

**SCRUTINY COMMENTS ON DRAFT REVIEW AND UPDATION OF MINING PLAN OF SANKALAPURAM IRON ORE MINE, M. L. NO. 2682 OF M/s RAI BAHADUR SETH SHREERAM NARASINGADAS PRIVATE LIMITED, OVER AN AREA OF 111.09 HA AS PER LEASE DEED/ AS PER CEC. IN VILLAGE SANKALAPURAM, HOSAPETE TALUK OF BALLARI-DISTRICT, IN STATE KARNATAKA. SUBMITTED FOR APPROVAL, UNDER RULE 17 OF MCR, 2016. NON-FOREST, CATEGORY OF THE MINE IS A-FM (FULLY MECHANIZED).. FOR THE PERIOD 2020-21 TO 2024-25.**

1. The list of annexures given, which must be added with another column to give number of pages in each annexure for clarity. The annexures must be given with date and validity of the particular letter/ document as applicable to each letter, including the approved mining plan/ scheme etc. Name of the mine with lessee need to be given with the photographs.

2. Introduction: In the introductory part, it is expected to give the work done in the present approved document/ similarly what is the work pending as per the proposals. In the light of the above remarks, the text para proposals, including the plates may be attended wherever applicable.

3. Para 3.3, under exploration part, it is given that the exploration undertaken during the year 2019-20, 49 nos., of trial pits were made of size 2m x 2m x 2m, in float areas, but proved the depth of the float ore body of 0.4m, 1.3m & 4.2m respectively, how this 4.2m depth has been proved with only 2m depth of trial pits undertaken in the ML area may be explained.

4. Para 3.3, under review of excavation in table no.6, it is mentioned that, during the year 2017-18, the production has been reduced by the monitoring committee to 40,00t, but what happened to 2018-19 full production not able to achieve after obtaining approval from CEC for 2.43lt/a, and followed by the current year 2019-20 till September only 92,000t, what is the reasons for the less production may be explained. Besides, what is the status of excavation/ production from the core zone from the sub grade old stack for wet processes has not discussed.

5. Para 3.3, under reclamation, table no.7, it is mentioned that the GCD (2), nallah N2, of size 1mx2mx2m, status indicated to be completed, without any time limit, which ought to have been. Table no.31 need to be attended on the above comments.

**Part-A**

6. Para 1(c): given that the float ore zone of 40.20 ha area in central & northern portion of the ML area with thickness of the deposit varies from 0.40m to 4.20m, how the 4.2m depth of the ore body has been proved with only 2mx 2m x2m size of the trial pits may be explained.

7. Para 1(e), under exploration already carried out during the year 2018-19 the size of the trial pits were given, but the exploration carried out during the year 2019-20, the trial pits size not reported, without that how the depth of the float has been calculated may be reconciled.

8. Para 1(J), the it is given from 1/4/2017 to 30/09/2019 3.25lakhs tones of production were achieved from floats zone only and no reef ore were involved in that. Besides, there is no any information on production or recovery of materials from the sub grade stacks for processing in wet beneficiation system not commented on 5 lakhs target per annum quantity from the core zone. (ii). Further in the same para, it is given that proved reserves estimated based G1 & G2 level of exploration data, whether it is in the float areas/ reef areas is not indicated for clarity. (iii).The recovery factor established in the reef & the floats for the mine need to be mentioned, similarly the tonnage factor. (iv). Table no. 14/15, wherein it is found that the term resources has been replaced with sources, reason for the same may be given.

10. Para 1(L), the threshold value of +45%Fe for iron ore & the ultimate pit depth has been taken to calculate the reserves/ resources as on 30/10/2019, if it is so, why the latest threshold value of +35%Fe for siliceous ore has not been established/ calculated may be justified.

9. Para 2A (a), the details of the existing number of working and non working pits along with benches height, width, slopes, waste dumps, stacks and infrastructures, etc., similarly, the proposed method of working for the current proposal with their extent of individual pits need to be demarcated on the plan/ sections. (ii) Further, the slope of faces, direction of advancement, approach to the faces & specification of roads, etc to be marked. Also, the existing dumps spread parameters, height, slope protective works etc., to be marked. (iii). the text

para also need to be attended in line with the development & production plan scrutiny comments offered as per the plate no. III/a,b etc. (iv). The proposed height & width of the benches in float found not appropriate and correct, comparing to the reef ore. Keeping 3m to 5m height of the benches in float need to be modified, considering the depth of the float of 0.4m.

10. Para 2A(b), the five years proposals of development & the production given in cubic meters/ tones as per the CEC approvals, besides, the yearly target of 5 lakhs tones of subgrade materials for wet processing in your own plant details has not indicated in this para or any other para of the text for reference, which ought to have been.

11. Para 2(b)(II), here it is mentioned about the e-auctioning of the subgrade materials lying at south western side @ 5lakhs tones/ annum, the details of the auctioned in the past may be listed in the continuity of table no.6 or 6A or 7 for reference and for records. Besides, the annexure-16 referred here, shows the feasibility report & not auctioned bid sheet. This needs to be attended appropriately.

12. Para 2(d), it is given the generated waste of 15% of excavated materials will be brought back in the float ore excavated area for concurrent back filling, from which pit this 15% waste is broght to which pit number of float pit may be indicated. Further, in other para it is given that, the float workings will undergo concurrent back filling, if it is so, why the 15% waste needs to be brought to float area for concurrent back filling may be explained/ and reconciled. (ii). Under extent of mechanization, it is mentioned that the mine will be operated by mechanized method, instead of indicating through the A(FM-fully mechanized).

