

Scrutiny Comments on draft 'Review & Updation of Mining Plan' in respect of Rajapura Iron Ore Mine, ML No.2514 of M/s K M Parvathamma covering 24.82 Ha of area in Rajapura Village, Sandur Taluk , Ballari District of Karnataka State.

- *The complete text may be submitted in the revised format as published with FAQ in IBM website & also communicated to the lessee vide this office E-Mail dated 08.09.2021.*
- *The Consent letter/Undertaking /Certificate from the lessee & qualified person may be digitally signed and enclosed in the text along with copy of the bank guarantee.*
- *No cells may be left blank. Either Nil/Not applicable may be furnished*

CHAPTER-1-GENERAL INFORMATION

1. Para- 1.1.1- (i) Lease deed execution date & Lease registration date since the initial grant and subsequent renewals may be furnished along with the copies attached as annexure.
2. Para- 1.1.2: Type of document submitted may be given.
3. Para 1.3.1: Approval of earlier Mining Plan & Its Subsequent Review in Chronological Order may be furnished since the inception of the mine.
4. Para .3.2: The information furnished regarding partial surrendered area during stages of operations may be supported by documents & attached as annexure.
5. Para 1.3.3: All the details of transfer of Lease area subsequent to grant may be furnished as per the format with supporting documents as annexure.
6. Para-1.3.4-Statutory Compliances- The details of the permissible annual production as per the CEC Approval letter should also be given under this Para. Also, the details of the CEC approval Letter no, date, Permissible annual production etc. to be given under this Para. The related documents to be attached as Annexure and reference to be given.
7. Para 1.3.4.1: Environment Clearance details may be furnished as per the format & copy of the same may be attached as annexure.
8. Para 1.3.4.2: The details of SPCB approval furnished have been expired in 31.03.2020. Valid SPCB approval details may be furnished with documents as annexure.
9. Para 1.3.6: Under the details of Owner/Nominated Owner Minutes of Board Resolution in case of Nominated Owner

CHAPTER-2-GEOLOGY AND EXPLORATION

10. Para 2.1.1: Topography -The seasonal nallah passing in the middle of the lease area may be demarcated on the Key plan which is to be enclosed. Highest stream order may be specified.
11. Para 2.1.2: (i) Location of nallah & public roads (Tar road, cart road) existing within the ML area may be furnished. (ii) Distance may be given & details of Physiographic features and Infrastructures available in and around the lease/ block area (within 5 KM) may be furnished in remarks column.
12. Para 2.1.3: Regional Geology: Regional Strtigraphy of the area may be provided as an Annexure and the Annexure number may be referred in the Text or this may also be provided by inserting table in word file.
13. Para 2.1.4.1:The local geological set-up/sequence with their lithounits may be discussed in this para.
14. Para 2.1.4.2: Structure: The main ore structure of the deposit may be described like banded structure, vein-like structure, the massive structure, brecciated structure, etc.

15. Para 2.1.4.3: Nature of occurrence of other lithologies along with foot wall and hanging wall rock may be described. Different type of iron ore available in the lease, their field occurrence, petrological characteristics and percentage of incidence of each type of ore may be given. Lumps and fines percentage in the iron ore may be provided.
16. Para 2.1.4.5: Along with the information provided, extent of Weathering/ Alteration (lateral & vertical) may also be provided.
17. Para 2.1.4.6: Nature/Form of Mineral: the ratio of lumps to fines in ROM may be furnished under this para.
18. Para 2.1.4.7: Extent of Mineralization: Along with the information provided, minimum & maximum width of the orebody and depth of the ore body may also be provided.
19. Para 2.2: It is mentioned in this para that 'No exploration work was carried out during last plan period as the mine was not in operation' and sub-paras omitted. Under this para, no sub- paragraphs should be omitted and the information 'not applicable' should also be furnished (from Para 2.2.1.1 to Para 2.2.1.14).
20. Para 2.2.2.1: Geological Mapping: Financial year may be mentioned in the year column. Scale of Geological mapping may be corrected. In the Geological plan, date of mapping may also to be mentioned.
21. Para 2.2.2.2 - 2.2.2.6: The exploration activities Geophysical survey, Geochemical Survey, pitting, Trenching if not carried out, the same may be specified.
22. Para 2.2.1.7.1:Core/Non-core Drilling: The litholog information given in the Annexure 12 may be reviewed, the date of starting and ending of the drilling, azimuth of drill hole may be furnished in log sheet of each borehole.
23. Para 2.2.2.9: Sampling: The type of sample mentioned as Rock-chip, in the foot note of the sample, Type of sample may be specified as RC Drill hole samples.
24. Para 2.2.1.10: Chemical analysis: There is no information in the para. The relevant information may be furnished.

