

Scrutiny Comments on Draft Review of Mining Plan including Progressive Mine Closing Plan i.r.o. Injepalli Limestone Mine (ML No. 2475) over an extent of 897.86 Ha of M/s Kesoram Industries Limited located in Injepalli Village, Sedam Taluk, Kalaburgi District, Karnataka State

General

- i) No cells in the excel format may be left blank, either 'no proposal', 'nil', or 'not applicable' may be furnished.
- ii) If any relevant information pertaining to the 'calculation' or 'supporting information' or 'clarification' may be provided in foot note of the respective table/para.
- iii) Wherever additional information or supporting document given in Annexure, Annexure no. may be specified in respective paras
- iv) In accordance with Rule 34(A)(3) of MCDR Amendment Rules, 2021 the lessee is required to submit processed output images obtained from drone survey of the mine lease area and up to hundred metres outside the lease boundary within six months, before submission of any mining plan document. To undertaking the survey, IBM will issue the guidelines; accordingly lessees has to carryout the survey and submit the Drone output data to IBM.
- v) In accordance with Sub-Rule (2) of Rule 17 of MCR, 2021 lessee has to submit the Draft RMP 180 days before expiry of the plan period. The document has not been submitted in stipulated time. Hence, lessee needs to pay Rs2,000/- per day penalty for late submission. For mode of payment guidelines will be issued by IBM.

Chapter 1: GENERAL INFORMATION

Para 1.1. - Lease Details: Name of Lessee mentioned as M/s Kesoram Industries Limited (Cement Division), Unit- VasavadattaCement however as per lease deed, Name of the lessee is M/s Vasavadatta Cement. The same may be reviewed and suitably corrected.

Para 1.1.1: Initial/subsequent Lease grant details: All the lease grant details may be enclosed as Annexure. The existing lease deed is expiring in 08.12.2022, the lease deed may be renewed well within the expiry of lease period and copy of the lease deed may be submitted to this office.

Para 1.3.1: Approval of earlier Mining Plan & Its Subsequent Review in Chronological Order: All IBM approval letters for Mining plan to be enclosed as Annexure and reference to be given under the Para.

Para 1.3.4.1: Environment Clearance: There is no validity date in the enclosed EC. If any additional supporting document for the validity of the EC may also be enclosed.

Para 1.3.2 to 1.3.3 may be mentioned as 'not applicable' and 'nil' may be mentioned in the details

Para 1.3.4.4: Land Acquisition Details : Total Amount Paid towards land acquisition mentioned as Rs.7,12,05,000/- however, as per Annual Return submitted for the Year 2020-21 it is mentioned as Rs. 7,40,96,000/-. The same may be reviewed and suitably corrected.

Para 1.3.5.1: Location of Boundary Pillars: (i) Lease boundary pillar co-ordinates provided are not authenticated by State Government. The same may be authenticated along with the Geo-referenced sketch map as per CCOM office circular no. 02/2010 dated 06/04/2010 and circular no. 1/2021 dated 07/06/2021.

Para 1.3.6: Owner/Nominated Owner Details: Mobile number of the nominated owner may be provided.

Para 1.3.7: Qualified Person Details as per M(OAHCEM)CR, 2016: (i) PAN card of the QP's may also be enclosed as Annexure. (ii) Declaration certificate of the QP's are not enclosed, the same may be enclosed with digital signature.

Chapter 2: GEOLOGY & EXPLORATION

Para 2.1.1: Topography: Kamalavati nallah flows within the lease, the order of the stream is above 4. The same may be corrected.

Para 2.1.2: Details of Physiographic features and Infrastructures available in and around the lease/ block area : From the key plan it is observed that, there is a railway line passes at northern part of the lease area, the same has not been mentioned (ii) There is a major river Kagna within 5km radius, the same is not mentioned. This para may be reviewed all the features within the lease and outside lease (within 5 km radius) may be specified as per the format. (iii) Tentative Distance of nearest port from the lease may also be specified.

