

Scrutiny comments on examination of Review of Mining Plan with Progressive Mine Closure Plan in respect of Virpur & Kenedy Bauxite Mine, Survey No-II0/P, 506/P an area of 70.82 hectares in village- Virpur & Kenedy, Taluka- Kalyanpur, District -Devbhumi Dwarka, Gujarat State submitted by the Shri Bharatbhai Makhecha of M/s. Prabhudas Vithaldas under rule 17(2) of MCR,2016 & 23 of MCDR 2017 for five years excavation proposals from 2018-19 to 2019-20.

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 discussed during site inspection, some of the mining lease area has been reduced and falls under eco-sensitive zone. But, this fact has not been discussed in the relevant chapter. Further, State Govt. letter and map showing line of demarcation for this reduced eco-sensitive zone area need to be provided.
3. This draft Review of Mining Plan document is submitted by the Shri Bharatbhai Makhecha who himself declared as legal heir. In this regard, necessary certificate of legal heir/succession certificate issued from competent court of law need to be submitted.
4. All the plans & sections have not been provided with latest and correct survey. In some of the blocks like Ratakunda small block, inside the working pit single mRL is provided which completely incorrect & not accepted. Provide all plans & sections with updated & correct survey in final submission.
5. As per MMDR Amendment Act, 2015 provisions, mining lease period shall be extended till 31.03.2020. Therefore, in view of this fact, various proposals like exploration, systematic sustainable mining and PMCP proposals, etc. need to be dealt in correct and systematic manner.
6. All the supporting tables, figures, annexure furnished in the report are not properly numbered with appropriate nomenclature.
7. Projection marked outside the ML area shall not be considered for the approval of this document except the projections shown on Environmental plan.
8. 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.
9. **Cover page-** Excavation proposals wrongly mentioned as “production plan” which need to be rectified, further excavation proposals may be reviewed in view of previous execution of mining lease period. Further, extended ML period mentioned which needs to be reviewed.
10. **Introduction-** It is mentioned that, TOR has been obtained for 839398 TPA (ROM) excavations but final status about environmental clearance not discussed and copy of final EC is also not enclosed. Give the status of previous Environmental clearance and its sanctioned ROM production capacity per annum. Moreover, the details on grant on mining lease and subsequent renewals not discussed in chronological & in correct manner.
11. **General:**
 - a. Second Mining lease renewal period effective from 14.10.1993 to 13.10.2013 whereas extended mining lease period is mentioned till 31.03.2020. 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.
 - c. Cadastral map of each block 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.
12. **Chapter-2: Location and Accessibility**
 - a. Huge numbers of ML blocks coordinates in term of Latitude & Longitude has been furnished. But, few BP have been noticed during site inspection. Declaration/undertaking may be given for erecting BP as per statue in proposed excavation plan 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 in term of “Land Schedule” for land type, ownership of land, etc. may be given separately.

- c. Page-10: It is stated that 14.164 Ha mining falls under the Eco-Sensitive-Zone (ESZ) and the same has been excluded from mine working planning. In this regard, working plan at the time reduction of this area and plan showing present ground status/profile in term of mRLs may be submitted.
13. **Chapter-3: Details of approved Mining Plan/Scheme of Mining:**
- 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.
 - Under this 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 be mentioned.
 - 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 to 2017-18 (up to july) may also be given separately.
 - Give the actual status of proposed afforestation with its locations where saplings proposed to be planted and actual location where plantation has been carried out.
14. **Part A: Geology & Exploration:**
- 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.
 - Along with description of individual block, avg. grade quality/analysis may be furnished for all the blocks in order to understand the bauxite quality.
 - 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.
 - For better understanding key map (not to scale) is also to be displayed while describing block wise details on page no 17 to 21. 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.
 - It mentioned that, the ML area has been fully explored, but some of the blocks i.e. Ratakunda Big, Kenedy-I, Kenedy-H, Block B one C, etc still required to be further exploration. Hence, proposed exploration programme may be proposed accordingly 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.
 - When it is mentioned that, the whole area has been fully explored then why only 40.27 Hectare area of mining lease falls under G1 level of exploration. Justify the same with necessary documentary evidences.
 - 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.
 - 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.
 - 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 in detailed manner.
 - The parameters considered for reserves estimation in previous approved SOM viz. 100 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.
 - Total reserves of 52769320 MT is furnished as per the previous approved SOM but on page no-27 the same has been furnished as 3855317 MT. Both the figures are mismatching to each other. Justify the same.
 - Remaining proved reserves (3491713 MT) estimated as per the last approved SOM without adequate exploration is not accepted at all and re-estimation of R&R may be carried out with reference to the provisions of MEMC Rules, 2015.

- m. 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.
- n. For reserves & resources estimation various parameters/constraints like Eco sensitive zone, power transmission line, public road passing through ML and other statutory barriers need to be considered very precisely.
- o. For block wise reserves estimation of proved category, generalised area demarcated in Sq.M which is accepted. Respective block wise area measured with AutoCAD need to be furnished on the plan. Further, these areas should be shown in different colours and hatchings.
- p. 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.