13. Para 2(e), 1<sup>st</sup> year working for the year 2020-21, stated about the production & development activities, how about the auctioned materials from the subgrade stack within the core zone is not discussed concerning the 1<sup>st</sup> year. In the light of the above remarks, the remaining four years period of proposals may be drawn/ attended appropriately.(ii). A note is given below the table no.28, that the waste generated from float iron ore will be back filled in worked out pits/ but in the other text para it is given as concurrent back filling.

14. Para 2(f), may be attended in line with the para 2A and other related scrutiny comments.

15. Table no.32, land se pattern, wherein it is given in Sl. No. 5, on mineral stock, which stock is referred here for 10.626 ha area may be explained. In the light of the above remarks, the other related tables if any need to be checked and corrected, including table no.42.

16. Para 4(a), table no.33, wherein the table is given back filling information on yearly basis, this back filling is pertaining to which locations may be indicated for clarity.

#### Part-B

17. Plate No.1/b (Key Plan): The approach road to the ML area with approximate distance from the known place needs to be marked.

18. Surface Plan- (Plate No. II/a): The three Ground control points not brought out in the plan/ plate which ought to have been. (ii). The existing pits in the reef & the floats need to be numbered for clarity & for reference, also needs to be demarcated working and non working. (iii). The pits, dumps, stacks etc., are must be depicted in the index/ plan as per the standard notation given in the MMR 1961. (iv). The waste dumps indicated in the index and the one shown in the plan needs to be marked with the extent of the dumps spread with clarity. (v). The fines/ ROM stock and the fines/ ROM/ C-ore stock are given in the index, but on the plan, 1<sup>st</sup> one is able to identify and the 2<sup>nd</sup> one is not able identify, therefore, whatever that is given in the index must be with clarity and easy to identify. (vi). The workings present on the southern end should be demarcated the extent of the pits/ or it is a single pit. (vii). The pits on the float ores needs to be marked with the extent of each pit spread for clarity and also the stacks of C-ores. (viii). The retaining wall & the garland drain around the waste dump constructed must be depicted/ shown with clarity for understanding.

19. Geological Plan- (Plate No -II/b): (i) The plan may be as per rule 32 (1) (b) of MCDR 2017. (ii).The notations used in the index must be same when it is shown/ brought out in the plan/ sections for easy reference/ otherwise it will be confusion, difficult to identify. (iii). UPL in the plan and the ultimate pit slope in the sections must be attended appropriately, instead of showing ultimate pit limit in both plan / sections. (iv). The geological notations used in the index in this plate and in other plates must be same without any

changes/ difference to avoid confusions.(v).The future planning for development & production must be in such a way for scientific & systematic mining. (vi). On the northern side of the ML area were found to be floats, established through trial pits/ still why that area has been shown with G3 scale may be explained.

**20. Geological Cross sections- (Plate No. II/c):** (i).The remarks given in the geological plan may be considered for geological sections. (ii). The Ultimate Pit Limit / Ultimate Pit Slope, ultimate pit slope should be indicated in sections only, & UPL for plan. The sections I-I', J-J', K-K' & L-L' found to be not appropriate and correct. The sub grade stacks present on the plan is not revealed in the respective sections. In the light of the above remarks, the other sections should be checked and corrected.

**21. Developments & Production Plan & section -( Plate No –III/ a/I-2020-21):** (i). The proposal drawn to work from top RL to the bottom RL at the southern end of the ML area is found to be un-systematic and unscientific, without showing the regular benches. The proposals may be drawn from sections M-M' to Q-Q' for optimum working for adequate development & productions, instead of restricted proposals. (ii). The direction of advancement of faces should be depicted accordingly on the plan. The working faces shown for the one year development & production plan without revealing the approach road & exit from the working faces and also the waste dump faces. (iii). Similarly, the workings of floats must be indicated with the pit number & the extent of the working limit & the direction of advancement of faces may be given.(iv). The other workings indicated at R1 location of the ML boundary for concurrent back filling is found to be not appropriate, the extent of the area utilized for the 1<sup>st</sup> year working and the advancement of the faces & the method of workings are not described. In the light of the above remarks, the other plates of the remaining years need to be attended appropriately.

**22. Production section -( Plate No.III/b):** This sections should be attended in line with the remarks furnished in para 2A and above production plan.

**23. Reclamation Plan (Plate No-IV):** Proposed environmental monitoring station at core-zone, water monitoring station at water discharge point should be reflected. (ii) The year-wise afforestation & environmental protective measures to be shown. (iii). Back filling(BF) need to be undertaken only after exhaustion of ore body, without which no BF should be commenced. (iv). This plan should be prepared similar to conceptual plan/ sections, considering the BF i.e. reclamation & rehabilitations. (v). current year BF need to be deferred based on my scrutiny comments.

**24. Conceptual plan- (Plate Nos. VI):** (i). the conceptual sections are not submitted with this document, which ought to have been. (ii). The plan and sections should be such that, what would be position of workings at the end of this plan period/ conceptual stage must be visualized and brought out accordingly. (iii). The conceptual plan submitted is not appropriate, the position of the workings brought out is not updated as it should be at the conceptual stage. What is seen in the surface plan is reproduced as it is without undertaking any changes during the five years period to be correct. (iv). During the conceptual stage, the back filling (BF) undertaken using the waste dumps in the worked out area and in some areas bench plantations may be planned / undertaken depends on the outcome of the future exploration/ workings and exhaustion of minerals from the working pits.(v). In the sections, the existing profile must be brought out, instead of showing original topography. (v). If there is a chance for water reservoir/ pond creation, it should be undertaken and brought out accordingly.