

SCRUTINY COMMENTS ON THE MINING PLAN OF ITTANAHALLI IRON ORE MINE OF M/S TUNGABHADRA MINERALS PVT.LTD., OVER AN AREA OF 33.21 HA, IN M.L. NO. 2366, AS PER AUCTIONED BLOCK, IN ITTANAHALLI VILLAGE, IN SANDUR TALUK, BELLARY DISTRICT, KARNATAKA STATE. SUBMITTED UNDER RULE 16 OF MCR, 2016, CATEGORY OF THE MINE IS, A (FM-FULLY MECHANISED), LEASE AREA UNDER RESERVE FOREST. PROPOSED FOR FIVE YEARS. CAPTIVE MINES.

COVER PAGE

1. Category of the mine is A (FM-Fully Mechanised), instead of A (Mechanised). Type of Forest, whether RF/ PF may be indicated.
2. The mine comes under whether Captive/ non-captive may be given. The online registration number and the mine code to be entered.
3. All certificates and undertakings from the Nominated Owner and from the Qualified Person should be furnished in Part-B of the document, followed by Part- A. Signature of the Nominated Owner should be in original.

INTRODUCTORY

4. It is given that the Mine lease is situated in Ettinahatti range in the introductory part, whereas in the other para it is given Donimalai range, hence the correct information needs to be given in the text and the plates. Besides, in page-2, 3rd para, the DMG letter dated indicated 11/7/2012, is not correct as per the enclosed document.

GENERAL

5. Para 1.2(a), under name of the lessee, the name of the nominated owner need to be indicated.
6. Para 1(f), the RQP certificate of Mr. B. P. Pandey, attached need to be deleted, and replaced with qualification and experience certificate of the QP as per rule 15(1) of MCR,2016. Another geologist may be included in the QP list who involved in the preparation of the document with his qualification & minimum five years' experience certificate to be endorsed along with this document.

LOCATION AND ACCESSIBILITY

7. This chapter is not found to be prepared as per the standard guidelines, may be duly re-furnished.
8. Copy of the Khasara Plan, showing co-ordinates of applied ML area, issued by the State Govt. to the applicant may be enclosed with the document.
9. Paras after 2.3 are not furnished with the relevant information, which ought to have been as per the universal format guidelines.

PART –A

10. Para 1.0, Geology and Exploration: The chapter 'Geology and Exploration' is not found to be furnished as per the standard guidelines, may be duly re-furnished. Followings items should be incorporated in this chapter:
11. Local Geology of the leasehold block should be discussed briefly in this chapter with descriptions of existing lithology in the ML block, in accordance with geological plan. Length, width, strike/dip and mode of occurrence of ore body are also to be mentioned.
12. Expenditure incurred in various prospecting operations should be furnished.
13. Nil future exploration programme is not acceptable. As evident from the geological plan, entire mineralised area is not explored by M/s MECL by G1 stage of exploration. Therefore, to ascertain the extent and depth of mineralization, complete ML block should be explored by detailed exploration (G1 stage); accordingly future exploration programme may be framed. Potential float ore areas located north eastern side of the block should be proposed to explore by trial pits.
14. In economic evaluation of feasibility report, provisions of paying royalty against District Mineral Foundation (DMF) and National Mineral Exploration Trust (NEMT) are not considered.