The core /non-core samples information may be provided in CSV/excel file (as an Annexure) which shall normally include Five files namely (a) collar file, (b) survey file and (c) Geology log file, (d) Assay file and (e) RQD File. The file formats are as follows:

(a) Collar file

Hole_id	Latitude	Longitude	Altitude	Max_depth	Hole_path (linear/angular)	Date of drilling

(b) Survey file for drill holes

Hole_id	Depth	Dip	Azimuth

(c) Assay file

			radicals analysed (specify name of radical as an example given below)				
Hole_id	Depth_from	Depth_to	Fe	SiO ₂	Al ₂ O ₃	LOI	P

(d) Geology file

Hole_id	Depth_from	Depth_to	Lithological Description

(e) Rock Quality Designation (RQD) File

Hole_id	Depth_from	Depth_to	RQD%

**Hole ID should tally with the surface geological plan as available in the latest approved mining plan*

25. Para 2.2.2.12: Beneficiation Test: If the study not carried out, the same may be specified.
26. Para 2.2.1.13: (i) Method adopted for calculating bulk density of ore and waste. (ii) All the details may be furnished as per the format. (iii) The bulk density study report consisting of sample details, photograph, methodology etc. to be enclosed.
27. Para 2.2.1.14: Area covered under exploration based on the level of exploration may be reviewed and relevant details may be furnished as per the format. The calculations should be with reference to total mineralized area.
28. Para 2.2.3: Ore Body Geometry & Grade: General Strike / Trend, Dip of Mineral Body and Average Grade information also need to be furnished.
29. Para 2.2.4.2 Resource Calculation: (i) Level of exploration given as G1/G2/G3/G4 instead of UNFC code. (ii) Float ore also to be calculated by cross-sectional method. (iii) The grade of silicious ore given as 26%, 30%, which are below the threshold value. The same may be reviewed and corrected.
30. Para 2.2.5.2: Threshold value & Cut off Parameters: Cut of parameter used for calculation of reserves may be specified.
31. Para 2.2.5.5: Cost & Revenue Factors: Annexure no. of Feasibility report may be given.
32. Para 2.2.5.9: Calculation of blocked resources: (i) UNFC code given may be corrected suitably. (ii) 90% considered for blocked resources, on what basis may be described.
33. Para 2.2.5.10: Calculation of Reserves: (i) UNFC code for the reserves should be 111/122/121, the UNFC code given may corrected accordingly. (ii) Recovery is considered 90%, the total recovery may be specified at the bottom of the table. (iii) Calculation of Hematitic silicious Iron ore Reserves not provided.
34. Para 2.2.5.11 Reserves/ Resources: (i) The values should be in tonnes, the same may be corrected. The figures of Reserves and Resources are not tallying with the total resources given in para 2.2.4.2, the same may be reviewed and corrected suitably.
35. Para 2.2.6.1: Geological Mapping: The scale of geological mapping may be corrected.
36. Para 2.2.6.5.1: Core Drilling & Non-Core Drilling: The exploration proposals should be suitably given to explore the entire mineralized area under G1 level laterally as well as vertically as per Rule 12(4) of MCDR.

