

SCRUTINY COMMENTS ON NARAYANAPUR IRON & MANGANESE IRON ORE MINE OF M/S. NARAYAN MINES PRIVATE LTD., OVER AN AREA OF 107.51 HA, AS PER CEC/ AS PER ML DEED, M. L. NO. 1602, IN VILLAGE NARAYANAPUR, SANDUR TALUK, BALLARI DISTRICT, STATE KARNATAKA. SUBMITTED UNDER RULE 17 OF MCR, 2016. FOR THE PERIOD FROM 2016-17 TO 2019-20. M.L. AREA FALLS IN SM BLOCK, RESERVE FOREST AND NON FOREST, I.E. (RF=105.15 HA), NON-FOREST (NF=2.36 HA), CATEGORY OF TH MINE IS A (MECHANISED MINE), NON-CAPTIVE.

COVER PAGE

1. It is expected to write submitted for approval under rule 17 of MCR, 2016. In the light of the remarks, the text and the plates must attend suitably.
2. It is given SM block reserve forest, but in the para 2(b), table-6, given as SM Block, Kumaraswamy reserve forest. Care should be taken to furnish correct and uniform information in the text and in the plates, without any difference.

INTRODUCTION

3. The document period mentioned 2016-17 to 2020, should be specified, i.e up to 31.3.2020. Table -1: The proportionate production limit for Iron & Manganese ore for the year 2016-17 as per the revised CEC permissible annual production may be given, along with pro-rata basis. In the light of the above remarks, the text and the plates may be attended suitably, wherever applicable.

GENERAL

4. Para 1(a), the lessee name is given, but, the nominated owner name is not declared. In this connection, a resolution should be made by the board of directors and copy to be enclosed.
5. Para 1(f), the copies of certificate of QP have indicated, besides, it is expected that the qualification and the experience certificates are enclosed.
6. Para 3.2, the details sought for last modification, with date of approval & reasons for modification; accordingly, it is expected to give all the relevant information.
7. Para 3.3, under review, the details of R & R work completed were given, in addition to that, any other work, under R & R proposals, which is under progress or pending if any may be furnished. Besides, enclose the copy from state government on delay condone. Further, it is expected to furnish status of the activities for the last five years.
8. Para 3.4, under violation, for the year 2015-16, in addition to that, any other violations issued before to that may be indicated.

PART-A

9. Para 1(c), in page-11, the average depth of manganese is given as 1.5m to 1.3m, but during the site inspection, it was observed that, the depth of old working pits were more than 5-7m approximately, exposed with Manganese ore, even at depth, if it is so, this area need to explore at depth, through exploratory mining, to understand/ establish the ore pockets. The manganese deposits exhibits generally erratic type. Page no.11: The type of sample of Manganese ore is not mentioned whether it is Trial pit or Borehole sample. It may be mentioned clearly.
10. 1( e), in table-14, trial pits details, wherein the depth of the trial pits reveal up to 3.5m depth only, but in the mine, old pits reveals more than 7m depth, hence the details furnished are tentative, the area need to concentrate develop at depth and laterally through exploratory mining for to establish the deposits. Hence, the mining in future should be undertaken accordingly.
11. Table-16, details of bore holes furnished without preserving the drilled holes through plugging suitably for future reference/ use, which ought to have been.
12. Para 1( e), (iii), wherein it is given most of the trial pits show the presence of iron ore & Manganese, but during the site inspection, some of the trial pits were found to be non – mineralized and barren, which also should be brought out for reference.
13. Para 1(j), the float ore recovery of iron ore is taken as 70% and 40% is taken for manganese floats, reveals on higher side, which must be reconciled. Para 1(j): The Reserves/Resources of

mineral may be re-estimated based on the data available from 35 boreholes (13+22) for Iron ore reef. On the basis of data of 36 trial pits for float of Iron ore and data of 4 trial pits & old workings /exposures etc. for float of Manganese ore, the reserves/resources may be re-estimated, since no borehole is encountered Manganese ore zone. Accordingly, the working proposals may be given and the modifications may be carried out wherever applicable in the document. The proposed boreholes of 32 nos., may be planned during the year 2017-18 instead of 2016-17 and then re-estimation of the reserves/resources may be taken up after carrying out drilling of 32 boreholes. Estimating the reserves/resources may not be appropriate by assuming the data from proposed boreholes. The proposed boreholes will not render the clear configuration of ore body.

