

Scrutiny comments on examination of Review of Mining Plan with Progressive Mine Closure Plan in respect of Asota Mewasa Bauxite Mine, Survey No-various over an area of 682.3892 hectares in village-Mewasa, Mota Asota, Ran, Habardi & Khakharda, Taluka- Kalyanpur, District -Devbhumi Dwarka, Gujarat State submitted by the Lessee M/s. Bombay Mineral Limited 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. As mentioned, original mining lease was granted & executed on 09.08.1958, hence mining lease shall be expired on 31.03.2020 as per the provision of MMDR Amendment Act,2015 but the expiry of this ML is furnished as 31.03.30 which need to be justified with supporting with State Govt. grant order stating that this lease is captive lease otherwise proposal should be restricted only upto 2020 only.
3. In last approved SOM ROM excavation was proposed at the tune of more than 39 lacs tonnes per annum when EC was awarded for approved ROM excavation of 1840000 TPA. Now, in this document ROM excavation is again proposed as more than 20 lacs/annum which is not supporting with existing EC quantity. Justify the same.
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 wrongly mentioned as “production plan” which need to be rectified, given excavation proposals may be reviewed in view of previous execution of mining lease period. Further, extended ML period mentioned which needs to be reviewed.
8. **Introduction-** Facts about exporting of NPG Bauxite is not mentioned whereas it is stated that, bauxite is completely being used as captive use, status of another ML/PL held by the lessee is not given correctly.
9. **General:**
 - a. Second Mining lease renewal period effective from 08/08/1998 to 08/08/2018 whereas extended mining lease period is mentioned till 31.03.2030. Hence, extension of mining lease for 30 years 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.
 - c. 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.
10. **Chapter-2: Location and Accessibility**
 - a. Huge numbers of ML blocks coordinates in term of Latitude & Longitude has been furnished. But, very few BP have been noticed during site inspection. Declaration/undertaking may be given for erecting BP as per statue in proposed excavation period may be given separately. Further, block wise accessibility is also to be discussed.
 - b. Ownership of mining lease area as per Govt. revenue records is not given. Further, consolidated representation for land type, ownership of land, etc. may be given separately.
 - c. Page-10, Para 2B, total mining lease area of 682.3892 hectare is mentioned as other (Private Land) which is incorrect and need to be rectify.
11. **Chapter-3: Details of approved Mining Plan/Scheme of Mining:**
 - a. Details of mining plans/SOM approved on last occasion not given correctly as the same not supported either MP or SOM document in given table. Review of approved proposals Vs actual status in respect of exploration not given correctly as the number of prospecting pits achieved not mentioned. Deviation for not achieving the production from proposed locations also not furnished.
 - b. Under the review chapter, details of blocks with its levels (mRLs) proposed for production Vs block wise achieved production with its mRLs should be given in detailed manner and reason for the its deviation also need to furnished.

- c. Reason for deviation for not achieving OB/waste generation against the proposed quantity is not mentioned. Further, justification of Nil generation of OB/Waste during the year 2015-16 & 2017-18 (up to july) may be given separately.
- d. It is mentioned that, total area of 37.96 Ha converted into water Reservoir during last approved SOM period which appears to be incorrect and need to be reviewed very meticulously as this aspect is related to FA part.
- e. The existence of various mineral stocks available in the field appears to be more as compare to the closing stocks quantity reported in statutory returns, it needs to be justified.
- f. The copies of violations, show cause notices issued by IBM/MMS Nagpur & its compliance positions should be given clearly with necessary supporting documents.

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. Along with description of individual block, avg. grade quality/analysis may be furnished for all the blocks in order to understand the bauxite quality.
- c. As mentioned, lessee has carried out the exploration by means of prospecting trial pits during last approved SOM period as well as in past. Necessary, supporting documents like intimation to IBM, analysis report, consolidated statement showing commencement and completion of exploration activities, etc. should be furnished.
- d. For better understanding key map (not to scale) is also to be displayed while describing block wise details on page no 12 to 19. Further, latest mineral analysis report has not been submitted in the document on block wise basis. Representative samples are to be shown at analysis from NABL laboratory.
- e. Proposed exploration programme is not given correctly as very limited exploratory trial pits have been proposed during proposed plan period which is not meeting the criteria of rule 12(3) of MCDR,2017 with an objective of bringing entire mineralized area under G1 category.
- f. While giving proposed exploration by means of prospecting trial pits, proper grid pattern should be adopted as per MEMC Rules, 2015. Further, adequate nos. of exploratory pits in mineralised area to be made. Moreover, proposals should also be given for ascertaining the mineral continuity below lithomergic clay.
- g. The cut 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
- h. Page-37: area marked under different level of exploration needs more clarity/justification with respect total mining lease. Total mineralised area explored so far and further to be explored to be specified very precisely.
- i. 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.
- j. Reserves & resources for individual blocks need to be reassessed considering the provisions given UNFC/ MEMC Rules, 2015. Accordingly, block wise re-estimated reserves & resources may be furnished separately.
- k. Remaining proved reserves (52769320 MT) and Probable reserves (8152605) estimated as per the last approved SOM without adequate exploration is not accepted at all.
- l. 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.
- m. Geological plans of different blocks are prepared on different scale and no uniform scale is adopted. For this purpose whether lessee has obtained any scale relaxation, if so, enclosed the copy of scale relaxation.
- n. As per the surface geological plan, in some of blocks neither any working pit is existed nor has any exploration done. But, still these blocks area has been classified in proved & probable reserves which are completely incorrect and not accepted.

