given as on 01/04/2021 should be inline with the existing approved document and figures given in Annual return. **(ii)** Updated Reserve/Resources as on 01/02/2022 or 01/03/2022 may be provided in this para by adding additional table. If any exploration carried out and Reserve/Resources updated after 01/04/2021, the same may be briefly explained before providing the updated Reserve/Resources. The quantity of ore mined from 01/04/2021 to 01/02/2022 or 01/03/2022 may be depleted from the Reserves. This Para may also be reviewed in detail and updated as per the comments given Reserve/Resources Calculation.
22. **Para 2.2.5: Future Exploration Proposal:** As per Rule 12(4) of amended MCDR, 2021, in the case of existing mining leases, *“Detailed exploration (G1 level) over the*

entire potentially mineralized area under the mining lease shall be carried out in the manner specified in the Minerals (Evidence of Mineral Contents) Rules, 2015 within a period of five years from the date of commencement of these rules.”. Hence, it is advised to propose the exploration activities as per the MEMC Rules during the year 2022-2023 itself instead of proposed during 2024-25 to cover the mineralized area into G1 level. Non-mineralized area need to be proved by geological mapping, exploratory pitting/trenching.

23. **Para 2.2.5.3: Pitting: (i)** As per the comments given in Para 2.2.5, the proposals may be updated. (ii) For each running meter depth one sample may be collected and analyzed, accordingly, tentative number of samples going to be generated during the course of exploration may be provided in Para 2.2.5.7 Sampling.

Chapter -4: MINING METHOD (OPENCAST)

24. **Para 4.2.1.2.2** In Stack Details it is mentioned as Boulder Stock, to have more clarity it may be mentioned Mineral name along with the details given.
25. **Para 4.2.2.1 Bench Parameters: (i)** Float ore deposits are considered to be of loose material and therefore the mine bench height may be restricted to maximum of 3 m and width of the benches 3 times of the bench height. Accordingly all the excavation proposals be modified keeping the above recommended bench parameters in loose material float ore mining (ii) Number of benches mentioned in mineral may be verified for its correctness. (iii) In maximum depth of working column, mRL may also be provided for ready reference with sections.
26. **Para 4.2.2.2: Year Wise Opencast Development:(i)** The comments given in Para 4.2.2.1 may be considered wherever it is applicable. **(ii)** Cells of location of advancement column are merged, the same may be unmerged and details may be provided in all the cells as per the format. **(iii)** Recovery percentage mentioned as 75%, however balance 25% not shown in Mineral Reject, the same may be reviewed and corrected suitably. (iii). As per the Mining Plan Template, the stripping ratio is OB to Ore; hence the details given in this para may be verified and corrected. **(v)** Detailed calculation along with bench height may be provided in Annexure and also on Production & Development Plan.
27. **Para 4.3.1:** (i) Bulk Density Study may be undertaken as per MEMC rule/SOP of CGPB and Report may be enclosed.
28. **Para 4.3.2: Insitu Mining: (i)** the calculation may be made with OB to Ore Ratio. **(ii)** Cells of Grade range column are merged, the same may be unmerged and details may be provided as per the format.
29. **Para 4.6.6:** Total number of persons proposed in General shift is not tallying with the Total persons per day, the same may be verified and corrected.
30. **4.7.4: New Stack:** No Proposals given in this Para, if any proposal to Stack the mineral, details may be provided.
31. **Use of Minerals:** Physical specification of ore may be verified for its correctness.

CHAPTER-5: SUSTAINABLE MINING

- 32. Para 5.2: CSR Initiatives:** Keeping in view the main objective of reinvesting the benefits derived from the extraction of minerals as per Sustainable Mining and SDF Implementations, It is advised to review the 'Nil' proposals made under sub paras 5.2.1.6: Efforts made towards Providing Hygiene & Sanitation to Local Communities & 5.2.1.10: Any other steps taken for improving the Socio-Economic Standard of Local communities.
- 33. Para 5.2.1.13: Efforts for green energy:** It is advised to make some provision for consumption of green energy at the mine.