15. Justification of UNFC category 111 and 122 should be deliberated, no resource estimation is given for UNFC Cat. 333.
16. Table-1.3, in page-13, the thickness of the iron ore deposit are given along with grades, but in the enclosed annexures pertaining to bore holes for number 1 to 8, the ore encountered in the hole no.7 is just 3-4m only and in hole no.8, the no depth details and the grades were not indicated, but just given color of the ore etc., which are not appropriate to interpret the ore deposits. Hence, this needs to be rechecked and updated. In the light of the above remarks, the related paras need to be attended, if applicable. The reliabilities of the estimation indicated in paras 1.5(a) also need to be attended.
17. Para 3.7, stripping ratio, the production & the waste reported are proposed one, but the waste is reported as generated, to be corrected.
18. Para 1.8, under future exploration, it is given M/s MECL established the reserves/ resources precisely in the ML area, but during the field observation, it was found that the estimation of the same in just 7 bore holes of Core/ RC drilled holes were not appropriate. It is therefore, essential to reassess the ore reserves/ resources and the non –mineralized area for future systematic & scientific planning and mining for optimum excavation of ore within the ML area. Hence, it is appropriate to take up future exploration at least in the 3rd year of the proposed plan period.
19. Para 2A (a), under mining chapter, it is expected to brief the existing old mining pit workings and the proposed method of working through A(FM-fully mechanised method). (ii). Besides, it is expected to brief on the slope of faces, direction of advancement, approach road to the faces & specification of roads, etc., to be marked. (iii). Also, the existing dumps spread parameters, height, slope protective works etc., to be marked. (iv). The bench wise, mRL wise, opening reserves, exploitation and the closing balance should be furnished for the proposed periods. (v). Further, the development & production plate no. 6A to 6E, remarks given may be reconciled for the correction and the modifications suitably. (vi). The chapter ‘Mining’ is not found to be furnished as per the standard guidelines, may be duly re-furnished. (vii). In ‘In situ tentative excavation’ proposals table, proposed ROM quantity is found to be exceeded than CEC approved quantity. It is to be noted that, as per definition ‘mineral reject’ and ‘sub-grade’ are integral part of ROM.
20. Para 2.2.1, under insitu tentative excavation, wherein the information furnished in table without giving table number for five years. Also the universal guidelines format paras to be strictly followed while preparing the document, instead of formulating the own paragraphs. As per the 1st year workings, it is given 239231.5 m³, comprises of 100000 m³ of ore, 139231.5 m³ of mineral rejects, which is not correct, the mineral rejects quantity should be brought out under the heading of intercalated waste, under column-5 of the table format. Similarly, the below table furnished in tonnes must be attended and corrected. In the light of the above remarks, the text and the plates may be attended, wherever applicable for all the five years workings.
21. Para 2.2.2, under dump re-handling, the proposals may be reconsidered based on the field visit discussion, that the old waste dump will be analysed in the laboratory for availability of ore and the grade suitable for fines/ lump to go for recovering at profit.
22. Para 2.2.3, under enclosed plans & sections, the annexures XA to XE to be brought out in the main text part itself, instead of on the annexure side. Plates need to be attended as per the remarks, given in the plates.
23. Para 2.3, method of working proposed is Mechanized, it is actually A (FM), accordingly the text paras in the text to be attended suitably, wherever applicable. Further, it is given that the ROM will be hauled to the pre designated processing / dumping yard & ROM will be processed in the primary screening & crushing plant mechanically. ROM cannot be directly taken to pre-designated processing/ dumping yard, unless until it is stacked in the ML area and moved only after the e-auction process. This should be taken care and attended accordingly in the text and followed in the future.
24. Para 2.3.3, under production & development plan, the para need to be attended in line with the scrutiny remarks, given in the development plates and the para 2A(a) strictly to follow the systematic workings.
25. Para 2.3.4, mine layout, it is given that the five years workings as given plate No. 6A to 6E & 7 will be worked along the strike length of the ore body & advance from N to S during the plan

period, but during the site inspections, it was discussed as given in the previous paragraphs should be followed strictly due to the existing topography through slicing from top downwards for few benches, later it can be modified, depends on the change ore body exposures and the geometry. (pl refer para 2.4.4).

26. Para 2.4, under conceptual mining plan, this chapter should be attended appropriately whatever applicable as per scrutiny remarks given in the above paragraphs.

27. Para 2.4.3, should be attended in line with the remarks, furnished in para 1.8 above. Also, as expressed in para 2.4.5(a). (ii). Further, in page-28, it is given that the entire pit, during the conceptual period covers about 33.21 ha will be afforested, is not appropriate and correct, this should be attended correctly. (iii). It is given dumping will be started from the highest level in descending order, pl refer to plate No. 7B, it is given in ascending order. (iv). The land use pattern given for conceptual period need to be rechecked, whether 10.41 ha area will continue to be for mining, will it not come under green belt, after undertaking afforestation as shown in the conceptual plan and sections.

28. Para 2.6.2, under blasting, the powder factor indicated as 5 is not correct way of indication; it should be given as 5t/kg of explosives used. Besides, the 5t/kg of explosives is very less in the soft to medium hard strata, this should be rechecked. The quantity of explosives calculation needs to be restricted, by recalculating.

29. Para 4© & 4.5 : Sequence of year wise build-up of temporary waste dump and environment protective measures to escape materials form the dump should be furnished in a tabular format. (ii). Location of top soil stacking area may be demarcated separately in the Production and Development plan.(iii). It is indicated waste generated during the scheme period will be dumped, it should be mining plan period.

30. Para 5.0, Use of Mineral: This chapter is not found to be prepared as per the standard guidelines, may be duly re-furnished. Provision of direct feeding/ transportation of ROM to captive steel plant, as deliberated by the applicant during site inspection, is not found to be mentioned in this chapter.

31. Para 8.1: In page 61, name, distance and population of the villages present in the buffer zone may be furnished in a tabular format.

32. Para 8.2.2, under proposed land use pattern in mining, from 5.73 ha area to 8.16 ha area expected to be increased during the plan period is found to be more, during the site visit as discussed to work from top by slicing method, though the strike line will be maintained, on the western side will be moving/ advancing within the broken up area, no fresh area will be added, but on the eastern side, fresh area will be cutting and descending downwards on eastern side. This may be checked and corrected, similarly the waste dump area.

33. Para 8.3.1: Proposed year-wise afforestation proposal is not furnished.

34. Para 8.6, under financial assurance, annexure-XIII indicated with bank guarantee for scheme period, which should be corrected as mining plan period and the bank guarantee should be submitted and no bank guarantee is found to be enclosed.