- o. Feasibility report is not prepared as per the guidelines as most of important aspects like proper justification for awarding UNFC codes are not discussed in correct manner.
13. **Mining:**
- a. Necessary justification for operating of numbers of blocks within mining lease in haphazard and unsystematic need to be justified and in proposed plan period in further mine planning care should be taken for systematic mining operation.
 - b. The annual production is targeted at the tune of 2096925 tonnes per annum need to be reviewed in view existing EC for 1840000 TPA ROM excavations.
 - c. As observed during site inspection, most of the either pit area or virgin area where proposed excavation/production planning is given is covered with already stacked mineral quantity which will be hindered further mining operations. But, this aspect not discussed in the relevant chapter.
 - d. Page-53: Block wise pit floor area as mentioned need to be checked very meticulously and there should not be any deviation as this aspect is directly related to the financial assurance and for further proposed excavation planning.
 - e. Pit wise top & bottom mRL indicate the remaining depth of bauxite mineral proposed under further production planning should be given in tabulated manner for easy understanding.
 - 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 and its quantity seems to be more than the production quantity as reported in returns. It needs to be justified with valid facts & figures. Quantity of mineral stack available in mine and closing stock reported in return should be discussed & justify with supporting documents. Further, mining working beyond statutory barrier of 7.5m also need to be discussed & justified with valid reasons.
 - g. 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.
 - h. ROM excavation/production planning is given in different blocks but the reason for proposing excavation planning in different blocks, quality constraints, scope of blending material from different blocks, etc. not discussed at all.
 - i. In proposed planning, it mentioned about recovery of 100% bauxite which appears to be unrealistic and need to be justified suitably. Further, constraints in achieving the same like generation mineral rejects in manual sorting, geological formation, etc. need to be thought of.
 - j. 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. Further, block wise quantity calculation part also need to be checked very precisely
 - k. Adequacy of man and machinery, calculation 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. Moreover, it is also noticed that lead factor is not considered while calculating the total required machineries.
 - l. Blasting parameters as furnished on the page no-73 appears to be incorrect and contradicting with given bench configurations.
 - m. Page-77-82: 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, etc. are not discussed in detailed manner.
 - n. Land use pattern wherein area of 3.810 Ha occupied by dumps need to clarified whether is this waste material or mineral reject dumped area or not.
14. **Chapter 4: Stacking of Mineral Rejects/Sub-grade Material & Disposal of Waste:**
- a. As observed during site inspection, there is generation high silica content bauxite mineral rejects and moreover there are again possibilities of generating mineral rejects during manual sorting and sizing of material. But, this aspect not discussed in the chapter. (b) Area furnished under the voids formation need to be checked with previous narrations/figures furnished in mining chapter.
15. **Chapter 5: Use of Mineral and Mineral rejects**
- a. As per last approved plan how much quantity of bauxite was consumed for Abrasive, Refractory, Metallurgical and Chemical purpose from the total quantity produced should be given. Further, above the threshold value and below the cut of grade/Sale grade of ROM should be shown in mineral reject

head. 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-90:** Quantity of water requirement for mining and processing is not furnished. 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-26: Land use pattern should be given as on date or 01.04.18 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. Land use pattern is also to be described on block wise basis.
 - 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.
 - c. Total 45.39 Ha is considered under reclamation & rehabilitation in FA table but the block wise details of this reclaimed & rehabilitated area not furnished anywhere in the chapter.
 - d. Page-104: year wise area proposed under voids available and subsequent proposed for rehabilitation by making water reservoir seems to be incorrect. The same need to be justified strongly. Further, environmental monitoring proposals are not given in detailed manner. Moreover, under the proposed afforestation/plantation by 300 saplings are not found appropriate in view of such big ML area.
 - e. When huge reclamation & rehabilitation is proposed year wise under item 8.3 of PMCP but simultaneous rehabilitation by way of barbed fencing, bench terracing, provision of garland drain, stone wall, etc. not proposed at ll.
 - f. Representative photographs of the area considered fully reclaimed & rehabilitated should be submitted. PMCP activities to be undertaken are to be discussed on block wise basis.
 - g. Under the Financial Assurance total area of 45.39 Ha considered as fully reclaimed & rehabilitated is appears to be incorrect and it is not accepted. Further, the same has not been marked on relevant plans. Give the actual & correct area which is completely fully reclaimed & rehabilitated in all respect as per the statue. 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

