

SCRUTINY COMMENTS ON THE DRAFT MODIFICATIONS IN THE APPROVED MINING PLAN OF JOHNIRON ORE MINE (M.L.NO.2294) OFM/SR. PRAVEEN CHANDRA., OVER AN AREA OF 42.13 HA IN MEGALAHALLI & OTHER VILLAGES, IN CHITRADURGA & HOLALKERE TALUKS, CHITRADURGA DISTRICT, KARNATAKA STATE SUBMITTED FOR APPROVAL UNDER RULE 17(3) OF MCR, 2016.- PRIVATE/ CAT - A (FM) / FOREST/NON-CAPTIVE./ PERIOD - 2016-17.

COVER PAGE

1. The name of the mine is not mentioned. Besides, the lease area comprises of other villages, if it is so, instead of indicating other villages, better to mention all the villages, for clarity. The previous five years period for which it was approved earlier and the present modification period should be given. The 50 years period may be indicated as per MMD&R( amendment) Act,2015.

GENERAL

2. The annexures enclosed in the text need to be mentioned with number of pages in each annexure, for better clarity & easy reference.
3. In the undertaking, it is required to mention, modification to the approved mining plan, instead of modified mining plan. The signature made by Shri R. Praveen Chandra, without mentioning lessee/ Owner.
4. The certificate from the RQP, wherein, it is mentioned as Mineral Conservation Rules 2016, instead of Mineral Concession Rule, 2016. Needs correction.
5. The mine photographs enclosed are without the mine name in the individual photographs for clarity/ reference & to avoid confusions.
6. The annexure No.1 is not indicated as annexure-I, which ought to have been.
7. In annexure-NO.14, wherein the list of plant species planted within & outside lease area are given without indicating the name of the mine, where this has been undertaken.
8. The list of bore holes drilled in the ML area are furnished, without mentioning the name of the mine and the ML number.
9. Under the introductory part, the details of leases held by the lessee is given in table-1, without giving the validity of approved mining plan & scheme of mining exist with respect to each mine.
10. In the introductory part, it is mentioned that the present document is submitted for the modification to the approved mining plan with enhanced annual production under rule 17(3), of MCR, 2016, but though there is increase in the reserves part, which is not specified in the introductory part, which ought to have been.
11. In table-2, under the status of the land it is given Niruthadi state forest, whereas in cover page it is given as reserve forest. Care should be taken to furnish correct information, wherever applicable.
12. In para 3.2, it was asked for any modification if any, undertaken in the past, if it is so, the same should be given, instead of what is furnished, which is uncalled for, same may be deleted.
13. In para 3.3, under exploration, the details of exploration undertaken in the lease area in the past furnished without indicating the year against the proposals and the actual achievements in a tabular form, giving the diameter of the holes & the angles for reference. The details of the litho-core logs should be enclosed in the annexures.
14. Under excavation, it is stated that the development & production undertaken for the past four years (2012-13 to 2015-16) from sections BB' to PP', but in the field it is found that mining activity was done between sections H-H' to P-P' only. The ore to waste ratio reported in table-5, as 0.154, instead of 1: 0.154, i.e. for every ton of ore produced to what is the quantity of waste produced.

15. In table-6, the details of environment protection measures carried out during previous scheme of mining is given, but the balance R & R works if any, as per approved R&R plan should be furnished with tentative period of completion.

#### PART -A

16. In para 1(e), the details of exploration carried out in the lease area, as per the table-8, should be marked with respect to year wise, giving numbers for the particular years. Some of the bore holes may be brought out through photographs.

17. In para 1(h), under geological sections, some of the sections like X-X' and N-N', wherein the bore hole numbers JM-25, JM-20 were drilled upto 228m & 150.50m respectively, stopped within the iron ore at 726mRL & 747mRL, but below that, 14m & more ferruginous shale has been indicated in both the ends without undertaking the drilling in the shale area, but assumed for entire depth as shale, which is not correct. Hence, the assumed data need to be re-checked and calculated again. From the longitudinal section L-L', submitted for approval reveals lot of difference from the previous approved document, were 13 exploratory bore holes shown, but in the present submission it just only three bore holes. Yet, the interpretations are not appropriate and correct.

18. In para 1(J), under reserves & resources, it is mentioned that the reserves are calculated based on the exploration data of 54 bore holes upto the depth of the ore encountered in the drilled holes for G1 category. But, the previous approved document, already 33 core drills & 5 DTH were shown and reserves calculated, if it is so, in the present submission, the remaining exploratory holes only mentioned & what is the changes happened after that may be given appropriately. Besides, while comparing the geological sections in plate No.II/C, and also the previous geological sections Plate No.5, there is no much changes in the depth of the deposit, even in the previous geological sections, the maximum depth of the drilled holes was upto 228m for hole no. JM-25 & JM-20 was 150.50m and JM-26 was 126m respectively. If it is so, how the additional reserves established, is not clear, which may be brought out suitably, from what depth to what depth established, comparing the previous sections, where it was calculated in the last approved document.

