

SCRUTINY COMMENTS ON THE MODIFICATION OF REVIEW & UP DATION OF MINING OF RAMANADURGA IRON ORE MINE OF M/S SRI KUMARASWAMY MINERAL EXPORTS PVT. LTD., M.L. NO. 2141, OVER AN AREA OF 59.36 HAAS PER AS PER CEC, IN DHARMAPURA VILLAGES, SANDUR TALUK, BELLARY DISTRICT, KARNATAKA STATE. SUBMITTED FOR APPROVAL UNDER RULE 17(3) OF MCR, 2016. MODIFICATION PERIOD FROM 2018-19 TO 2021-2022. CATEGORY OF THE MINE IS A(FM-FULLY MECHANIZED), OPEN CAST MINE. NON-CAPTIVE, RAMANADURGA RESRVEFOREST, LAND. DATE OF EXPIRY OF THE MINING LEASE IS 23/01/2042.

TEXT:

1. **Introduction:**The brief introduction indicated in this chapter is not adequate, this needs to be given with other changes proposed during the present modification specifically, without omitting anything for clarity and for future reference.
2. Para 3.2, the reasons furnished for the previous modification of document need to be dealt with clarity, specifying the number of bore holes drilled, quantity of reserves/ resources added after the extensive drilling of bore holes.
3. Para 3.3, under review of development & production, the development part is not at all achieved, it is very poor for the year 2017-18 & also for the year 2018-19 and the reasons for not achieving the same is not mentioned, except for the production is given. The proposals of development and the production are equally very important for systematic and scientific sustainable mining. (ii). In table no.19, the R & R works reported for retaining wall & Garland drain is not clear and appropriate, the time of completion is conceptual period is also not correct. A definite period needs to be given for completion in the remarks column.
4. Para 3.6, the reason mentioned for increase of production enhancement from 064MMT to 1.23MMT is not complete, in order to increaser the desired production, addition of areas also required to be highlighted

PART-A

5. Para 1(e), the details of bore holes drilled recently referred in annexure-No.11 may be furnished with photographs of the locations in the field. (ii). The datas furnished in the Table No.1.12 & and the write up given below reveals different. The bore holes figures reported during 2018-19(till 5/7/2018 were 29 nos., but during the period 14/5/2018 to 20/5/2018 is only 04 nos. Therefore the wording should be corrected.
6. Para 1(e)(iii), the details of samples analysis from the lab of NABL, wherein the outcome of the bore holes not dealt, which may be given in brief, which are the bore holes proves to be positive of mineralization and non-mineralization for reference and for records.
7. Para 1(i), under the future exploration programme, given only 06 nos. of bore holes for the remaining four years in the ML area, which may be modified by adding some more bore holes on the un explored areas to understand the deposits and also for the future planning.

8. Para 1.0 (j): the addition and depletion of reserves & resources after the last approved document may be given with clarity and in particular giving the +45%Fe & +35%Fe and BHQ/ BHJ separately. Give reserves and resources also separately without any confusion.

9. In table No. 1.18, under reserves/ resources shown as on 5/7/2018, may be modified up to 31/7/2018 or as on 1/8/2018. The siliceous reserves/ resources may be shown in separate column for easy reference. In the light of the above remarks, the text and the plates may be attended, wherever applicable.

10. In feasibility report, under economic axis, it is given reserves are calculated for +45%Fe as threshold value, but not on the +35%Fe, which ought to have been. In the light of the above remarks, the text and the plates may be attended, wherever applicable.

11. Para 1(k), the bulk density arrived for different grades/ types of iron ore from the ML area and the method adopted/ calculated may be furnished. (ii). Para 1(L), the lump & fines ratio projected for +45%Fe & siliceous ore +35%Fe, is given as +45%Fe, which may be corrected appropriately. (iii). The ultimate pit depth proposed as 100m, is not appropriate on the hill top. What is the method adopted to arrive the figure 100m may be explained. Because, in a hilly terrain, the deposits at times can be worked through slicing from top to bottom, if it is so, the depth may vary. This needs to be attended appropriately.

