

Scrutiny cum inspection report of Review of mining Plan of Quartz, Feldspar, Vermiculite and Mica Mine of Sree Kalyana Rama company Over an area of 4.192 Ha in Gokulabrundavan village, Sydapuram Mandal, SPSR Nellore District in Andhra Pradesh State.

General

- 1) The document should be submitted as per the format of IBM Manual on appraisal of Mining plan-2014.
- 2) In the cover page and at all other relevant places the Survey Nos, Mine name, minerals granted needs to be mentioned correctly. Plan period to be mentioned.
- 3) Letter towards approval of mining plan by IBM needs to be submitted as Annexure. Letter no and date of mining plan approved by the State Govt needs to be submitted along with the copy of the approval letter.
- 4) Further the last mining plan document approved by the state govt needs to be submitted in full separately.
- 5) Status of lessee needs to be submitted correctly.
- 6) Name of managing partner with address; email id and mobile no needs to be mentioned in the text. Partnership firm registration certificate, documents pertaining to declaration of managing partner, legible copy of deed of partnership needs to be submitted.
- 7) Address, email id and mobile no to be submitted as per registration made u/r 45.
- 8) Lat and Long of all the boundary pillars needs to be submitted as per the lease sketch authenticated by state DMG. Further the authenticated lease sketch with lease boundary pillar co-ordinates needs to be submitted.
- 9) Mineral(s) which are included in the lease deed needs to be mentioned correctly.
- 10) Annexure no needs to be submitted correctly in the text.

Review

- 11) Status of underground mine development needs to be submitted.
- 12) Year wise review to be submitted in respect of earlier approved proposal for exploration, development, production of different types of minerals indicating the percentage of recovery proposed and achieved and generation of sub grade along with reason for deviation.
- 13) Review also needs to be submitted for the period 01.04.2019 to the date of survey as given in the surface plan.
- 14) Year wise production and despatch figures in respect of Quartz, Feldspar, Mica and Vermiculite for the years 2009-10 to 2013-14, 2014-15 to 2018-19 and from 01.04.2019 to date of latest survey needs to be submitted after authenticated from state Govt.
- 15) Status of violations pointed out by IBM needs to be submitted.
- 16) Indicate and give details of any suspension /closure/ prohibitory order issued by any Government agency under any rule or Court of law.

Geology

- 17) Source of rain fall, highest and lowest temperature needs to be submitted.
- 18) Form-I and Form-J in respect of the dug trail pits, trenches and DTH bore hole needs to be submitted as annexure. All the Form -J needs to be signed by the managing partner and also by the QP. Photographs of all the trial pits needs to be submitted. As the DTH

bore holes have been drilled after inspection, documented evidences along with drilling agency bills need to be submitted for corroboration.

- 19) Details of Pit, Trial pit/Trenches and DTH bore holes like No, dimension, top & bottom RL, co-ordinates to be submitted. The meter wise litho logs of pit walls, trial pits and DTH bore holes need to be submitted with chemical analysis of Quartz, Feldspar and Mica and Vermiculite and copy of Laboratory analysis reports needs to be annexed. Meter wise & mineral wise bore hole sample needs to be collected and analysed. Further meter wise sample needs to be collected from the entire vertical section of the pit wall.
- 20) Expenditure towards exploration and chemical analysis to be submitted for pit wall sampling, DTH Bore holes and Trial Pits/Trenches.
- 21) Basis for considering the Bulk density needs to be submitted.
- 22) The category of the deposit as per MEMC Rules-2015 should be submitted correctly. Also mention the category of the deposit as per UNFC.
- 23) In parameters considered for reserves/resources estimation, the cut off grade to be submitted for chemical and physical properties for Vermiculite, Quartz, Feldspar, Mica. UPL to be submitted correctly in the text and to be demarcated correctly in the plans and sections.
- 24) In Geological axis justification, the distance between the trial pits, DTH Bore holes and mining pit wall sample location should be mentioned to justify the scale of exploration. The sampling details like no, interval and sample preparation method to be submitted for pit wall sampling and bore hole sampling. Petrographic study report in respect of pegmatite needs to be annexed.
- 25) In the feasibility axis justification the processing related information needs to be submitted wrt size requirement for Quartz, Feldspar, Mica and vermiculite. The costing needs to be submitted also in respect of mining below GW table. In the infrastructure details the plants and sheds available needs to be mentioned. Marketing details for Quartz, Feldspar, Mica and Vermiculite needs to be submitted. In the other factors statutory clearance no and date, capacity needs to be submitted.
- 26) Economic viability needs to be justified for all the minerals granted in the lease. The specific end-use grades of reserves needs to be submitted for all the minerals granted in the lease.
- 27) Details of reserve / resources as per UNFC need to be submitted for Pegmatite (under sub head for Mica, Quartz, Feldspar) and Vermiculite separately in a table.
- 28) Under Geology Chapter 1(l) the quantity of resources estimated along with grade and area under different level of exploration needs to be submitted for Mica, Quartz, Feldspar and Vermiculite.
- 29) Exploration is to be proposed to explore the potential mineralized area in G1 level by means of exploratory drilling and the year wise area proposed to be explored in different level needs to be submitted.
- 30) With respect to all the above mentioned points under Geology head the reserves/resources needs to be established for as per UNFC guidelines/MEMC Rules-2015 as applicable.