Para 2.1.3: Regional Geology: (i) Tentative dimension of the Bhima basin where Limestone occurs may be provided in this para. (ii) Regional Stratigraphy of the area may be provided provided by inserting table in word file. (iii) Regional Geological Map of the area may be enclosed as Annexure. (iv) Regional Structure of the area may be defined.

Para 2.1.4.1: Local Geology and Structure: (i) The para title should be Local Geology (ii) Local lithological set-up in the lease area with thickness range may be provided and

2.1.4.2: Structure: Dip and strike information of the lithologies may also be provided

Para 2.2.1.7 Exploratory Drilling (Core/non-Core): It is mentioned as under progress and no information provided. Since the drilling activity is not commenced, it may be

be mentioned as proposed drilling activity has not carried out. This comment is also applicable to para 2.2.1.9: Sampling and para 2.2.1.10: Chemical Analysis.

Para 2.2.1.13: Bulk Density Study as per M (EMC) Rules, 2016 and SOP of CGPB: The bulk density report Annexure no. referred in this para is not matching with the given annexure, the same may be corrected.

Para 2.2.1.14: Area Covered under Exploration : If exploration carried out during the Plan period, this para may be updated.

Para 2.2.2: Name of the exploration agencies may also be provided in this para.

Para 2.2.2.7.1: Core/Non-core Drilling: (i) From the assay file provided in Annexure, it is observed that out of 96 bore holes, in 38 bore holes bottom depth shows CaO greater than 40%. Hence, in future programme of exploration Para no. 2.2.5.5, drilling activity also need to be proposed where the bottom depth of the bore holes not reached non-mineralized zone. (ii) In assay file, for some of the bore holes, for bottom depths it is mentioned as 'Not done in detail; and no analytical results provided, the data of elements analysed may be provided, where the analysis for particular radical is not carried out the same may be mentioned 'NA'.

Para 2.2.2.10: Chemical Analysis: (i) Information provided is incomplete and some of the columns are deleted, not as per the format. (ii) Laboratory certificate for analysis of the samples to be provided as Annexure and the Annexure no. may be referred in this para.

Para 2.2.2.14: Area Covered under Exploration: As per last approved Mining Plan document dated 15/12/2017, the area explored under G2 level is 409.20Ha, after that no exploration activity has been carried out by lessee in the lease area. However, the area under G2 level of exploration given as 278.99 Ha. Further in the Surface Geological Plan it is observed that, there are proposed bore holes in the area where it has been marked as area explored under G1 level. The same may be reviewed and suitably corrected in text, plans and sections.

Para 2.2.3: Ore Body Geometry & Grade: Details of the shale mineral also to be provided in this para.

Para 2.2.4.1: Reserve / Resource Estimation Methodology: (i) The mine being a highly mechanized mine with annual production of the mine is more than 8 million metric tonnes, the Reserve/Resource estimation may also be calculated in Slice plan method and details may be added in Annexure along with the slice plans in list of plates and the variance calculated between sectional method and slice plan method may be provided in this para. (ii) As per EC condition, 50m area all along the lease boundary has to be utilized for bund formation using OB waste and maximum working depth allowed as per EC is 60m, these conditions also to be considered while calculating the Reserves.

Para 2.2.4.2: Resource Calculation: The grade for limestone should be Cao 34% and above and for shale CaO 25% to <34%. Accordingly, the grade details given in this para may be revised. This comment is also applicable to para 2.2.4.11 and 2.2.4.12.

Para 2.2.4.7: Cost & Revenue Factors: Summary of Operating Cost of Limestone Mining, Capital Cost, Working Capital, Revenue per Tonne of Limestone may be provided in this para. Annexure no. of the Feasibility report may be referred.

Para 2.2.4.12: Calculation of Reserves: The maximum depth considered while calculating the Limestone shale reserves may be given at the foot note of the table.

