

Scrutiny Comments on the Modifications to the approved Mining Plan & PMCP over 37.00 hectares in Pudupalayam Village, Ariyalur Taluk & District of M/s. Chettinad Cement Corpn. Pvt. Ltd. submitted under Rule 17(3) of MCR, 2016 and Rule 23 of MCDR, 2017

Minecode: 38TMN38007

General:

- 1) Para 1.1: The lease code shall be mentioned.
- 2) Para 1.1.1: The mining lease expired on 8.2.2009 and applied for renewal which is still pending. Hence, a letter from the competent authority of the State Government regarding validity of the mining lease period should be submitted.
- 3) Para 1.2: The lease area shown as 37.00 hectares and the area shown in the mining lease deed shows slight variation which may be clarified.
- 4) The document and certificates should be signed by the lessee and qualified person digitally.
- 5) Para 1.3.4.1: The validity of EC shall be mentioned as specified in the EC.
- 6) Para 1.3.4.2: SPCB – Copy of the order of consent to operate shall be enclosed.
- 7) Para 1.3.5.1: The co-ordinates of the boundary pillars no. 14 to 22 may be checked for the correctness.
- 8) Para 2.1.2: Under this table, the road passing adjacent to the mining lease area may be shown.
- 9) Para 2.2.1.1 Geological mapping: The scale given may be checked and corrected.
- 10) Para 2.2.2.9: Mineral shown as Limestone, Marl, Sandstone and associated mineral. The statement may be corrected.
- 11) Para 2.2.2.13: Bulk Density was assumed which is not correct. The same may be derived by carrying out bulk density test. Accordingly, corrections may be done in all the plates.
- 12) Para 2.2.4.1: The year may be corrected in the 1st sentence. Tonnage conversion factor for Limestone is taken as 2.0 tonnes per m³ and for waste 1.8 T/Cu.m. is assumed. The same should be supported by the data. 6 boreholes core drilling) for a total meter age of 56.50 m. has been drilled whereas Form-I and K have not been enclosed in the report and not submitted to IBM as required under the rules. At least 10% of the samples may be analyzed from third party NABL accredited or Department of Science & Technology (DST)/BIS recognized laboratories or government laboratories for assessing the acceptable levels of accuracy in compliance of M(EMC) Rules, 2015. The analysis of the samples should be submitted from NABL accredited laboratory on their letterhead.
- 13) Para 2.2.4.2: As blocked resources & reserves are all a part of resources, the same shall also be shown in this table.
- 14) Para 2.2.4.5: The bench height mentioned as 6 m. and in some places 5 m. in the report which may be corrected.
- 15) Para 2.2.4.7: The overhead cost shown as Rs.142 which is on the higher side which may be rectified.
- 16) Para 2.2.4.10: Either regular habit or irregular habit, not both.
- 17) Para 2.2.4.11: Calculation of the blocked reserves & reserves estimation: The depth column is left blank. The details calculation in excel sheet should be given in the CD for verification.

