

Scrutiny comments on the Modification in Review of Mining plan along with progressive mine closure plan of Balaji Iron Ore Mine of Shri Anil Khirwal (Lessee), located in village Noamundi, District – West Singhbhum of Jharkhand state submitted under rule 17(3) of MCR, 2016 & Rule 23 of MCDR for the period from 2020-21 to 2022-23 (30/04/2022).

Cover Page –

1. Mention the area in Hectares below the heading Balaji Iron Ore Mines.

Preface -

2. On transfer of Lease the transfer was with the reduced area or after transfer the part area was surrendered is to be clearly mentioned.
3. Under details of Mining Lease Period mention the date in which the lease was transferred from Sardar Fauza Singh to Shri Anil Khirwal.
4. **In the introduction chapter a chronology shall be depicted clearly indicating various permissions/ approvals taken since the execution of the deed in a tabular format.**

Details of approved MP/ RMP -

5. Pg. 3 ii –

- a. Exploration - Under actual work done period of 2020-21 and beyond should not be mentioned as the modification proposal is for 2020-21 onwards.
- b. Mine Development – As per last approved RMP and proposal for current modification the actual work done does not matches, which is mentioned below, necessary modification is to be made accordingly based on current survey.

Pit	Based on last approved RMP as on Nov. 2018		Based on present Modification.	
	Top mRL	Bottom mRL	Top mRL	Bottom mRL
Puja Pit	503.20	476.60	503.20	476.00
Ganesh Pit	501.62	482.00	501.62	488.00
Mahabir Pit	501.68	493.35	507.18	500.00

- c. Exploitation – Under Actual work done period of 2020-21 and beyond should not be mentioned as the modification proposal is for 2020-21 onwards.
- d. Afforestation – under actual work done Location, No. of plants and area utilized for plantation is to be mentioned in Ha.
6. In RMP the violation pointed out during 2019-20 is to be mentioned and its compliance status if any.

Geology & Exploration -

7. Pg. 1 –xv –under expenditure incurred in various prospecting operations, year wise no. of BH drilled and type of BH is to be mentioned accordingly.
8. **The resources have not been estimated as per the extant provisions of Minerals (Evidence of Minerals Contents) Rules 2015. The geological plan is not at all matching with the respective cross sections. The boreholes shown in the x-sections is either not shown on the plan or are projected. But, the projections boreholes are not properly nomenclated in the sections. Different ore types are shown in the plan but the same are not shown in the sections. A feasibility study report (F-1) has been submitted without any detailed cash flow analysis & sensitivity analysis and can't be considered at all to be a nature of feasibility report. However, resources/ reserves 221, 222 & 122 categories have been reported indicating that a pre-feasibility level of study (F-1) has been carried out.**

The submitted document indicates that iron ore above 45% Fe exists within the ML area as per the thresholds of IBM. But, the resources have been estimated only above 50% Fe in the report. Again, in the use of mineral chapter it has been reported that iron <45% is being sold to different parties. Therefore the entire document is not at all synchronised in the manner of its reporting. Therefore, the reserves & remaining resources needs to be re-assessed strictly as per the extant provisions of Minerals (Evidence of Minerals Contents) Rules 2015. Proper categorisation of the UNFC codes needs to be done and shown in the respective plans & sections.