CHAPTER-3-MINERAL BENEFICIATION/PROCESSING

37. Para 3.2: Complete chemical analysis of Rom may be furnished in this para.
38. Para 3.5.1: Product size may be corrected and product quality may be furnished for screening.
39. Para 3.9: The quantity of water required in Cum/day for mining & allied activities process like dust suppression, drilling, plantation, domestic purpose like washing, drinking etc. details to be given under this Para. The details regarding source of supply of water, disposal of water, extent of recycling, chemical analysis of water should be given under this Para. The Water balances chart to be prepared accordingly and may be added in

annexure and reference to be given under this Para. The water requirement should be within the EC & CFO permissible limits.

CHAPTER-4-MINING OPERATIONS

40. Para 4.2.1.3: Area stabilized & method of stabilization may be furnished for ID-1, moreover AD is active dump & the same is furnished under details of stabilized dump. The same may be reviewed & corrected.
41. Para 4.2.2.1: Instead of writing year 1, year 2 & so on, the proposed financial year may be mentioned at all relevant places in the text.
42. Para 4.2.2.2: (i) Instead of writing year 1, year 2 & so on, the proposed financial year may be mentioned (ii) Distance of advancement of benches may be furnished along with the direction. (iii) The recovery percentage of ore & waste may be furnished & taken into account for year wise calculation of production, over burden & accordingly change the stripping ratio. The year wise total may also be furnished & the same may be attached as annexure.
43. Para 4.3: During the field inspection it was observed that in northern pit, slope failure had taken place in few benches. Hence it is recommended to have an integrated slope stability study done covering the mines & waste dumps collectively.
44. Para 4.3: The 106 (2) (b) permission from DGMS as per MMR 1961 should also be enclosed as Annexure and reference to be given under this Para.
45. Para 4.3.1: The necessary corrections in the In situ Mining table furnished may be done as per comments placed under Para 4.2.2.2.
46. Para 4.3.3: The total ROM quantity may be corrected as per the above comment.
47. Para 4.5.6: No. of persons engaged per day furnished may be corrected.
48. Para 4.6.1: (i) The proposed OB dump height may be reduced to 10 mts. (ii) The total dump quantity mentioned is not aligned with the year wise generation of waste in para 4.3.1.
49. Para 4.6.3: The information on the proposed generation of mineral & stacking of the same may be

CHAPTER-5-SUSTAINABLE MINING

50. Para 5.1- It should be specifically mentioned under this Para “ Sustainable Mining and SDF implementations during the plan period will be carried out in accordance with Rule 35 of MCDR 2017”.
51. Para 5.2: Under cumulative work done for the proposed years, “Nil” may be mentioned.

CHAPTER-6- PROGRESSIVE MINE CLOSURE PLAN

52. Para 6.2.2.2: Since the mine is expiring shortly, fencing may be proposed to avoid inadvertent entry of men & animals.
53. Para 6.2.7: This para may be attended as per the comments placed at para Para 4.2.1.3.
54. Para 6.2.11: (i) Land use of lease area at the expiry of lease period (conceptual stage) may be corrected as per the information submitted in the last & present approved document. (ii)

The area furnished under mineral stack, screening plant & statutory buildings may be reviewed & corrected.

CHAPTER-7- FINANCIAL ASSURANCE/PERFORMANCE SURETY

55. (i) Under financial assurance the unused area of 4.16 Ha may be furnished & shown in the financial assurance plate.(ii) The amount of bank guarantee may be verified & corrected. All the details including uploading of the copy of bank guarantee may be given.

CHAPTER-8- REVIEW OF PREVIOUS PROPOSALS

56. Para 8.1.2: Since the last approved document didn't have SDF proposals, accordingly it should be mentioned "Not applicable" under this para.
57. Para 8.3: Since there were no proposals in the last approved plan period under Socio-Economic, accordingly under para 8.3.1, 8.3.2, 8.3.3.1, 8.3.3.2, 8.3.3.3, 8.3.3.4 & 8.3.3.5 it should be mentioned "Not applicable".