12. Para 2A (a), it is given that the D1 & D2 waste dumps are located on the northern part of the ML area is not correct. The D1 falls on the northern side, D2 on the eastern side, but not as mentioned, this may be corrected appropriately, wherever applicable, with the co-ordinates. (ii). The extent of the area indicated for the SG1 & SG2 as 4.4161 ha, found to be more, this needs to be re-assessed, and corrected, if required. (iii). Present crushing, screening & stacking for e-auction location is not mentioned. (iv). The present temporary stacking of BHQ/BHJ materials in the pit-3/ Block-C are also not mentioned. (v). The threshold value of iron of +45%Fe is indicated but not about the +35%Fe threshold limit, which ought to have been. Further, the slope of faces, direction of advancement, approach to the faces & specification of roads, etc to be given & marked. Also, the existing dumps spread parameters, height, slope protective works etc., discussed.

13. Para 2A(a), under the proposed method of mining for the year 2018-19, it is mentioned that the development and the production desired to do from the section R-R' to K-K' is accepted, but the proposals drawn for the year and in this plan period to stack the ROM stacks of fines and the calibrated ore within the pit- no.2/ block-B, reveals that the stacking in pit-no.2 is not adequate, hence it is appropriate to re-consider to work the mine from both the ends i.e. already from Pit-1(block-A) towards the block-B and simultaneously from pit-No.2/(block-B) towards the pit-No.1, considering top slicing from pit no.2 or from the bottom of the pit no.2, for the current year will help to get more space for stacking of ROM/ calibrated ore. (ii). Necessary correction may be attended, wherever applicable, if feel may be adopted, based on the field discussion held at the mine. (iii). Tables nos. 2.4, 2.5, and other tables of dumping may be attended and modified. (Table no. 2.7, need to be attended based on the above remarks.).

14. Under the mining chapter, the proposed waste dumping, for the year 2018-19 to 2021-22 is proposed in D1 & D2 is not appropriate. The existing dump D1, where SG1 quantity present may be tried to

remove / move from the location and try to accommodate the waste quantity for the current year and for the ensuing period or creating a temporary dump away from the main workings/ pit-No.3/ Block-C. Dumping on the D1 & D2 is not the appropriate solution. In the light of the above remarks, the table no.2.6, and other related para/ plates may be attended and corrected, wherever applicable.

15. Table no.2.8-A, development & production for the year 2018-19 and 2019-20 reveals all in high grade and very little in lateritic iron ore, which may be re-modified to 60: 40 ratio (high grade + medium grade or low) method to balance the production. In the light of the above remarks, the other relevant tables may be attended.

16. Para 2A (II), under dump re-handling, it is given nil, if it is so, how about the SG1 & SG2 may be indicated.

17. Para 2(e), need to be attended appropriately wherever applicable in relation to the remarks given para 2A of this chapter for better future systematic workings & sustainable development.

18. Para 2(f), this chapter needs to be attended and modified, wherever changes occurs needs to be changed suitably in the remarks in para 2A chapter.(ii). The exploration proposals may be included with additional exploration on the eastern part of the Pit No.1, to know the geology at depth.

19. The land use pattern indicated in table no.2.16 is not appropriate and correct. The active dump / dump stabilization given is not correct. (ii). The area considered for BHQ/ BHJ is also not correct, the pit indicated not specified. There is a chance for BHQ to be used/ sold at that time. This needs to be re-checked.

20. Para 3(b), the minimum & the maximum depth indicated is not appropriate in pit -2, in block-B, needs to be assessed in the light of the bore holes drilled in the block-B.

21. Para 4(a), the waste dumping planning need to be re-considered based on the remarks, offered in the above paras. Regarding subgrade ore considering the threshold value as ROM, if it is so, what is the method adapted to the +35%Fe is not dealt, about the usages.