14. Para 1(j), table-18 , 23 & 24, reserves/ resources were brought out up to 1.11.2016, instead of that, it should be up to 1.12.2016 respectively, by attending to the scrutiny comments furnished in the above paras.

15. In feasibility report, table-25, in feasibility axis, sl.no. 7 & 8, marketing and economic viability, cost of production is given as Rs. 370/t, market price is (ex-mine) is well above this, here the cost pertains to iron or manganese is not indicated.

16. Para 2A (a), under proposed mining, it is mentioned that the mine is going to be operated through fully mechanized method, but the proposals drawn for A( Mechanised) only, therefore, the proposals may be attended suitably, how the mine is going to be operated for iron & manganese in specific. Besides, it is given, that the drilling & Blasting will be deployed for hard formations, is not appropriate, instead it should be mentioned as drilling & Blasting will be undertaken/carried out, as per requirements. The production should be drawn on the pro-rata basis. Further, the slope of faces, direction of advancement, approach road to the faces & specification of roads, etc., to be marked. Also, the existing dumps spread parameters, height, slope protective works etc., to be marked. The bench wise, mRL wise, opening reserves, exploitation and the closing balance should be furnished for the proposed periods.

17. Para 2(b), under tentative excavation, the four years period indicated from 2016-17, wherein the 1<sup>st</sup> year 2016-17, should be w.e.f. 24.01.2017, and also in other tables, 26 to 29 and other related tables, if applicable. Annexure-17, enclosed on production & development, in annexure side, which may be kept in the regular text para itself, instead of annexure side.

18. Para 2(c), repeatedly placed in the text for rate of production and individual year wise development, which must be corrected. Besides, in page-28, the details furnished on stocks and the inspections need to be attended appropriately.

19. Para 2(d), it is given that excavation of manganese ore will be in the same manner as iron ore, extracted ore will be sent to screening plant to get +10mm ore, is found to be not correct. Manganese ore especially needs to excavate through machines, and sorted out manually at sorting place possibly through segregate the ores from the gangue minerals. The para need to be attended, appropriately.

20. Further in the above para, bench height & width shall be maintained at 6m in iron ore each is found to be not appropriate proposals. The width should be at least 8-10m, since it is reported that the strata is soft.

21. Para 2(e), the proposal for future mining is made in the place where the ore is already exposed, is not correct, but in the old pits where the development and production undertaken in the past. The strike direction of iron ore is along the NNW to SSE. The advancement of the benches is along the strike and across. Table-34 need to be attended accordingly as commented.

22. Para 2(e), table-35, where manganese workings, briefed, in sections C-C' and M-M' and advancement along NE to SW found to be not appropriate, during the field visit, it was suggested that, sections between A-A' to C-C' is the better location for manganese working for the proposed period. M-M' is not the appropriate location for Mn mining.

23. In page-33, the development & production for the year 2016-17, production & waste dumping details furnished, but the dumping location earmarked for waste dumping is not referred to any plate, to know the location for reference, except 728 to 708mRL. Similarly, the same is given for the year 2017-18, but not mentioned any plate for reference. Hence, the para need to be attended suitably in these paras and for the remaining years up to 31.3.2020.

24. Para 2(f), the description given in the excavation para need to be attended, considering the scrutiny remarks in the mining chapters suitably wherever applicable. Besides, the recovery given for iron & Mn, need to be reconciled, since during the site inspections, it was observed that the old working areas pertains to iron ore is filled with the shrub's and bushes, and found difficult to assess the geology in the old benches.

25. Para 2(f), under land use pattern, in table-37, the land use pattern, wherein 2.5ha is reported for subgrade stock, but in the same para, it is reported, that there is no subgrade generation is proposed. The para need to be comment and attend appropriately.

26. Para 3(b), the maximum and the minimum depth of workings indicated need to be attended 835mRL & 780mRL above MSL.

27. Para 4(b), under dumping area, the location indicated in the text is not reflected in the relevant plates for reference, which ought to have been. Para 4(c), should be attended in line with para 2(f).

28. Para 8.2(i), table-45, land use, existing dumping is reported for 9.78 ha and for the plan period is as 8.97 ha , how the waste dump area got reduced with addition of waste generation during the plan period may be clarified.