CHAPTER-9- IMPACT ASSESSEMENT

58. This chapter may be furnished as a part of the text document. Though this chapter is applicable only for fresh grant, all the headings & sub headings may be furnished with "Not Applicable" against each of the same as given in the format.

59. PLANS & SECTIONS:

- a) **Hard copies of all the plans may be submitted in .dwg format with UTM grids (WGS 84 datum) only. Soft copies of the same may be submitted in KML/SHP format.**
- b) **The plan submitted in SHP format does not contain any attribute data. Line, polygon & point feature should be in separate file with all the necessary information.**
- c) The numbering of plates has not been sequentially maintained as per the format. Numbering of plates to be specifically maintained as per the format. Any additional plates enclosed may be followed after plate no 11 with corresponding details.
- d) All plans and sections should be signed with date by certified surveyor, Qualified Person, Geologist, Mining Engineer as per provisions of MCDR 2017.
- e) Surface Plan (Plate No.2): (i) An updated surface plan showing the updated position of faces, OB dumps, mineral stacks, Nallah & public road passing through the ML area may be shown & indexed accordingly along with the date of survey.
- f) Surface Geological Plan (Plate No.3): In this plate all the necessary corrections may be done as per the comments placed under Para 2.2.6.5.1.
- g) Production & development Plan (Plate No.5A to 5C): (i) During the field inspection it was observed that the formation of proposed benches is not aligned with the mRL of the existing benches. The same may be proposed appropriately on the updated surface plan & corrected accordingly in the text. (ii) Proposed mineral stacking area may be shown & indexed.

- h) Production & development section (Plate No.6): Separate sheet of year wise section showing the proposed working, OB dumping & mineral stacking may be furnished.
- i) Conceptual Plan & section (Plate No.9 & 9A): This plans needs to redrawn as per the information furnished in the text showing all the proposed activities at the conceptual stage of mining including fencing, plantation, construction of retaining wall, garland drain & regrassification of the degraded land. The same may be attended as per the comments placed under para Para 6.2.11.
- j) Financial Assurance Plan (Plate No.12): (i) Only the outline with solid fill colours may be marked for different land particulars and indexed. (ii) All the land particulars to be shown prominently in this plate & other tables incorporated may be deleted.
- k) Key Plan showing distinctly Natural drainage system such as rivers, nallahs, stream etc., roadways, boundary of all villages and towns with their population, places of historical & archaeological importance, forest with tree density, predominant wind direction etc. as per the provision of rule 32(5) of MCDR 2017.
- l) Dump management Plan & section: Separate plate of OB dump management plan & sections may be given.
- m) Lithologs of the previously drilled boreholes may be given in a separate sheet.

60. **ANNEXURE:**

- a) The numbering of annexures has not been sequentially maintained as per the format. Numbering of annexures to be specifically maintained as per the format. Any additional annexures enclosed may be followed after annexure no 18 with corresponding details. All the annexures as mentioned in above scrutiny comments of different chapters to be enclosed. Also, corrections in the annexures, as mentioned above in scrutiny comments of different chapters to be incorporated and corrected annexure to be enclosed.
- b) Letter of lease grant may be enclosed.
- c) The CTO enclosed has expired in 2020. Valid Consent to operate for total proposed permissible production quantity to be enclosed.
- d) Undertaking/Consent letter from the lessee may be digitally signed by the lessee & not by the QP.
- e) Bulk density test report of each of the material handled in the mine may be enclosed.
- f) Exploration details may be enclosed as per comments.
- g) Copy of Bank Guarantee may be enclosed.
- h) The 106(2)(b) permission from DGMS for working with Deep hole drilling and blasting with use of heavy machineries under MMR 1961 as mentioned above in scrutiny comment no 25 may be enclosed.
- i) Feasibility report submitted may be reviewed & corrected wrt Forest Clearance. The same may be signed by the QP
- j) 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 Annexures. All the annexures should be legible.