22. Para 5, nothing mentioned about the usages of +35%Fe grade ores along with the +45%Fe and above grades, which ought to have been.

23. Para 8, the existing land use pattern may be dealt with clarity, when the mineral stacks falls within the pit area, how this 5.00 ha area will be coming under this head may be reconciled.

24. Para 8.3.1, may be attended in line with the changes as per the remarks given above.

25. Para 8.6, under financial assurance, the area occupied with Subgrade to the extent of 2.4086 ha may be brought out under column -E and the net amount need to be calculated.

PART-B

26. Key Plan (Plate No. 1): The approach road to the ML area with distance indicated on the plate, but not shown the location & the route with clarity.

27. Surface Plan (Plate No. 2): Surface plan, should be prepared as per rule 32(a) of MCDR, 2017. Besides, with the present modification, whatever the addition of infrastructure proposed on the northern

end of the lease area may be brought out in this plan for reference. (ii). The SG2 & D2 subgrade stack & the waste dump must be with barrier in between to avoid the SG ore mixing with the waste dump D2. (iii). The approach road to the waste dump & the subgrade dumps are not shown/ brought out on the plan. (iv). The proposed period on the plate need to be changed to 2018-19 to 2021-22. In the light of the above remarks, the other plates may be attended, including text part, wherever applicable.

28. Geological Plan (Plate No. 3): (i). Geological plan, should be prepared as per rule 32(b) of MCDR, 2017. (ii). The scrutiny given in the text part on the additional few more bore holes to be proposed in the ML area on the eastern part of Block-A/ Pit no.1 to be more appropriate proposals during the 4th & 5th year to know more depth/ lateral extension of the ore body and also will help in next planning proposals.

29. Development & Production Plan & Section (2018-19 to 2021-22, Plate No.5 to 5C): The proposal drawn for the year 2018-19 need to be revised by changing the proposals to work from Pit-No.1 to Pit No.2 and another side from Pit No.2 to Pit No.1 by top slicing towards south (i.e. towards Pit No.1). The formation of benches should be in line with the strike / ore body. The development should be such that, there should not be any barrier of BHQ/ BHJ in between, that will cause blockage of ore body beneath. In this connection, the scrutiny remarks given in Mining chapter may be followed & attended suitably.

30. Reclamation Plan (Plate No. 8): During the plan period and subsequent plan periods must be taken in to consideration, including the PMCP chapter and the SG1 & SG2 present and the proposals to remove the same through e-auctioning may be considered and update the plan suitably.

31. Conceptual Plan & Section (Plate No.9): The surface features present now will not be present during the conceptual stage, except few things, which is inevitable. The notations used for back filling, dumps & stacks etc., should be with clarity without any doubt. The section C-C' & D-D' shown for temporary stack for BHQ at present, but the same stack will not continue as temporary, even in the conceptual period is not appropriate. (ii). During the conceptual stage, which are the areas that are undergoing /used for back filling, i.e. reclamation & rehabilitation after complete extraction of the ore body if any may be clearly dealt with appropriate notations. (iii). The area which are used for back filling with water or creating pond/ for water storage may be dealt accordingly. (iv). The sections J-J' to Q-Q' reveals incomplete comparing the plan view, needs to be attended appropriately. (v). the sections presented in plate No. 9A also not appropriate and correct. The existing topography will not appear during the conceptual period, which must be attended. The remarks on reclamation & rehabilitation if any may be attended suitably.

32. Annexure:

- a) Copy of the recovery analysis report for siliceous iron ore (size-wise, grade-wise).
- b) Latest season environmental monitoring data.
- c) Copy of chemical analysis report for BHQ and waste from NABL or similar accredited Lab.
- d) Relevant photographs of Boundary pillars, Bore holes locations, all the three pits, stacks, SG 1 & 2 stacks, crushing & screening spot and plantations undertaken so far may be brought out.
- e) Core library established in the mine need to be sent in photographs.
- f) The copy of the latest financial assurance/ bank guarantee amount need to be attached as per the remarks given.