PART-B

35. The certificate from the lessee should be given instead of applicant. The document submitted should be mentioned as rule 16 of MCR, 2016, instead of 22(4) of MCR, 2016. In the light of the above remarks, the whole certificate to be attended. Besides, the certificate given by the QP, must be attended and the scheme of mining indicated should be replaced with mining plan.

36. Key Plan (Plate No.1): the name of the mine may be invariably written on all the plates. The approach road to the ML area with approximate distance from a known place may be indicated for reference. In the light of the above remarks, all the plates may be attended.

37. Surface Plan (Plate No. 03): The mine is indicated as Bellary Iron Ore Mine, which should be given correctly in all the places of the text and the plates, without any difference. The approach road to the old waste dump is present on the eastern side of the ML area and also on the southern end, which are not brought out in the ML area. The name of the surveyor signed in the plan need to be indicated. The three GCP's selected for need to be mentioned with name of the points for reference.

38. Geological Plan (Plate No.4): Strike and dip of the iron ore bands and float iron ore areas are not shown in the plan. Area covered under different stages of exploration and proposed Bore Holes/ Trial Pits should be marked.
39. Geological Cross section (Plate No.): Strike and dip of the iron ore bands and float iron ore areas are not shown in the plan. Area covered under different stages of exploration and proposed Bore Holes/ Trial Pits should be marked.
40. Production & Development Plan (Plate No.6A to 6E...1st to 5th year): The development and production proposed for 1st year from between 906 and 890m, above MSL with three benches, but during the field inspection of the mine, that the existing topography will bring restriction for further development and production, hence, it was suggested to develop the mine through slicing method from top to bottom along the strike and extending on east to west without any restriction and later the workings can be modified/ altered as per the convenience, when the ore deposit / geometry is exposed as you start working in slicing method. The present UPL on the eastern side can be extended, similarly on the western side up to the ML boundary on the western side. In the light of the above remarks, the remaining workings for the five years can be developed and produce the iron ore. The respective year workings should be brought out at the end of 31.03.2018, 31.03.2019 and so on up to 31.03.2022.
41. Dump Management Plan (Plate No.7B): The indexing given for development & production along with waste dumping year wise is not tallying with the sectional views. Besides, the protective measures undertaken in the form of retaining wall only is given, but not for garland drain, which ought to have been.
42. Land Use Plan at the end of Ensuing Mining Plan (Plate No.9): the land use pattern drawn for the ensuing period may be reconsidered to use the old waste dump located on the southern side of the ML area, after analysing the dump/ stack to recover the ore from the old dumps on the mineral conservation point of view. If possible, proposals may be redrawn to work the old dumps in the ensuing periods.
43. Conceptual Plan (Plate No.10A): The name of the mine/ applied area need to be indicated on the index part for reference. The way in which the mine would developed in future through benches need to be brought out at the conceptual stages, instead of revealing as plain land/ without any benches, as if there is no any mining activities, undertaken in the ML area.
44. Conceptual section (Plate No.10B): the sections should be attended in line with the conceptual plan remarks.
45. Environment Plan (plate No.11): The scale indicated is 1:4000, wherein it should be prepared in 1: 5000 and the plate should be prepared as per the rule 28(5) (b) of MCDR, 1988. The other ML areas present within the 500m buffer zone must be brought out for clarity & reference.
46. Financial Area Assurance Plan (Plate no. 12): Enclosed FA table is not found correct.

ANNEXURES:

- (i). Boundary pillars present in the mine may be present through photographs, including three Ground Control Points and Bore holes drilled by the MECL.
- (ii). Mine pits, waste dumps, stacks & infrastructure etc., present in the ML area may be furnished through photographs.
- (iii). Environmental datas for the four seasons may be attached.
- (iv). All the annexure must be given with number of pages in each annexure for easy reference.
- (v). The RQP certificate to be deleted and enclosed with BE (Mining), or M.Sc. (Geology), qualification and experience certificate with minimum five years professional experience certificate.
- (vi). Annexure-1 should be given with date, annexure-2 should be given with 0.3 MTPA and from CEC. Annexure-5 & 6 should be with dates, annexure-7, should be checked for correctness of M.L. No. and the company name, wherein it is reported for 2393 & M/s Tungabhadra Private ltd., instead of M/s TML.
- (vii). Annexures-10 to 14 should be placed in the text part in the mining chapter, instead of annexures side. Besides, the calculation furnished in section-6, column-5/6 given with ROM as

80% recovery & 20% as intercalated waste, if it is so, how again the waste is showing in the column-8 to 9 may be checked & reconciled.

(viii). Annexure-11, should be mentioned with the place of the plant. Annexures-13 should be given with the M.L. No. in each photographs and the lessee name.

(ix). Annexure-15, submitted with incomplete information.

(x). The valid bank guarantee to be submitted along with the final document, while submitting for the approval.

(xi). Corrected Feasibility Study Report.

(xii). Copy of the photo ID of the applicant/ lessee.

(xiii). The information furnished in table 1.3, 1.4 & annexure-IX for 45%Fe & 55%Fe should be tested from the authorised NABL laboratory.