19. In para 1(k), under detailed calculation of reserves/ resources section wise, it is expected that the from the last approved document, what is the reserves depleted, what is the additional reserves established from the last approval, by carrying out additional exploratory bore holes from the last approval, may be shown separately with clarity for understanding as per UNFC norms & categorisations. Without, which giving all together is found to be not appropriate? The additional reserves/ resources established based on the additional drilling holes must be specified and also in the introductory part and wherever applicable, it should be attended.

20. In para 2(b), it is given already 21.59 ha area is under mining, but the present mining will be within 6.62 ha, during the current plan, if it is so, whether the indexed color code area for the current year falls in the 6.62 ha may be explained.

21. In para 2(d), it is given proposal to operate mining operation by A (FM-fully mechanised method), with hydraulic excavator, tipper & dumper combination and in the same para it is given shovel & dumper combination, it is better to have the later proposals, since the same is practiced in the mine, instead of tippers & dumpers. Besides, it is also given hydraulic excavators are used for breaking the semi-hard formations, though ripper dozer in operation as observed, which is not mentioned in the text, for ripping the medium hard strata's.

22. In para 2(e), it is given mine is operated on single pit, instead of mentioning in a single pit. Besides, under extent of mechanisation, it is given including annual handling of ore & waste as 0.794 MMTPA (Million metric tonne/ annum, which should be restricted within the CEC limit of 0.75MMTPA, in the text and in the plates, wherever applicable.

23. In para 2(f), under conceptual mine planning, it is given 54 core drill holes & 5 DTH measuring 7438.40m used for estimation of reserves is found to be not appropriate, the previous document was approved vide letter No.KNT/CTD/MS/Fe-185-SZ/672 dated 12/9/2012, wherein it was mentioned 33 core drills of 4207.50m & 5 nos, of DTH holes of 511.9m upto September, 2012 were referred in for estimation of reserves. If, it is so, the same need not be mentioned repeatedly, other than these if any, should be mentioned clearly without any confusions. What was in the previous document, depleted from that reserves, addition of reserves and the present balance reserves must be dealt with clarity.

24. Under reclamation & Rehabilitation, in page-37, with the existing strike length running from N-S, appropriate planning may be made to reclaim & rehabilitate from one end of the strike and backfilling can be made to use the OB waste and other waste.

25. In page-38, under land use pattern, the OB dump area for existing & end of plan period is given as 9.20 ha, and for conceptual period is 14.22 ha, instead of using for conceptual dumping, some portion maybe considered for reclamation & rehabilitation to be appropriate.

25. In para 7, the details of man power employed may be dealt in details, like manager, mining engineer & Geologist etc.

#### PART-B

26. **Key Plan (Plate No.1/b):** 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.

27. **Surface Plan (Plate No.II/a):** The waste dump extent, subgrade or the low grade stacked on both the sides of the main workings and other features and infrastructures must be depicted with clarity, by usage of colors for easy reference.

28. **Geological Plan (Plate No.II/b):** All the subgrade ore present within the UPL must be proposed to shift away from the same and the area may be planned in such a way to exploit the area systematically on the mineral conservation point of view, to achieve the optimum recovery of minerals. The exploratory bore holes considered for the present submission may be given with clarity by coding numbers for easy reference & to understand the area and the depositions, from the previous document.

29. **Geological Cross section (Plate No.II/C):** The bore holes drilled in the ML area, after the approval of previous scheme of mining, may be indicated along with the previous document must be prepared with care to present the difference in establishing the deposition at depth and at lateral end, but the present document, some of the holes drilled in the past has been not shown in this cross sections. The depth taken for estimation of reserves & resources in the past and in the present should be brought out with clarity with color codes.

30. **Production & Development Plan (Plate No.III/a):** The development and production should concentrate more on the northern end to join the southern portion of the working pit, similarly to widen the eastern working boundary to expose the ore body beneath to plan accordingly in future workings proposals. Besides, the mine is having common boundary working permission, both the mine should work together in the common boundary areas and develop it systematically to avoid rift.

31. **Conceptual Plan (Plate No.VI):** The conceptual plan has been prepared in such a way, that the mine is going to be back filled & planted over the back filled areas.(i.e. reclamation & rehabilitation). But, while referring the text paras, it is dealt as if no reclamation & rehabilitation is possible even in the conceptual stage, which must be checked and corrected.