29. Para 8.6, under financial assurance, table-47, the mineral stock area exist is 6.45ha, if it is so, why additional area required during the plan may be explained. Why the same mineral stock area cannot used in the future plan period.

#### Part –B

30. Surface Plan (Plate No. II/a): pits, dumps, stacks should be numbered or given with identification for easy reference. Existing pits in the ML area must be numbered. The proposed waste dumps, site for screening plant, infrastructure should be marked for reference. This plan should be prepared as per rule 28(1) (a) of MCDR, 88.

31. Geological Plan (Plate No. II/b): Geological plan of last approved document dated 29.1.2015 and the same of present draft document submitted are not matching in respect of surface geology shown between the grid lines E678500 and E678600. The location of trial pit no.35 is not similar to that of last approved document, whereas the coordinates are given as same. This may be corrected. This may be corrected. The geological plan and sections may be modified as per the re-estimation of reserve/resources like earmarking of G1 level of exploration on the plan and sections wherever it is applicable. This should be prepared as per rule 28(1) (b) of MCDR, 88.

32. Geological sections (Plate No. II/c): The ultimate pit limit marked in the sections should be corrected as ultimate pit slope. Accordingly, the UPS marked in cross sections, attended and corrected. Siliceous ore should be different from BHQ. Plate no. II/c/2: The section LL' is not similar to that of the last approved document in respect of showing borehole NMD-21 encountering BHQ in the present document, which is not there in LL' section of last document .This may be given correctly. In the light of the above remarks, the plates and the text need to be attended, wherever applicable.

33. Development & Production Plan (2016-17, Plate No. III/a/1): The proposed workings for the year 2016-17, in manganese ore must be as discussed in the field from the existing old pits. , The iron ore working for the year must be attended, as per remarks given in the mining chapter para 2A (a) & (b). Approach road to the each bench should be marked. CCOM circular No.4/91 & 5/91 may be taken full care while preparing these plates. The waste dumping location proposed found to be not appropriate, since the location is very steep slopes. Possibly, the waste dump ID-5 location may be considered for temporary dumping giving protective measures. Further, the mineral stacks area may also be utilized in part, when the materials moved out through e-auctions.

34. Development & Production Plan (2017-18, Plate No. III/a/2): The proposed workings, for production, waste dump, mineral stacks, etc. are need to be carried out as per the remarks, given in text para in mining chapter strictly. Previous 1<sup>st</sup> year workings was marked in red color, but in 2<sup>nd</sup> year it is given in black, which must be avoided, let the proposed color coding be continued for the four years, as given in index. In the light of the above observations, remaining years workings may be planned to the reality.

35. Environment Plan (Plate No. V): Environment Plan should be as per rule 28(5) (b) of MCDR, 88. 500m core zone should be replaced with buffer zone.

36. Conceptual Plan & section (Plate No.VI): The conceptual plan should be prepared in such a way to represent the position of workings at the end of conceptual stage. The sectional lines marked in the plan is for D-D' and C-C', but while drawing the sectional view, instead of C-C', E-E' has been shown, which is not matching with the plan and the sections. The section C-C' is not brought out in the sections, which ought to have been.

37. Reclamation Plan (Plate No. IV): Just submitting the dumping and plantation activities will not come under the back filling or reclamation plan. Whatever the back filling with the waste, those areas to be marked specifically, that those areas undertaken backfilling after exhaustion of mineral at depth.

Annexures:

- (i). Annexure-12, should be mentioned as qualification & experience certificate.
- (ii). Photographs of the boundary pillars and three ground control points may be enclosed.
- (iii). Few photographs of the mine showing the old mine workings/ pits, both Iron & Manganese pits, stacks, dumps, bore holes locations etc., may be enclosed for reference.
- (iv). Copy of the valid bank guarantee may be enclosed.
- (v). Annexure-15: Form-J is incomplete. The copy of complete letter of Form-J may be enclosed.
- (vi). Annexure-16: The feasibility Study Report is to be signed by the QR/lessee.
- (vii). Annexure-17: The proportionate Iron ore Production proposals may be given for the year 2016-17, since the enhancement of iron ore production limit is applicable from 23.1.2017 to 31.3.2017. The earlier approval is valid upto 22.1.2017.