Para 2.2.4.13: The Reserve and Resource of limestone as per UNFC classification given in this para are not tallying with the last approved document after deduction of the production quantity of shale for the year 2017-18, 2019-20 and 2020-21. The given information may be reviewed in detail and suitably modified. This comment is also applicable to shale mineral.

Para 2.2.5.1: Geological Mapping: Updation of Geological mapping has been proposed for only for the year 2022-23, the same may be proposed for remaining plan period.

Para 2.2.5.5: Exploratory Drilling: (i) The average depth of the borehole proposed for the Year 2023-24 is about 35m, the same should be reviewed and adequate depth may be proposed as per average depth of limestone. (ii) In the foot note of the table it may be mentioned that, the proposed depth of drilling is tentative and drilling will be carried out up to the non-mineralized zone. (iii) Drilling may also be proposed where the bore holes are ended in mineralized zone as per the comments given in para 2.2.2.7.1.

Chapter 3: MINERAL BENEFICIATION / PROCESSING

Para 3.2: Complete Chemical Analysis of the ROM Ore/Mineral: The Average Chemical grade of the shale may also to be provided.

Para 3.9: Overall water requirement of mining and mineral processing: Summary of water requirement for mining, Dust suspension, Plantation and other operations and source of water etc information should be provided in this para and details may be provided as an Annexure. Water quality report, water balance chart may also be enclosed.

Para 3.10: Flow sheets and charts: Flow Sheet of Crushing and Screening may be provided as an Annexure and Annexure number may be mentioned in this para.

Chapter 4: MINING OPERATIONS

Para 4.2.1.2.1: Dump Details: It is mentioned as 'No waste Dumps in the lease area' and no details given in this para. Details of soil dump exist in the lease area may be provided, in the foot note of the table it may be mentioned as soil dump. This comment is also applicable to the 4.2.1.3 Details of Stabilized Dumps.

Para 4.2.1.2.2: Stack Details: Range and average grade of the low grade limestone stock may be provided at the foot note of the table.

Para 4.2.2.1: Bench Parameters: (i) Number of Benches in OB may be specified. (ii) Year-Wise Development & Production Plan Sections plate nos. given in the text are not matching with the Plate Nos. (iii) Year-Wise Development & Production Sections given as combined for all the 5 years, the same may be provided separate for each year. (iii) The detailed year-wise development and production calculation Table for bench & section wise has not been prepared. The same should be prepared and enclosed as annexure and reference to be given under this para and Table also may be inserted in the year-wise production and Development Plan.

Para 4.2.2.2: Year wise Opencast Development: (i) Direction of Development may be provided for each year separately. (ii) Location of Advancement, only one direction (northing) given, both easting and northing should be provided. (iii) Calculation of development made combined for all the benches, the calculation should be made bench-wise (iv) Bulk Density of Mineral Limestone for the period 2023-24 to 2026-27 mentioned as 2.0, which is not acceptable, the same should be modified suitably along with all the calculations. (v) To soil is not considered as OB while calculating the OB quantity, the same should be considered. (vi) The information provided in the OB to Ore Ratio is irrelevant; the same may be reviewed and corrected. The OB to Ore Ratio may be calculated ton/ton and same maybe mentioned at foot note of the table. (vii) Bulk Density of associated mineral shale may also be provided at the foot note of the table. (viii) Pit-wise & Year-wise Top and bottom RL of the benches may be provided below the table for reference. (ix) Ultimate working depth proposals should be restricted 60 meter below ground level and 50m safety zone along the lease boundary as safety zone should be left for bund formation as per EC condition. (x) if, any relevant additional information pertaining to this para may be provided in Annexure. (xi) The slope stability report for mine pit to be enclosed based on which the mine design parameters (Bench height, Bench slope angle, overall slope angle etc.) are mentioned. If the slope stability study for the mine has not been conducted then the same should be initiated from Govt. agencies to assess the overall Geotechnical stability condition for the mine. In the text it should be mentioned accordingly in remarks that the slope stability study will be conducted at the earliest and the report will be submitted to IBM once the study is complete. Also, the bench height, width, Slope angle of haul roads etc. should be checked w.r.t 106(2)(b) permission of DGMS. The 106(2)(b) permission of DGMS to be also enclosed as Annexure and reference to be given under this para.

