

Scrutiny comments on examination of Mining Plan with Progressive Mine Closure Plan in respect of Tukda Bauxite Mine, Survey No-444 an area of 5.6656 hectares in village- Tukda, Taluka- Porbandar, District – Porbandar, Gujarat State submitted by the Lessee Shri Dolarji Thanki under rule 17(2) of MCR,2016 & 23 of MCDR 2017 for five years excavation proposals from 2018-19 to 2022-23.

1. Reference of MCDR, 1998 given in all the certificates, text report, annexure, etc. may be changed in view of recently notified MCDR, 2017.
2. For preparing this document standard guidelines is not followed in true spirit as various incorrect statement/facts/figures have been mentioned in the text report, improper ordering of documents found in the text report which need to be avoided in final submission.
3. All the plans & sections have not been provided with latest and correct survey. In working pits surface profile with its mRL are not provided correctly. All plans & sections with updated & correct survey need to be given in final submission.
4. All the supporting tables, figures, annexure furnished in the report are not properly numbered with appropriate nomenclature.
5. Projection marked outside the ML area shall not be considered for the approval of this document except the projections shown on Environmental plan.
6. Final 3 copies of ROMP with PMCP and all required plans/sections should be given in single bounded text report manner to avoid misplacing of drawings and text report.
7. **Cover page-** Excavation proposal period not specified correctly, Heading of document "Mining Plan with PMCP" is incorrect, further excavation proposals may be reviewed in view of previous execution of mining lease period. Further, extended ML period is not mentioned.
8. **Introduction-** Other ML/PL held by the lessee not given, name of the QP mentioned in the introduction is not required as it is already furnished on cover page.
9. **General:**
 - a. First Mining lease renewal period effective from 14.09.2007 to 14.09.2037 whereas extended mining lease period is mentioned till 31.03.2037. Hence, extension of mining lease letter from competent authority as per MMDR Amendment Act, 2015 should be submitted else document shall not be considered for approval.
 - b. Mining lease boundary pillars & its latitude-Longitudes not found as per the statutes as observed during the site inspection. Given GPS co-ordinates of BP are no more allowed and same should be furnished as per DGPS in view of CCOM circular 2/2010/MCR/2016.
10. **Chapter-2: Location and Accessibility:** Ownership of mining lease area as per Govt. revenue records is not given. Further, consolidated representation in term of "Land Schedule" for land type, ownership of land, etc. may be given separately. Existence of public road/railways line, railways connectivity, port connectivity, etc. not discussed in detailed manner.
11. **Chapter-3: Details of approved Mining Plan/Scheme of Mining:** Review of approved proposals Vs actual status in respect of exploration not given correctly as the reason for not achieving the proposed exploration is not mentioned. Reason for Nil generation of waste and lees plantation against proposals is also not mentioned.
12. **Part A: Geology & Exploration:**
 - a. Future exploration proposals need to be given as per the rule 12(3) of MCDR,2017 with an objective of bringing entire mineralized area under G1 category.
 - b. Page-12: Topography, drainage pattern, vegetation, climate & rainfall data of mining lease area has not been described in detailed manner & details on some of these heads are missing.
 - c. As mentioned, lessee has carried out the exploration by means of prospecting trial pits in the past. So necessary, supporting documents like intimation to IBM, analysis report, consolidated statement showing commencement and completion of exploration activities, etc. should be furnished.
 - d. Proposed exploration is given as "Nil" despite of maximum ML virgin area yet to be explored. Accordingly, exploration need to be proposed in plan period in view of criteria of rule 12(3) of MCDR,2017 with an objective of bringing entire mineralized area under G1 category. Moreover, proposals should also be given for ascertaining the mineral continuity below lithomergic clay.
 - e. The cut-off grade and threshold value of bauxite should be discussed as per the IBM circular 2009, (Al₂O₃- 30% (Min) and Silica (reactive) – 5% (max). Further, copy of chemical analysis report of bauxite/intercalated waste/mineral rejects/metallurgical grade of bauxite, etc. may also be submitted from NABL accredited laboratory.
 - f. Page-18: Total area of 4.1608 Ha considered under G1 level of exploration is incorrect as only two working pits comes over grid line which may be considered for taking the influence of bauxite mineralisation laterally.