Mining

- 31) Briefly describe the existing as well as proposed method of working with all design parameters indicating on plans/ sections.

- 32) As manual mining has been proposed, proposals regarding bench parameters need to be submitted with bench height not more than 1.5m.
- 33) Details of all existing mining pits (Tabel-13) needs to be submitted with pit no, dimension, coordinates, max and min level, no of benches. Status of the old mining pit needs to be submitted.
- 34) Location of the year wise proposed mining area needs to be submitted.
- 35) Mining should be proposed in an area which has been explored at least in G1/G2 level clearly depicting the year wise bench movement.
- 36) In table no-17 the total tentative Excavation, volume of mineral reject needs to be submitted correctly. In table no-15 the submission regarding waste should be of mineral reject. The Source of generation of intercalated waste needs to be submitted with proper justification. The ROM: Waste ratio needs to be submitted considering the generation of intercalated waste.
- 37) 5yr block wise conceptual Mine planning up to the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, afforestation, backfilling of voids, reclamation and rehabilitation needs to be discussed showing on a plan with few relevant sections.

Mine Drainage

- 38) The mine drainage chapter needs to be attended more elaborately.
- 39) Max depth of water has been submitted as 350m. Source of information in respect of min & max water table needs to be annexed. Further max and min depth of working needs to be submitted.

Stacking of Mineral Reject, Sub Grade material and disposal of waste

- 40) All the existing waste/MR dumps with its no, location co-ordinates, dimension and tentative volume need to be submitted.
- 41) Year wise Top soil/MR/waste disposal needs to be proposed as per the table given in the format. Further details like co-ordinates, volume and dimension etc needs to be furnished.
- 42) In case of dumping of waste, calculation for area requirement to accommodate the proposed waste to be generated needs to be submitted.
- 43) Waste dump management needs to be proposed for the existing as well as proposed waste dump.
- 44) Dumping of Top Soil, Mineral reject, sub grade and waste needs to be proposed separately.
- 45) Table no 28 needs to be submitted correctly.

Use of Mineral and Mineral Reject

- 46) Describe briefly the requirement of end-use industry specifically in terms of physical and chemical composition for mineral Mica, Quartz, Feldspar and Vermiculite.
- 47) Indicate precise physical and chemical specification stipulated by buyer for mineral Mica, quartz, Feldspar and Vermiculite.
- 48) Give details of processes adopted to upgrade the ROM to suit the user requirements.

Processing of ROM and Mineral Reject

- 49) As processing (crushing and screening plant) of the ROM is being carried out for pegmatite and Vermiculite separately, briefly describe nature of processing indicating size and grade of feed material and finished marketable product and recovery etc.
- 50) Flow sheet of processing needs to be submitted.
- 51) Size, Quantity and quality of rejects to be generated and proposed to be disposed needs to be submitted.

Progressive Mine Closure Plan

- 52) Recent Ambient Air Quality (AAQ) Monitoring, Water Quality, Noise level monitoring reports needs to be submitted as annexure.
- 53) Environmental protection measures need to be proposed for existing and proposed new waste dumps and dully demarcated on the R&R plans and conceptual plan. Details of environment protection measures need to be submitted for dimension, co-ordinates to be furnished in the text.
- 54) Plantation proposal also needs to be submitted within the 7.5m boundary safety zone cut by mining.
- 55) The buffer zone location needs to be mentioned in text apart from plan.
- 56) The bank guarantee amount is to be calculated based on the area already put to utilization and proposed to put to use in the PMCP plan and Category of the mine based on mining method.

Plans and Sections

- 57) Date of survey needs to be mentioned in the surface plan and surface geological plan.
- 58) Key plan should be submitted in Toposheet showing existing features, contour lines and levels.
- 59) In the Geological plan all the lithounits needs to be demarcated and properly indexed.
- 60) In the surface plan the levels of benches needs to be represented by more points of elevations. The area used for mineral stacking needs to be demarcated in the surface plan.
- 61) In the YPDP the hatching pattern of Pegmatite body needs to be changed such that proposed development can be viewed. The waste dumping proposal needs to be demarcated in the production and development plan year wise instead of a combined for the five year from initial stage.
- 62) 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.