- 18) Para 2.2.4.12: The reserves estimated 0.386 million tonnes. Further, as per the details provided in the Modified Mining plan document the grade of the mineral falls just above and below the threshold value of Limestone. The Cao content below threshold value i.e. 34% CaO falls under sub-grade category. Accordingly, the reserves estimation under Cat. 111 and 121 with proper explanations may be given. The resources under Cat. 111 has come down to 0.229 million tonnes compared to previous approved ROMP. The reasons for the same may be spelt out. Further, the bench wise estimation of the reserves may be given in the report in excel sheet in CD. The low grade limestone below threshold value is proposed to use by blending with high grade imported limestone. A flow chart may be given in Annexure.
- 19) Para 4.2.2.1: The maximum height of the bench and mineral is shown as 4 m. which may be corrected.
- 20) Para 4.3.1: The hydrological study report of the mine should be submitted.
- 21) Para 4.3.2: Insitu mining: In the table it was mentioned +25% CaO for marl which may be corrected. Slope of boreholes and overall pit slope cannot be the same.
- 22) Para 4.6.7: Supervision: Since it is a fully mechanized mine only B.E. (Mining) should be shown under qualification for Mining Engineer, etc.
- 23) Para 5.2: Cumulative figures have not been shown correctly.
- 24) Para 6.2.3: Green belt development: Total number of plants shown as 4650 may be corrected as discussed during the inspection.
- 25) Para 6.2.3.2: A very small area has been proposed to be afforested in each of the plan years. Larger area and larger number of saplings shall be proposed. Plate 7 shall be modified accordingly.
- 26) Chapter 7 – Financial assurance should be submitted in original in compliance of Rule 27(1) of Mineral Conservation & Development (Amendment) Rules, 2021 and copies of the same should be enclosed as annexure in the final copy of the document and in CD.
- 27) It is found that during the inspection the pit to bottom completely covered with water upto a depth of 3 to 5 m. Hence, the floor of the pit bottom cannot be seen and 6 boreholes drilled in the proposed area. The photos of the core logs collected during the drilling should be enclosed as annexure.
- 28) Para 8.1.2 : Achievement, Deviation & reasons shall be specified.
- 29) Para 8.2.1: Grid interval of the holes drilled shall be specified. The area (in ha.) upgraded to G1 from G2/G3 shall be specified.
- 30) Para 8.2.2.1: It is stated earlier that the mine was not worked for want of EC, then how 282858 tonnes of ore was excavated? Year wise proposals and actuals shall be furnished.
- 31) Para 8.2.8.2: Afforestation proposals for previous years have not been furnished.
- 32) Chapter 9 – Impact Assessment: Relevant details may be furnished under this chapter.
- 33) Updated format available on IBM website along with FAQs on format of Mining Plans issued vide CCOM Circular 1/2021 shall be used for uniformity.

Annexures:

- 34) All certificates should be digitally signed by lessee and QP. All calculations should be given in excel sheet in CD.
- 35) The QP id proof has to be enclosed along with qualification and experience certificate.

Plates:

- 36) The index for the plates not given.
- 37) The name of the Surveyor has to be furnished.
- 38) The mineral contact has to be drawn in all plans.
- 39) All the plans and sections as required should be submitted in hard copy along with final copies of the documents and in CD pdf format.
- 40) The index of the already drilled boreholes and new boreholes are interchanged which may be corrected in all the relevant plans and sections.
- 41) During the inspection it is found that the pit bottom was filled with water of 2 to 5 m. depth. Hence, the position of the water may be shown in all the plans and sections with proper color code.
- 42) Apart from .kml / .kmz / .shp file format, soft copies of plates shall be submitted in pdf format as per the guidelines.
- 43) At least 3 ground control points should be plotted showing respective bearings and distances with boundary pillars on the surface plan enclosed.
- 44) The geo referenced cadastral plan duly certified by the State Government shall be enclosed.
- 45) In compliance of rule 34A(3) of MCDR (amended) 2021, the processed output (digital elevation model (DEM) and Orthomosaic) images obtained from a drone survey of the lease area and up to hundred metres outside the lease boundary carried out within six months shall also be submitted to the Regional Controller of Mines & Controller General, IBM.
- 46) Plate 3: Safety barrier and ultimate pit limit shall be drawn. If both are same, it shall be mentioned there.
- 47) Plate 3 & 4: A cross-section perpendicular to the drawn long sections & passing through the potentially mineralized zone shall also be drawn.
Section wise/ Bench wise dimensions utilized for reserve and reserve estimation shall also be shown on these plates for verification.
- 48) Plates 5, 5A, 6 & 6A Section wise/ Bench wise dimensions utilized for year wise excavation quantity shall also be shown on these plates for verification.
- 49) Plate 7A shall show the year wise progressive mine closure activities instead of year wise excavation activities.
- 50) A financial assurance plan outlining the item-wise land use as proposed in Chapter 7 shall also be included.