Para 4.2.2.3: Transportation & Hauling Equipment: (i) The additional 03 Dumpers proposed may also be provided in the Table.

Para 4.3.2: Insitu Mining: (i) Top soil has been considered as OB Waste, however, the same has not been considered in Para 4.2.2.2: Year wise Opencast Development. The Top soil may also be included as OB in Para 4.2.2.2. (ii) Grade Range of CaO% given as +25%, minimum and maximum CaO along with Avg grade may be provided.

Para 4.4.4: Drill Machine Requirement: Stand by Drill machine is not proposed, the same may be proposed.

Para 4.52: Under the column "Total ROM proposed to be handled in Cum/annum" - to be considered, as same as it has been considered for drilling in previous Para 4.4.4. The other parameters like spacing, burden etc. yield/hole(cum) etc. to be calculated correctly accordingly as mentioned above and in previous paras.

Para 4.6: Manpower deployment: (i) After Para 4.6.5, Para 4.6.6- (Others Specify) to be added as heading. Accordingly, S.I. no of Para 4.6.6 & 4.6.7 to be corrected as 4.6.7 & 4.6.8. The excel template as published in FAQ may be referred The manpower related to Security etc may also be included in Para 4.6-6- Others.

Para 4.6.7: Supervision : Shortage or excess of Manpower proposed if any may be mentioned.

Para 4.7.3: Existing Stack: There is a low grade limestone stack in the lease area, the details of the same may be provided in this para.

Para 4.9: Use of Minerals: (i) Mentioned as 'Cement Making' however, this is not there in the selection list given in Template. Hence, the information given in Proposed Use of Mineral column may be corrected as 'Captive use in Own Industry'. (ii) In Chemical Specifications column, all the other radicals may also be provided along with CaO.

Chapter 5: SUSTAINABLE MINING

Para 5.1: In this para Declaration for under taking Sustainable Mining and SDF Implementations in Compliance of Rule 35 of MCDR'2017 may be provided

Chapter 6: PROGRESSIVE MINE CLOSURE PLAN

Para 6.1: Status of Land: (i) Area utilized for bund formation along the lease boundary may also be provided. (ii) Details of Area under utility services may be provided at the foot note of the table

Para 6.2.1: Backfilling: There is a 709,000 m³ of soil quantity given for spreading. This para is exclusively for backfilling, if no backfilling proposal, the information given may be deleted and to be mentioned as 'No Proposal' and 'Nil'.

Para 6.2.2: Water Reservoir : Proposed Area under Water Storage unit of area may be specified.

Para 6.2.2.2.3: Garland Drains : Garland drains may be proposed all along the soil dump locations

Para 6.2.3: Green Belt Development: (i) As per EC condition, the density of plants per Hectare should be around 2500 nos.. Accordingly year-wise proposed plantation may be reviewed and suitably proposed as per EC condition. (ii) Further, where the plantation activity is carried out and the density of plantation and /survival rate is poor, gap filling plantation may also be proposed.

Para 6.2.9.2: Year Wise Proposal: It is proposed to utilize the 100% Top soil generated during the plan period. The proposed utilization details of Top soil may be provided at the foot note of the table

Para 6.2.11 : (i) t conceptual stage the area under infrastructure like workshop building etc needs to be dismantled & Rehabilitation measures (Grassing/Plantation) on such area to be implemented accordingly such area needs to be calculated and proposed under Rehabilitated area under utility services (ii) The conceptual plan should include undertaking of re-grassing of the mining area and any other area which may have been disturbed due to mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc in accordance with the order of Hon'ble Supreme Court dated 08.01.2020.

