

Scrutiny comments on the Review of Mining Plan submitted by Sri L.Sreenivasulu in respect of Kocheruvu Limestone Mine over an extent of 6.621 hectare in Kocheruvu village, Dhone Mandal, Kurnool Dist., Andhra Pradesh after field inspection dated 12.03.2020.

General

- 1) Lessee's name need to be spelled correctly as per the execution deed and the name in address proof and identity proof should match with the name as mentioned in lease deed.
- 2) Consent letter from the lessee should be prepared in Lessee's Letter head.
- 3) Rules name and year needs to be updated in the qualified person certificate.
- 4) Copy of Lease Sketch needs to be submitted in full.
- 5) Annexure numbering is to be done correctly.
- 6) Lease validity dates needs to be mentioned correctly in page 01 and 03.
- 7) The BP co-ordinates of the ML as mentioned in the surface plan are not matching with that of the BP coordinates as mentioned in the authenticated mining lease sketch for which justification needs to be submitted. Further during inspection it was observed that all the boundary pillars are not installed in the field and where ever installed in the field the boundary pillars nos and co-ordinates are not mentioned on the Boundary pillar. Thus copy of lease sketch showing DGPS surveyed boundary pillar co-ordinates authenticated by competent authority of state Government should be submitted along with DGPS survey report. The Shape and size of the precise area in all the plans should match with that of Lease sketch authenticated by State.
- 8) The Review of Mining Plan needs to be prepared as per the format of IBM Manual on appraisal of Mining Plan-2014.
- 9) In location and accessibility the details like type of road, connecting places and distance at which the mine is located from the mine needs to be submitted.
- 10) Revised topo sheet no needs to be submitted.
- 11) Details like Letter no and date, approving authority, mineral for which the document approved, period for which approved needs to be submitted from the time of initial grant in Details of approved Mining Plan/Scheme o Mining.
- 12) Details of last modification like letter no and date of approval with reasons need to be submitted.

Review

- 13) Xerox Copy of Modified Mining Plan approved by State DMG for the period 2015-16 to 2018-19 in respect of Dolomite Mineral only needs to be submitted separately with a covering letter and the pages wrt approved proposals for Dolomite mineral in respect of Mining, Exploration, Generation/utilization and disposal of waste; mineral reject and sub grade needs to be submitted as annexure.

- 14) Review needs to be submitted correctly in respect of exploration, excavation (mining of limestone) upto 2019-20 (Lapsed Period). For verification of review in respect of Dolomite and its Mineral reject, production and despatch figure in respect of Dolomite Mineral duly authenticated by concerned authority of Andhra Pradesh State needs to be submitted. The date of survey is 08.06.2019 and the document has been submitted for approval on 02.03.2020, and also as the survey is not upto date it requires resurvey, hence in the review the year 2019-20 needs to be submitted as lapse period. Also the year 2014-15 needs to be mentioned as lapsed period.
- 15) Status of compliance of old violations needs to be submitted correctly and the status of compliance of fresh violations issued or to be issued after inspection dated 12.03.2020 also needs to be submitted.
- 16) Name of GCP points need to be mentioned in text at page no-8 (Geology and Exploration chapter) and demarcated in the surface plan.
- 17) In the text it has been mentioned that Bench mark has been established on BP E but during inspection the BP E was also not found in the field. Bench mark need to be established and its location co-ordinates with RL to be furnished. The point from where the bench mark is to be transferred needs to be mentioned.

Geology

- 18) The Local lithological succession needs to be submitted.
- 19) The disposition of different type of lithounits has not been demarcated correctly in the Geological Plan.
- 20) Strike and Dip needs to be demarcated in the Geological Plan.
- 21) 10% of the check samples need to be analysed by NABL laboratory and analysis reports thereof needs to be submitted along with NABL accreditation certificate and Scope.
- 22) The BH name in surface plan and text should be the same. Preferably Meter wise sample analysis needs to be submitted.
- 23) Detailed estimation of reserves/resources section wise need to be submitted in text instead of annexure.
- 24) Expenditure incurred in various prospecting operations needs to be submitted.
- 25) Exploration needs to be proposed to explore the entire mineralised area in G1 level upto the end of mineralization and the proposed exploratory inputs needs to be demarcated in the Geological Plan and Geological Cross Section.
- 26) Area proved under different level exploration needs to be demarcated in the Geological Plan and mentioned in text with details like Level of exploration, extent, resources estimated, grid pattern of exploratory inputs.
- 27) Parameters for reserves/resources and the basis for categorization need to be discussed for Limestone and Dolomite. Cut off, Recovery Factor, UPL considered, mineral resources blocked needs to be submitted.
- 28) UNFC justification needs to be submitted for each axis wise level wise. A) In the Geological axis justification Grid pattern of exploratory inputs, depth explored in

different level of exploration, total no of different types of samples collected and their analysis. In the Geochemical survey sub head it has been mentioned that a total of 3596 sub surface meter wise samples are generated which is not correct so correct information needs to be submitted. B) In the Economic axis justification details of specific end use grades need to be submitted for Limestone and Dolomite separately. In the Mining Plan sub head mining plan details need to be submitted from initial grant time. C) In the Feasibility axis justification Costing details needs to be submitted as per the Format of AR for the last 3 years. D) Justification given for UNFC code wise reserves/resources needs to be corrected accordingly with respect to sub point A) to C) and further more justification needs to be submitted for 221 and 222 category resources.