- g. In reserves estimation, justification given in generalised manner for assigning UNFC codes i.e. EFG. The same may be given with respect to the actual facts related to the mining lease area only.
 - h. Methodology adopted for reserves and resources estimation in last approved SOM appears to be incorrect. Further, parameters considered for lateral as well as depth of persistent for bauxite mineralisation also not as per MEMC Rules, 2015.
 - i. The parameters considered for reserves estimation in previous approved SOM viz. 50 m distance from pit boundary, prospecting pit in all direction considered for proved (III) category reserves appears to be incorrect and not in support with MEMC Rules, 2015.
 - j. Remaining proved reserves (219328 MT), Feasibility resources (11544 MT), Pre-feasibility resources (46340 MT) & Inferred mineral resources (150480 MT) estimated as per the last approved SOM without adequate exploration is not accepted and re-estimation of R&R may be carried out with reference to the provisions of MEMC Rules, 2015.
 - k. Detailed calculation of reserves/resource estimation considering UNFC classification, MEMC Rules, 2015 for each block should be given separately. Basic parameters like depth of mineralisation, bulk density of bauxite, various statutory barriers, avg. quality of each blocks, etc. need to be addressed suitably in R&R estimation.
 - l. For reserves & resources estimation various parameters/constraints like Eco sensitive zone, power transmission line, public road passing through ML and any other statutory barriers need to be considered very precisely.
13. **Mining:**
- a. During proposed production/excavation planning total 95% is considered as ROM excavation & 5% of ROM is considered as waste below threshold limit. In this regard, proper justification may be given with facts & figures.
 - b. Adequacy of man and machinery with detailed calculations and its capacity should be discussed in very correct manner and justify. Further, it should be clarified that HEMM used/proposed is own, hired or contractual basis with necessary supporting documents.
 - c. Pit wise top & bottom mRL indicate the remaining depth of bauxite mineral at pit floor and the same proposed under further production planning should be given in tabulated manner for easy understanding.
 - d. Under the given dimension of individual blocks, top and bottom mRLs of each pit should be mentioned separately along with no. of benches being operated in mineral as well as in waste need to be specified.
 - e. Under proposed year wise excavation planning blocks extents proposed under excavation not mentioned in term of co-ordinates pattern. Further, mRLs wise proposed production is completely missing.
 - f. It is observed during mine inspection that, mining operations are being carried out unsystematically as ROM/mineral rejects stacks developed and formed within lease area. Further, mining working beyond statutory barrier of 7.5m also need to be discussed & justified with valid reasons.
 - g. Page-37-40: Conceptual mine planning is not given as per the guideline because adequacy of further exploration, present land use pattern pit, reclamation & rehabilitation aspects, conceptual land use pattern, post mining land use, etc. are not discussed.
 - h. Page-37: It is mentioned that only mineable (111) & (211) reserves are taken into consideration to prepare this conceptual plan which is incorrect because (211) is resource part which cannot be considered without converting into reserves.
 - i. Incorrect/wrong declaration has been given about exploration that 3 trial pits have been proposed during 5 yrs plan period whereas no such proposals have been given in relevant chapter. Justify the same.
14. **Chapter 4: Stacking of Mineral Rejects/Sub-grade Material & Disposal of Waste:**
- (a) Statement given in respect backfilling seems to be incorrect as the backfilling is proposed by both top soil & mineral waste material but out of this only mineral waste is considered for backfilling & no use of top soil is mentioned. (b) Further, this will be simultaneous backfilling or any storage of top soil & mineral waste material is required is not clarified in the chapter.
15. **Chapter 5: Use of Mineral and Mineral rejects**
- a. When it is mentioned that separation of HG & LG bauxite is not feasible to separate out from ROM then how this 5% is considered as mineral reject to be separate out. Justify the same. Specification of buyers for high grade & low grade shown here is generalized; the same should be specific to this mine/lease only.
16. **Others, Page-49:** Under the employment potential requirement skilled, semi-skilled persons and technical and non-technical persons are not given in detailed manner as per the prescribed rules.
17. **Chapter: 8, PMCP**
- a. Page-54: Incorrect Land use pattern is given as the total area not matching with ML grant area. The same may be given as on date and proposed plan period up to 31.03.23 and till the mining lease period. Further, existing

and proposed environmental protective measures should be given in tabulated form with supporting analysis reports.