15. **Mining:**

- a. Necessary justification for operating of numbers of blocks within mining lease in haphazard and unsystematic manner need to be given and in proposed plan period in further mine planning care should be taken for systematic mining operation.
- b. The annual avg. production is targeted at the tune of 836502 tonnes per annum need to be reviewed in view existing EC approved ROM quantity only.
- 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. During the proposed production planning, the ratio of high grade Vs low grade bauxite is mentioned as 05:95 which seems to unrealistic. In this regard, past experience of achieving the different grades of bauxite should also be shared.
- e. Page-33: 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.
- f. 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.
- g. 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.
- h. 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.
- i. 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.
- j. In proposed planning, it mentioned about recovery of 5% high grade bauxite & 95% low grade bauxite 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.
- k. In Pilidhar block, production planning for pit floor bauxite with avg. depth of bauxite is considered as 5.5m whereas this pit already reached to 6 to 7mts as per surface plan then how this depth of 5.5mts is considered. Justify the same & the same aspect may also be checked in other blocks also.
- l. 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
- m. 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.

- n. Blasting parameters as furnished on the page no-42 appears to be incorrect and contradicting with given bench configurations.
 - o. Page-44-48: 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.
16. **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.(c) Avg. height of backfilling is mentioned 7.0 to 8.0 mts which is incorrect and need to be rectified.
17. **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.
18. **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. Appointment of mines manager is mentioned as under the rule 55 of MCDR 2017 is incorrect & need to be rectified.
19. **Chapter: 8, PMCP**
- a. Page-58: Land use pattern should 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. Land use pattern is also to be described on block wise basis. Further, it is mentioned that, lease area granted is private land which is non-irrigated barren land which is incorrect & need to be reviewed.
 - b. Total area of 47.702 Ha is mentioned in land use pattern mismatching with the total mining lease granted area of 70.82 Ha. Justify the same.
 - c. 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.
 - d. Page-65-66: year wise area proposed under voids available and subsequent proposed for rehabilitation by making water reservoir need to be reviewed thoroughly. Further, environmental monitoring proposals are not given in detailed manner.
 - e. Lessee is also required to submit FMCP 2 years prior to the expiry of lease i.e. 31/03/2020. Hence, there is need for comprehensive restoration, reclamation and rehabilitation proposals in view expiry of ML by the year 2020.
 - f. 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 all.
 - g. Under the Financial Assurance total area of 0.14 Ha considered as fully reclaimed & rehabilitated need to be checked very precisely. Further, the same has to be marked on relevant plans. 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. Plates are not folded in correct and standard manner.
 - b. Given dimensions of various pits have found some deviation and it should be strictly checked & correct figure may be given in final submission.
 - c. All the plans & sections are not correctly prepared in AutoCAD in term of its font size, index table, legend table, paper size, colour management, etc.
 - d. Scale representation is not marked correctly as per the prescribed rules.
20. **Cadastral maps:** In all cadastral maps, different blocks are not marked with prominent ML boundary, further blocks names & relevant details also not provided.

21. **Key Plan:** Plan is not submitted with all the information as required under Rule 32(5)(a) of MCDR, 2017 as all the blocks nos. & names not mentioned, ML boundary not marked clearly, land use status including Govt. land, Pvt. Land, Forest land etc. not marked correctly, wind rose diagram, village boundary, other ML area with name of lessee, and village road, etc. are also not marked correctly.
22. **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, Pit numbers not provided properly, latest and correct survey plan is not provided, Pit wise spot mRLs not mentioned, index is defective as various plan features not incorporated. Contours line not properly marked over plan, Further, mark the other feature like public road passing through ML, electric transmission line is any, spot mRL for mineral stacks not provided. The given observations need to be incorporated in all the blocks.
23. **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 but still marked in index, colour codification for bauxite not done properly, previous exploration not marked, cross sections lines are completely marked as incorrect, incorrect mRL representation marked in some sections, lithomeric clay not mark correctly, various prominent features as shown on plan but not marked over sections, hence sections need to be prepared fresh.
24. **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, UNFC category of R&R not marked, in block B-One-C bauxite already exhausted up to 2to 3 mts but still more 4 mts bauxite is proposed under production planning-how?, in section existing pits profile is not marked & mRLs marked mismatching with plan mRLs, insufficient sections have been marked, various features not marked over section hence sections need to be prepared freshly.
25. **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, various important features like wind rose diagram, scale representation, etc. not marked correctly.
26. **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 correctly, conceptual sections are not prepared correctly, proposed reclamation & rehabilitation by backfilling not proposed but still marked in index, ultimate pit limit also not marked correctly, different scales have been used for preparing this plans.
27. **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 also not marked.
28. **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, in some blocks conceptual reclaimed & rehabilitated area is marked which incorrect, 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.
29. **Annexure:**
 - a. Copy of the lease deed execution on second renewal is not enclosed.
 - b. Legal heir/succession certificate issued from competent court of law not submitted.
 - c. Board of Director Resolution passed for authorising to the signing authority to submit this MP is not submitted.
 - d. Land schedule indicating the type of land either private or Govt. with other details has not been provided.
 - e. Cadastral map of each block 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 & individual block wise bauxite 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.