- 29) Without any proper survey, exploratory records and documentation, the area of DTH drilling and mine workings can not be considered as G1 category. Areas where drilling is not done and no other exploratory input are there can not be considered as G2 by extrapolation of the mine pit evidences and also as per MEMC Rules 2015 the same is not allowed. Resources estimated under G3 level in respect of 10m additional depth beyond the depth of exploration is only allowed after proper documentation in respect of Geological evidence of mineral occurrence at that depth.
- 30) Table provided for UNFC code wise reserves / resources should corroborate with the table provided for Level of Exploration wise resources. Further the reasons/justification for hike in reserves/resources quantity needs to be submitted.
- 31) Surface plan is based on survey dated 08.06.2019 and as on date of inspection many of the workings have not been shown, so resurvey needs to be done and on re survey basis the surface and surface geological plan needs to be updated and alt type of Sections need to be prepared on the basis of updated plan only.

All the old and new mining pits have been considered as exploration inputs for reserves/resources estimation but they are not demarcated with name in the Plans, lithologs of pits and pit wise/depth wise each meter wise sample chemical analysis need to be submitted.

Two different types of Lithologs have been submitted for BH with No with series LT and KUP. Copy of all the sample analysis reports needs to be submitted with BH Nos and depth of sampling. Copy of sample analysis reports I respect of Dolomite also needs to be submitted. Further in the Geological cross section UPL is considered beyond the explored depth, hence UPL should be considered upto the explored depth in G1 and G2 level of exploration only. In the Geological cross sections the different type of lithology and their depth wise extent, UNFC category needs to be mentioned correctly. UPL needs to be demarcated in the surface and Geological Plan.

The Geological cross section has not been drawn correctly and also the reserves/resources has been estimated on higher side.

Thus in view of all the above mentioned points, the reserves/resources has not been estimated confirming to MEMC Rules-2015.

Mining

- 32) Systematic mining needs to be proposed to reduce bench height and to mine by developing a single mining pit instead of a cluster of mining pits and to remove the unevenness in the mining pit.
- 33) Each existing Mining Pits dimension and co-ordinates, no of benches and top most and bottom most RL needs to be submitted.
- 34) Existence of Limestone and Dolomite mineralization is not evidenced through exploration in the area proposed for mining. Hence Mining should be proposed in the ML area which is explored by atleast G2 level of exploration.
- 35) Insitu tentative excavation table needs to be submitted separately for Limestone and Dolomite mineral.
- 36) As survey is of 08.06.2019, resurvey needs to be done and as 2019-20 is already over Production and Development proposal, related plans and sections needs to be submitted for the period 2020-21 to 2023-24.
- 37) SG dump rehandling needs to be proposed.
- 38) Permission u/r 106(2)(b) of MMR-1961 for deep hole drilling, blasting and HEMM needs to be annexed.
- 39) Percentage of Slurry and ANFO to be used in blasting needs to be furnished.
- 40) The layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc needs to be submitted year wise.
- 41) Conceptual Mine planning upto the end of lease period 5 year block wise needs to be submitted taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation, afforestation and exploration and needs to be shown on the conceptual plan and sections.

Use of Mineral and Mineral reject and Others

- 42) There is no waste dump instead it is a Sub Grade dump as informed by the Lessee during inspection. The existing Sub Grade Limestone dump details like Co-ordinates, Dimension, Volume and average grade needs to be submitted. The source of 3660 m³ waste which is required for backfilling purpose in 2020-21 needs to be submitted.
- 43) Use of Mineral and Mineral reject if any needs to be submitted for both Limestone and Dolomite.
- 44) Justification for unskilled manpower required for sizing of ROM and other works needs to be submitted in the mining chapter. As it is a Category A mines Permanent Mining Engineer and Geologist needs to be mentioned in the manpower/employment in chapter 7.

Progressive Mine Closure Plan

- 45) The survey is of 08.06.2019 and as on date of inspection additional area has been put to use, hence the PMCP plan needs to be updated on the basis of resurvey of the ML area and area put to use and proposed to put to use needs to be calculated and BG amount should be submitted as per PMCP plan prepared on the basis of resurvey.
- 46) Backfilling of areas encroached out side the ML area needs to be proposed.
- 47) In the financial assurance plan dump needs to be been shown.
- 48) Environmental monitoring of core and buffer zone needs to be proposed. Core zone environmental monitoring location needs to be demarcated in the Reclamation plan., where as the buffer zone environmental monitoring stations are to be demarcated in the key plan and environmental plan.
- 49) Environmental Plan needs to be submitted correctly dully demarcating all the existing features and as per the required scale.

Plans

- 50) All the plans and sections should be prepared and submitted as per the provision of rules 31, 32, 33 & 34 of MCDR, 2017 and signed by the surveyor having Certificate of Competency of Survey from DGMS.
- 51) Certificate of correctness need to be submitted in each plan and sections.