- b. Impact assessment is not given as per the guidelines. Generalised & merely repetition of previous chapter's text is done. Systematic remedial proposals and existing facilities to cater various environmental polluting parameters need to be discussed here.
- c. Under item 8.3 of PMCP reclamation is proposed but simultaneous rehabilitation by way of barbed fencing, bench terracing, provision of garland drain, stone wall, etc. not proposed at all. Corrected & systematic PMCP proposals need to be given here.
- d. Financial area should be assessed correctly based on the actual area put to use as on date and subsequent additional area requirement during plan period. Further, the copy of original bank guarantee of extended period for A category of mines should be submitted in final submission of this document.

Plates

18. **Cadastral maps:** Mining lease boundary pillars numbers, co-ordinates (Lat-Long) are not furnished. Further, co-DGPS co-ordinates of all BP duly authenticated by the CGM/SG need to be submitted.
19. **Key Plan:** Plan is not submitted with all the information as required under Rule 32(5)(a) of MCDR, 2017 as ML projections & google imagery is not legible, ML boundary not marked clearly, land use status not marked, wind direction not marked, scale is incorrect, etc.
20. **Surface plan:** Surface plan is not submitted with all the information/prominent features as required under Rule 32(5)(a) of MCDR, 2017 as ML boundary pillars nos. not mentioned, plan is not properly surveyed as most of the surface features not incorporated, Pit wise spot mRLs not mentioned, counter values throughout the area appears to be incorrect.
21. **Surface geological plan & Sections:** Geological plan is not submitted with all the information as required under Rule 32(5)(b) of MCDR, 1988 as ML area with level of exploration & Reserves category (111/121, 1211) as per MEMC Rule, 2015 not marked correctly, exploration not proposed, presence of lithomeric clay in working pit shown wrongly, cross sections lines are completely marked as incorrect as lithology incorrectly marked, previous exploration not marked, hence sections need to be prepared fresh.
22. **Year wise working part plan:** Area marked under proposed excavation in Sq.M. appears to be checked, year wise plan is not depicting with proper approach to faces, ultimate depth of working, advancement direction, etc., ultimate pit limits not marked, UNFC category of R&R not marked, mRL projection over plan & sections are incorrect, sections are not in natural scale.
23. **Environment plan:** The plan has not been prepared incorporating all details as per rule 32(5)(b) of MCDR'2017 as land use pattern within 500Mts zone are not marked, proposed afforestation/plantation not shown, surface features including human settlement, etc. not shown, monitoring stations in core & buffer zone not marked correctly, other MLs area with its lessee name not mentioned.
24. **Conceptual plan:** No provision for bench wise access to lower benches has been shown, environmental protective works like fencing at ultimate stage is not marked correctly, conceptual sections are not prepared correctly, ultimate pit limit also not marked correctly.
25. **Reclamation plan:** Para 8.3: the details of progressive mine closure plan is not depicted distinctly on plan. 5 years ending pit position have not been marked, total area proposed for reclamation should be specified in digits for each pit, year wise afforestation not marked correctly, ultimate pit limit also not marked, Tile/heading of plan is incorrect.
26. **Financial Area Assurance Plan:** Block wise area proposed under excavation in plan period not specified in hectare, block wise area already reclaimed & rehabilitated if any also to be shown, the plan may be given by showing year wise area broken up at the start of MP period & additional area requirement during proposed plan period.
27. **Annexure:**
 - a. Land schedule indicating the type of land either private or Govt. with other details has not been provided.
 - b. Photo ID & address proof of lessee not enclosed.
 - c. Analysis/test report from NABL Lab. for bulk density used for computation of R&R is not enclosed.
 - d. Cadastral map showing mining lease with DGPS co-ordinates of all BP as per the CCOM circular 02/2010/MCR/2016 duly authenticated by the CGM/SG need to be submitted for final approval of this document.
 - e. Exploratory prospecting pits samples & individual block wise bauxite samples analysis report has not been submitted.
 - f. Copy of field photographs of trial pits/borehole logs with signature of geologist should be submitted in further submission.
 - g. Copy of original bank guarantee for extended period should be deposited in further submission for approval of this ROMP.