9. Proposal of drilling BH in the entire lease area up G1 level is to be proposed, further more how much area is explored in G1, G2 & G3 is to be mentioned clearly in the tabular format.
10. **The drilled borehole logs along with its analysis, duly signed by the Geologist appointed for the mine shall be submitted. Atleast 10% of the samples duly tested from a NABL accredited lab. shall be submitted.**
11. Pg 1 – xviii – Under Cut off grade cut off grade of the mine only has to be considered.
12. **A complete time series data since the opening of the mine may be submitted to establish the recovery factor as reported in the document & duly signed by the Geologist & Mining Engr. appointed for the mine. Supporting document from an approved NABL lab. shall be submitted to arrive at the reported TCF.**
13. **Both section wise & level wise calculation of the reserves & remaining resources needs to be provided.**
14. **Also, no assumptions/ factor shall be taken for arriving at the waste quantities. Detailed calculations shall be shown to arrive at the waste quantities with clear depiction of the same in all the relevant plans & sections.**
15. **The UNFC categorisation of the reserves as per the re-assessment carried out shall be clearly shown in the geological x-sections (both transverse & longitudinal) & also in the geological plan.**
16. **All the existing waste dumps/ sub-grade stacks/ backfilling areas shall clearly show the existing quantity of material contained/ dumped in it with date along-with description of the type & quality of material in it with supporting documents from an NABL accredited lab.**
17. **A plan for detailed exploration (G-1 level) over the potentially mineralised area within the ML needs to be submitted in this proposal as per rule 12(4) of MCDR 2017 and the same shall be clearly shown in the geological plan.**
18. **The submitted document indicates that iron ore above 45% Fe exists within the ML area as per the thresholds of IBM. But, the resources have been estimated only above 50% Fe in the report. Again, in the use of mineral chapter it has been reported that iron <45% is being sold to different parties. The use of mineral chapter shall be duly supplemented with the reports from the NABL accredited labs.**
19. All resources shall be assessed up to the threshold value and the resources between the threshold value and the cut-off grade shall be reported separately. The estimated resources below the IBM threshold shall be reported separately, if there is a market for it with or without beneficiation.
20. Pg 1- xxxiii – Table 1.16 clearly mention the Resources obtained outside the broken area is by taking the influence of BH or drilling has been done outside the broken area.

Mining -

21. Proposal should be given so that overburden and waste material obtained during mining operation shall not be allowed to be mixed with the materials above the threshold values of minerals stacked.
22. Proposal should be given so that non-saleable/un-usable minerals/ ores above the limit prescribed in the threshold value and below the cut off grade shall be stacked separately in an area earmarked for the purpose.

PMCP –

23. Revised Bank Guarantee is to be submitted.

Plates –

24. Plan Period is to be mentioned in each plate.
25. **A certificate shall be enclosed in all the plans that the plan is correct to the best of the knowledge of the QP/ lessee.**
26. **The lease map of the ML area duly authenticated by the competent authority of the State Govt. shall be submitted.**
27. **All the mine production & development plans/ sections shall show the present/ last position in a lighter shade / dim colour with the proposals for development & production in a darker shade/ dark color with a very clear cut index of it. The spot level of the benches must be clearly indicated. The mine production & development plans/ sections shall also be shown in a scale of 1: 1000.**
28. **An auto-cad file of the Financial Assurance (FA) Plan, Geological Plan, Geological x-sections & Conceptual Plan shall be submitted in softcopy. The FA plan shall clearly show the existing & proposed land usages only for different entities (i.e. mining/ dumps etc.) as cited in the FA table in different colours & suitably indexed.**
29. **A local grid has been shown in the plans. The UTM grid levels as indicated in a table shall be clearly shown in all the plans & sections.**
30. **Few plans/ sections have different riders viz. "As per the granted EC' etc. written on it. No such riders shall be given in the index of the submitted plans & sections.**
31. **All the lithotypes as shown in the geological plan are not shown in the sections. The surface profile as shown in the geological sections is not matching with the plans. The boreholes shown in the x-sections is either not shown on the plan or are projected. But, the projections boreholes are not properly nomenclated in the sections. Therefore all the geological plans & sections alongwith the year-wise development & production plans & sections, conceptual plans & sections etc which needs to be re-cast properly & correctly as per the ground facts & figures showing the litho units too.**
32. **All the Annexures & Plates of the DGPS survey report enclosed with the document shall be submitted. The plates shall be submitted in the same scale as reported in the text.**
33. The surface plan, surface geological plan, key plan and environment plan shall be updated strictly as per the extant provisions envisaged under rule 32(1)(a), 32(1)(b), 32(5)(a) & 32(5)(b) of MCDR 2017.
34. The key plan, surface plan & FA plan shall also be signed by the Surveyor of the mines. A copy of his certificate of competency shall be enclosed.
35. The geological plan with X- sections & the borehole logs shall also be signed by the Geologist of the mine.