Chapter 7: FINANCIAL ASSURANCE/ PERFORMANCE SURETY

(i)The Bank guarantee amount should be re-calculated as per rule 27(1) amended MCDR 2021. i.e. 5 lakh Rupees per hectare for the area propose to be utilized and updated Bank Guarantee may be submitted. (ii) 5.23 ha area of mined out area has been reclaimed as water reservoir and the area has been deducted while calculating the Bank guarantee, this area should also be included in land utilization and accordingly bank guarantee amount may be calculated.

Chapter 8: REVIEW OF PREVIOUS PROPOSALS

Para 8.2.1: Exploration: Out of proposed 105 bore holes, till date no drilling carried and drilling activity not yet commenced, hence the information given as under Achievement column as 'progress' may be mentioned as not carried out and percentage of deviation may also be mentioned.

Para 8.2.2: Mine Development: Information of production deviation provided in tonnes, the same may be provided in percentage.

Para 8.2.8.3: Afforestation (Green Belt): Percentage of achievement may be mentioned in the respective column of the table (ii) construction of retaining wall and garland drain measurements may be given

Chapter 9: IMPACT ASSESSMENT

The details under this chapter have been deleted. The details as per the template may be retained and to be mentioned as 'Not Applicable'

Annexures:

1. Index of the Annexure may be provided with page nos.
2. All additional Annexures referred in the scrutiny/comments may be provided.
3. Consent letter /undertaking/certificate from the applicant- The Consent letter is to be enclosed with the Text and should be digitally signed by the Nominated Owner. The contents of the letter may be kept as per the earlier format.
4. Certificate from QP- The Certificate from QP is also to be enclosed with the Text and should be digitally signed by the Qualified Person. The contents of the letter may be kept as per the earlier format.

Plates soft copy (kml file)

1. Plates provided in .kml file format are not in order. Does not contains the features (polygons/line/point) as required. Most of the information provided is line feature does not contain polygon feature for area features. All the features are merged and does not contain required attribute information. All the features should contain basic attribute data which is required to identify the layer/proposal etc. The .kml files submitted should be corrected suitably and submitted with all layer information as per legend given in hard copy in shape file / kml file format.

Plates (Hard copy)

1. State Government authenticated DGPS surveyed lease boundary plan should be provided. If there is any change in the boundary pillar co-ordinates or the area, all the plans lease boundary has to be updated as per the State Government authenticated DGPS surveyed Plan.
2. Date of preparation of Plan may be provided in all the plans.
3. All the plans should be updated as per the scrutiny comments wherever applicable.
4. Plate Ib - Key Plan: 5km radius circle may be drawn on the key plan to check the water bodies, settlement etc within the 5km radius.
5. Plate IIa - Surface Plan: Name of the river flowing adjacent (western side) to the lease boundary may be mentioned on the plan. This comment will be applicable to Geological Plan, PMCP, Conceptual Plan and Environmental Plan. (ii) Lease boundary pillar co-ordinates in Deg Min Sec as may be provided in tabular form on the plan.
6. Plate IIb – Geological Plan: (i) Dip and strike of the limestone may be provided where outcrops are exposed. (ii) Area demarcated under different level of exploration may be reviewed as per the comments in para 2.2.2.10 and maps should be suitably modified and Geological cross section also to be updated.
7. Plate IIc: Geological Cross Section: In Geological Index, limestone grade may be mentioned as Cao 34% and above and for shale CaO 25% and <35%. This comment is applicable where grade is mentioned in legend.
8. Plate IIIa to e: (i) Section line thickness may be reduced. (ii) Section-wise & Bench Production & Development details in tabular form may be provided in Year-wise

Production and Development Plan. (iii) Only part area where production and Development proposed is given in 1:2000 scale map, for easy reference, a key plan may be provided showing the entire lease area and area of interest.

9. Plate IIIf : Production and Development cross section for the five years period are combined. The Production and Development cross section may be provided separate for each year. (ii) In some of the sections, the bench development is not matching with the Year-wise Production and Development plan. The same may be reviewed and corrected suitably.