CHAPTER-6: PROGRESSIVE MINE CLOSURE PLAN

- 34. Para 6.1 Status of Land:** Area under Mining Operations and dump during the existing plan period is given as 7Ha and 0.10Ha, however, the same area has been given in the proposed plan period at the beginning of the year. There is no change in the area, the same need to be verified for its correctness.
- 35. Para 6.2.2.2 Protective measures:** No Proposal of Retaining Wall and Garland Drain given for the plan period, as per EC condition, 4(A)(iv), garland drain and retaining wall may be proposed along the dump and mine water be channeled into water courses/drainages with adequate protective measures like building gully plugs, Gabion Check dams etc., for arresting the silt or mine runoff. Hence this para may be reviewed and proposal may be made as per EC condition.
- 36. Para 6.2.3.2:** In the Green Belt location column, UTM grid values of proposed green belt location may also be provided. If green belt, proposed on the backfilled area, the same need to be specified.

CHAPTER-7: FINANCIAL ASSURANCE/PERFORMANCE SURETY

- 37.** Revised bank guarantee as per the Mineral Conservation and Development (Amendment) Rules, 2021 needs to be submitted.

CHAPTER-8: REVIEW OF PREVIOUS PROPOSALS

- 38. Para 8.1.1 Lease area utilization:** There is a production of iron ore during 2021-22, however, no change in the Mining area is observed, the same may be reviewed and corrected suitably.
- 39. Para 8.2.1 Exploration:(i)** the information given in the G-axis up gradation may be reviewed w.r.t. MEMC Rule, 2015 accordingly achievement in upgradation in G-axis may be specified.
- 40. Para 8.2.2:** Reasons for deviation in Mien Development may be specified as per the format.
- 41. Para 8.2.2.2:** Lessee has commenced production in 2021-22, however, there is no change in the lateral and vertical extent at the proposed excavation location. Same may be reviewed and corrected as per the updated surface plan information.

Plates - Hardcopy

- 42.** All the plans should be updated as per the scrutiny comments wherever applicable.

43. **Geological Plan:**(i) The Proposed Pitting/trenching and bore holes may be updated as per the comment given in Future exploration. (ii) Mineralized/non-mineralized area and area explored under G1/G2/G3/G4 may be marked on the plan and area details may be given in tabular form. (iii) Cross line hatch given for the float ore is subdued the other features of the map, hence, same may be removed and may be shown in solid color. This comment is applicable to all the plans where float ore has been shown.
44. **Geological Cross Section:**(i) UNFC code given on the sections may be suitably corrected as per the level of exploration carried out. (iii) Proposed exploratory pit location may be shown on the sections.
45. **Production & Development Plan:** (i) Proposed Working Block names (North Block & South Block) may be provided in all the Production & Development Plans. (ii) Proposed working benches line thickness may be increased.
46. **Production & Development Sections:** Proposed working benches line thickness may be increased in all the sections.
47. **Progressive Mine Closure Plan:** (i) Concurrent Backfilling is proposed, the same may be shown on the plan. (ii) Year-wise concurrent backfilling area alongwith top RL and Bottom RL details may be provided in the plan for ready reference.
48. Graphical Lihtolog of all the pits along with Fe grade may be provided.
49. Key plan showing lease area and surrounding area may be provided

Plates soft copy (kml file)

50. All the plans may also be updated in softcopy (.kml/.shp) as per the comments given in Plates (Hardcopy) and in text.
51. All the features (line/point/polygon) in the kml file should contain basic attribute data about the feature shown.

ANNEXURE:

52. The numbering of annexure has not been sequentially maintained as per the format. Numbering of annexure to be specifically maintained as per the format. Any additional annexure enclosed may be followed after annexure no 18 with corresponding details. All the annexure as mentioned in above scrutiny comments of different chapters to be enclosed. Also, corrections in the annexure, as mentioned above in scrutiny comments of different chapters to be incorporated and corrected annexure to be enclosed.
53. Undertaking/Consent letter from the lessee may be digitally signed by the lessee.
54. Copy of Valid Bank Guarantee for the entire plan period as per the amended MCDR Rule 2021 needs to be submitted.
55. All the annexure to be properly numbered/ paged and relevant annexure to be signed by QP. The Page no range should be accordingly given in list of Annexure. All the annexure should be legible.
