

Scrutiny comments on draft Modification in Mining Plan of New Amtipani Bauxite Mine (49.069 Ha) of M/s Awadhesh Kumar Singh situated in Gumla district of Jharkhand State.

Review of Mining Plan:

1. Current submission is Modification in approved mining plan. Reason and justification for submission of this modification should be given under item 3.6 (page 12).

Geology and Exploration:

1. Local Geology: Latitude and longitude values to be checked and corrected. Nature of mineralization and type of deposit with reference to MEMC rule should be mentioned so that reserves/resource estimation and future exploration proposals can be justified.
2. Details of Prospecting: Details of exploration done if any during previous plan period should be discussed in detail and brief summary of previous exploration to be mentioned. Breakup of explored and unexplored area should be given.
3. Based on past exploration, breakup of mineralized and non-mineralised area and further, mineralized area explored under G1/ G2/G3 level should be tabulated in text and marked in geological plan.
4. It is stated that 12 boreholes will be drilled at 100 m spacing. Since ore body is not continuous therefore, exploration proposal is inadequate for G1 level and to be modified. Borehole proposals should be given at 50m grid interval in text and marked in geological plan.
5. Time bound exploration proposals should be drawn in such a way that entire potentially mineralised area can be explored upto G1 level prior to 26/2/2022.
6. **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.**
7. **The deposit is of irregular nature. The reserves & remaining resources have been reported under 122, 221 & 222 category without any pre-feasibility report (F-2). A feasibility report (F1) has been enclosed without any detailed cash flow analysis & sensitivity analysis. Therefore, the reserves & remaining resources needs to be re-assessed strictly as per the extant provisions of Minerals (Evidence of Minerals Contents) Rules 2015. The remaining resources, if any, in the area of 9.365 ha. also needs to be reported, which has been applied for its surrender.**
8. **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.**
9. **Both section wise & level wise calculation of the reserves & remaining resources needs to be provided along with for the year-wise production and development quantities.**
10. **Also, no assumptions/ factor shall be taken for arriving at the waste & top-soil quantities. Detailed calculations shall be shown to arrive at the waste & top-soil quantities with clear depiction of the same in all the relevant plans & sections.**

Mining:

1. Statement about recovery (reported at 80%) and Mining losses (reported at 20%) should be corrected throughout document as discussed during inspection.
2. Insitu tentative excavation:
 - (i) Intercalated waste (refer head quarry waste in column 8 of table furnished on page 30) are part of OB/SB/IB therefore, it should be included in quantity reported in column 5 and column 8 may be deleted accordingly.
 - (ii) Footnote as per IBM manual of appraisal of Mining Plan 2014 for tonnage alongwith note need to be furnished below the table on page 30.

3. Year-wise Proposals:

- (i) Year-wise excavation details as furnished in two tables separately may be tabulated a fresh in single table as per following format and irrelevant data are to be removed.

Name of Quarry	Lithology/Bench no.	Area of excavation (m ²)	Average thickness (m)	Vollume excavation (m ³)	Working Location /

- (ii) To ensure systematic mining working proposals for the year 2023-24 and 2024-25 should be modified in such a way that Quarry 5 will be merged with main quarry and entire ore zone upto UPL near BP 53 and 54 can be exploited. Bench-wise excavation details should be reconciled and necessary corrections are to be done in respective plan and sections accordingly.

Dump Rehandling:

1. **All the existing waste dumps/ sub-grade stacks(if any)/ 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.**

Land Use Pattern:

1. As per earlier approved Mining Plan area put to use under pit and backfilling was estimated at 5.536 ha. After five years of mining total area under same head is estimated at 5.99 ha i.e. only 0.454 ha area was broken during last five years workings. Area under existing land use pattern need to be reconciled and necessary corrections should also be incorporated in FA table accordingly.

Environment:

1. In submitted document five years Plantation proposal is restricted over backfilled area only. Proposals should be modified in compliance restrictions imposed by State Level Environment Impact Assessment Authority vide letter no.294 dated4/3/2014.

PMCP:

1. 550 saplings are proposed for plantation every year on backfilled area and in this way only 1.1 ha can be rehabilitated by plantation out of 6.62 ha. reclaimed area. Proposal for plantation of more saplings should be given so that rehabilitation of reclaimed area and plantation in statutory barrier zone around forest area can be achieved. Year-wise PMCP proposals should be should be modified accordingly.

Annexure:

1. **The drilled borehole logs alongwith its analysis, duly signed by the Geologist appointed for the mine shall be submitted. At least 10% of the samples duly tested from a NABL accredited lab. shall be submitted.**
2. Annexure nos. should be checked and corrected in sync with that referred in text.
3. Annexure 21: Complete set to be enclosed.

Plates:

1. **The lease map of the ML area duly authenticated by the competent authority of the State Govt. shall be submitted.**
2. **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.**

3. **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.**
4. **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.**
5. **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.**
6. **The geological plan with x-sections shall also be signed by the Geologist of the mine also.**
7. Submitted DGPS map is not authenticated by State authority. Dually authenticated map should be submitted.
8. Key Plan: Lease area should be demarcated under bold line with distinct colour hatching. Colour hatching for forest land as shown in index not matching with that shown on plan.
9. Surface Plan :Mine surveyor signature missing. Lessee's application for surrender of forest land is still pending with State Govt. Word surrendered should be replaced with applied from index and also from other places in document wherever applicable.
10. Surface Geological Plan and Sections:
 - (i) Lithology exposed on surface, pit faces, mineralized/non-mineralised/unexplored area should be marked. Mineralized area explored under different level should be shown.
 - (ii) UPL is missing in western periphery and many locations.UPL should be checked and drawn correctly. UNFC codes should be also be corrected accordingly.
 - (iii) Grid spacing for proposed boreholes should be modified and corrected in line with scrutiny comments given in text.
 - (iv) Subsurface lithology of unexplored area which is yet to be established may be shown as ??? on respective section lines.
 - (v) **The geological x-sections needs to be submitted in a scale of 1: 1000, as the print submitted in the scale of 1: 2000 is totally obscure. 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.**
11. Production and Development Plan and Sections:
 - (i) **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.**
 - (ii) Various section lines which are drawn across the area where there is no proposals such sections/plates has no relevance should be removed.
 - (ii) No plantation seen at the time of inspection in the area marked under existing plantation. Existing surface features should be in line with that shown in surface plan.
12. Environment Plan: Forest land/ agriculture land/ other lease and quarries etc coming inside 60 m and 500 m periphery of the lease area is to be shown.
13. Financial Area Assurance Plan: Financial Area Assurance Plan not submitted. A Financial Area Assurance Plan showing outlines of area put to use under different heads as tabulated in FA table should be submitted.