

Scrutiny comments on examination of Draft Scheme of Mining in respect of NK Block IV-Eastern Extension, Beach Sand Mine of M/s IREL, GO(MS) No. 746/2007/ID Dt. 08.06.2007, Extent 180.00 Ha. in Allapad, Panmana and Ayanivelikkulangara villages, Karunagapalli Taluk, Kollam District, Kerala.

COVER PAGE

1. Name of the document may be mentioned only as '*Scheme of Mining*' at top of the cover page.
2. Name of the mine may be corrected as '*NK Block IV, Eastern Extension, Beach sand mine*', it is to be mentioned that lessee is requesting for approval in respect of *Sillimanite mineral* only to IBM.
3. Scheme of mining period may be corrected as from 2016-17 to 2020-21.
4. Category of the mine should be written as: Opencast, Category-A, OTFM, Public sector undertaking.
5. All undertaking & certificates by the Lessee & Qualified Person are to be placed in Part-B of the document in accordance with new standard guidelines.

INTRODUCTION

6. Date of first grant of the ML, subsequent renewals, references of deed executions, reference of last approved mining plan, present status of CRZ clearance and other specific orders / guidelines or notifications received from the regulatory bodies time to time pertaining to this ML may be discussed in this chapter briefly.

GENERAL

7. Para 1.0 (f): As per Rule 15(1) of MCR, 2016 a qualified person should have a degree in mining engineering or a post graduate degree in Geology with professional experience of minimum five years of working in a supervisory capacity in the field of mining after obtaining the degree. Accordingly copies of relevant educational qualification and professional experience certificates may be enclosed.

LOCATION AND ACCESSIBILITY

8. Para 2.0 (a): Latitude & Longitude of any boundary point should be furnished here, identification no. of the pillar may also to be written.
9. Para 2.0 (b): Latitude & Longitude of all corner/ boundary pillars should be mentioned here in a tabular format.

DETAILS OF APPROVED SCHEME OF MINING

10. Para 3.3: All review of earlier approved proposals should be furnished from 2011-12 to 2015-16, reasons for nil production and development since the grant of ML may be discussed here briefly. Description on method of mining, waste disposal and environment management (ref. Page no 11 to 14) may be removed under this para and the same information should be incorporated in relevant places of the document.

PART- A

11. Para 1.0 (e):
 - a) ***Exploration details in the leasehold area are not found to be updated. Enclosed 'Status report' of AMD exploration in NK blocks is two years old, latest exploration status in the leasehold area need to be enclosed.***
 - b) ***In 'Status report' of AMD it is further noted that exploration activities have been carried out in 3 different mining leases of M/s IREL viz., Azheekal ilmenite mine (extent 4.8 Ha.), NK Block IV (extent 102.77 Ha.) and NK Block IV, EE (extent 180 Ha.) and accordingly report is furnished altogether. Nos. of borehole drilled and sampling details as on date within NK Block IV-EE only require to be elaborated in this document, the same may be furnished in a tabular format under this para.***

- c) In page 22 it is mentioned that, as on 01.04.2011, as per AMD report raw mineral sand reserve is 24.9 million tonnes (UNFC Cat. 111). No such estimation report from AMD is found available with the document, please clarify.**
- d) Complete chemical analysis for all radicals may be undertaken for selected samples from a NABL accredited Laboratory or Government laboratory or equivalent. At least for 10% of total samples may be analyzed in accordance to BIS and reports from NABL accredited/other government laboratory) and copy of analysis reports may be enclosed with the document.**

12. Para 1.0 (i): Please confirm the future exploration program of AMD in the leasehold area.
13. **Para 1.0 (k): Proved mineral reserve estimation (UNFC Cat. 111) is not correct. Although part of the deposit is explored in details by AMD with 100m x 25m grid interval, but most of the ML is thickly habilitated by local villages and these areas are not readily available for mining by M/s IREL at present, in view of lack of land surface right and other legal issues. Hence, resources in these areas should be classified under 'blocked ore resources' under UNFC Cat. 211. In view of above, 'blocked ore resources' should be estimated separately in reserve/ resources calculation.**
14. Para 1.0 (l): Justifications for considering different axes of UNFC are not given. Mining method, recovery factor, mining losses, processing loss etc. are not discussed.
15. Para 6.0 (b): Material balance chart and flow sheet diagram is not provided.
16. Para 6.0 (g): Quantity of water required (in cum) for processing each tonne of raw sand should be indicated here with water balance chart.
17. Para 8.1(i): Areas as mentioned in present land use pattern are not correct; the same may be corrected in accordance with latest surface plan.
18. Para 8.1(vii): Villages present around 5 km of the ML area should be furnished here in a tabular format with population and average distance.
19. Para 8.3.5: In summary of year wise proposals from 2016-17 to 2020-21 only 'proposals' column should be mentioned in relevant places ('actual' & 'remarks' columns may be removed). An additional column may be inserted viz. 'actual position as on date' for each activity.
20. Para 8.6: 'Areas put on use at the start of the Scheme of mining' should be corrected in accordance with latest survey/ surface plan and accordingly 'net area calculation for financial assurance' should be updated.

PART-B

21. Para 9: All certificates & undertakings are to be furnished separately in Part-B as per new 2014 guidelines.
22. **Para 10, Plates:**
- a) Surface Plan (Plate no. 4): This plate should be placed & numbered before Geological plan. Signature & certificate no. of the surveyor is not present in the surface plan, the plan also should be signed by the mine manager. Co- ordinates of the boundary pillars should be written in the surface plan in a tabular format. Shore protection wall within the ML area should be demarcated in the surface plan.
- b) Geological Plan (Plate no. 3): Location of drilled boreholes (by AMD) and area covered under different stages of exploration (viz. G1, G2 or G3) should be demarcated in the plan. Blocked ore areas by human inhabitation and by other structures may be shown.

- c) Geological Cross Sections (Plate no. 3A): Boreholes are to be drawn along the section lines. Proved reserve (Cat. 111), blocked ore resources (Cat. 211) and other possible UNFC categories should be demarcated on the section. Reserve & resources on the deposit, as per UNFC, should be calculated section-wise and accordingly calculations should be enclosed separately as annexure. Ultimate Pit Limit (or depth) should be drawn on the sections.
- d) Financial Area Assurance Plan (Plate no. 8): Outlines of the existing working, dumps, stacks, etc. covering all the items under the financial assurance table at the end of 5 year plan (i.e. 2020-21) period in different colour for the purpose of computation of the areas required to be used in that period to verify the financial assurance including areas considered as reclaimed and rehabilitated.
- e) Reclamation Plan and Conceptual Plan are not found provided with the document.

23. **Para 11, Annexure:** Following items are required to be annexed with the document:

- a) *Latest exploration report by AMD.*
- b) *Section-wise updated Reserve & Resources calculation.*
- c) *Copy of the analysis report of drilled boreholes (minimum 10% of the total collected samples), analyzed by NABL/ other Govt. laboratory.*
- d) Copy of Qualification & Experience certificates of the qualified person.
- e) Photo Identity Card of Lessee with permanent address proof, enclosed one is not legible.
- f) Few photographs of mining operation and aesthetic environment on the ML area.
- g) Copy of valid bank guarantee, valid up to 31.03.2021