- a. All the plans & sections are not prepared on prescribed scale and different scales have been used for preparing these plans which is not acceptable. Prepare all the plan & sections as per prescribed scale given in MCDR, 2017.
 - b. Most of the Plans & sections are not incorporated with updated survey details.
 - c. Plates are not folded in correct and standard manner.
 - d. Given dimensions of various pits have found some deviation and it should be strictly checked & correct figure may be given in final submission.
 - e. All the plans & section not correctly prepared in AutoCAD in term of its font size, index table, legend table, paper size, colour management, etc.
 - f. Scale representation is not marked correctly as per the prescribed rules.
18. **Cadastral maps:** In all cadastral maps, different blocks are not marked with prominent ML boundary, further blocks names & relevant details also not provided.
 19. **Key Plan:** Plan is not submitted with all the information as required under Rule 32(5)(a) of MCDR, 2017 as land use status including Govt. land, Pvt. Land, Forest land etc. not marked correctly, wind rose diagram, village boundary, other ML area, village road, etc. are also not marked correctly. Further, given blocks nomenclature mismatching with text narration, 5km buffer zone not marked.
 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 Lat & long of the lease boundary pillars are not provided correctly, Pit numbers not provided, Pit wise spot mRLs not mentioned, index is defective as various plan features not incorporated. **Karamkund Block-** Given scale 1:4000 is incorrect; given details of boundary pillars connected to permanent ground points are incorrect. Further, mark the other feature like public road passing through ML, electric transmission line is any. The given observations need to be incorporated in all the blocks.

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, proposed exploration not marked correctly in grid pattern, grids of various plans are marked incorrectly, lithology of the area not marked correctly, scale of the various blocks plans & sections are incorrect & not uniform, in some blocks there is no working & no exploration but still area marked under proved & probable reserves, in some of the block area no exploration has been proposed, possible category of reserves is incorrectly mentioned over the plans, sections are completely incorrect as the mRL representation marked incorrectly, limestone lithology not marked, lithomergic clay not mark correctly, various prominent features as shown on plan but not marked over sections, hence sections need to be prepared fresh.
22. **Year wise working part plan :** Area marked under proposed excavation in Sq.M. appears to be incorrect, Production planning need to be given in view of available mineable reserves as on date, year wise plan is not depicting with proper approach to faces, ultimate depth of working, advancement direction, etc., ultimate pit limits not marked, in some plans proposed development over virgin/fresh area not marked correctly, clear demarcation for year wise excavation is not made, UNFC category of R&R not marked, in section existing pits profile is not marked correctly, various features not marked over section hence sections need to be prepared freshly.
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, 500 m zone as marked is incorrect, for block Kothariyadhar the said plan is prepared on scale 1:1000 which is incorrect, various important features like wind rose diagram, scale representation, etc. not marked correctly.
24. **Conceptual plan:** Incorrect representation given for conceptual planning, No provision for bench wise access to lower benches has been shown, environmental protective works like fencing at ultimate stage is not marked, conceptual sections are not prepared correctly, proposed reclamation & rehabilitation area not marked correctly, ultimate pit limit also not marked correctly, spot mRL of proposed backfilling area not mentioned, ultimate block wise depth is not furnished.
25. **Reclamation plan:** Para 8.3: the details of progressive mine closure plan is not depicted distinctly on plan. The year wise fencing, year wise plantation, Environmental monitoring stations, garland drains, etc. have not been shown, 5 years ending pit position have not been marked, total area proposed for reclamation should be specified in digits for each pit, already reclaimed area nowhere shown in the plans, plans are not prepared on prescribed scale, area proposed under reclamation & rehabilitation not marked clearly, year wise afforestation not marked correctly, ultimate pit limit not marked.
26. **Financial Area Assurance Plan:** Block wise area proposed under excavation in plan period not specified in hectare, block wise area already reclaimed & rehabilitated also to be mentioned & highlight in hectare, 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, FA table as shown on plan is incorrect.
27. **Annexure:**
 - a. Copy of scale relaxation for preparing plans & sections other than prescribed scale is not enclosed.
 - b. Copy of the lease execution on second renewal of ML for the period from 08.08.1998 to 08.08.2018 is not enclosed.
 - c. List of all existing mining leases with all relevant details is not provided.
 - d. Land schedule indicating the type of land either private or Govt. with other details has not been provided.
 - e. Cadastral map showing granted ML area and its boundary pillars DGPS co-ordinates duly authenticated by concerned SG authority need to be submitted in final submission.
 - f. Exploratory prospecting pits samples analysis report has not been submitted.
 - g. Copy of field photographs of trial pits/borehole logs with signature of geologist should be submitted in further submission.
 - h. Copy of original bank guarantee for extended period should be deposited in further submission for approval of this ROMP.
