

KOMORRAH LIMESTONE MINE

MINING PLAN INSPECTION REPORT

INSPECTED BY: SK MOHAPATRA DATED: 28.12.17

TEXT

- 1.0 Mining plan to be prepared strictly as per the prescribed format given in "IBM manual for appraisal of Mining Plan – 2014". All the consents/ certificates enclosed should be strictly as per the format given in the above manual and the cover page should also be re-cast as per the prescribed format given in the above manual.
- 2.0 The line spacing of the text should be single to reduce un-necessary increase in the number of pages of the document. All the photographs attached shall be completely clear with a caption note given at its bottom.
- 3.0 In the introduction chapter a brief history of the mining lease to be given depicting all the statutory clearances/ court cases etc. with documentary evidence right from the initial grant of this lease in chronological order and in a tabular format.
- 4.0 It has been mentioned in the Introduction chapter that, KLMCL obtained renewal of mining lease up-to 24.06.2013 and as per MMDR (Amendment) Act 2015, the mining lease has been extended upto 50 years i.e. 24.06.2023. Copy of extended lease deed/ letter from the concerned State Govt. regarding validity of mining lease needs to be annexed with a reference of the same in text.
- 5.0 A brief write-up on the cement plant to which the mine is supplying limestone to be given broadly indicating the capacity of the plant in terms of clinker and cement production, raw material consumption pattern, pre and post clinkerization process & CAPEX/OPEX of the plant (for the FY 2016-17) in a tabular format.
- 6.0 The review of mining plan w.r.t afforestation, reclamation & environment control measures shall be duly supported with colour photographs with proper caption at its bottom.
- 7.0 Under the review of monitoring of AAQ parameters, the reported figures of air quality/ noise levels etc are very old i.e. of 2015. Latest monitored figures for all the four quarters of the preceding year may be enclosed.
- 8.0 The document does not spell about any time bound program of exploration during the next 5 years period. **Almost 45 years have lapsed but still no exploration has been carried out to establish the resource of limestone band-III.** A firm time bound exploration program may be given so as to delineate the limestone extent (lateral/ depth wise) for the entire ML area.

9.0 A fresh re-assessment of the resources/ reserves needs to be carried out. The ore zone has been delineated much below the depth of the existing boreholes. Also too much extrapolation of the borehole influence has been taken to report the resources specifically along section AA' & BB'. No extrapolation shall be carried out beneath the depth of the existing boreholes. The thickness of horizon has increased in some sections wherein reserves have been carved out of the resource figures of a specified category. The same is not clear. NABL test report of limestone samples to be enclosed. No cut off grade has been mentioned to establish the resources. The area is fissured & there is probability of ore loss on account of dilution at contact zones. The recovery factor has not been mentioned with basis to arrive at the recoverable reserves. The un-recoverable resources on account of inferior quality/ safety zones/ HFL/ land acquisition etc to be reported separately. **The resources/ reserves therefore need to be re-estimated as per the extant provision given in 'Evidence of Mineral Contents Rules 2015'.**

- 10.0 Level wise & section wise resource/ reserve figures to be reported.
- 11.0 A feasibility study report shall be annexed for the UNFC categorisation of reserves/ resources.
- 12.0 A fresh categorisation of resources/ reserves as per the UNFC system shall be thereafter reported after carrying out the above stated re-assessment of resources. A new table may be inserted indicating the resources established in different categories in different areas (to be reported in ha.) within the ML and shown in the geological plan.
- 13.0 Necessary supporting documents shall be provided to justify the tonnage conversion factor taken in the report.
- 14.0 The e-mail id./ phone no. of the exploration agency to be given. The expenditure incurred on the exploration carried out to be reported.
- 15.0 The present pit configuration is not reported. The height/ width of benches/ extent of the mine (quarry wise)/ bench floor reduced levels etc should be given in a tabular format.
- 16.0 Year wise in-situ excavation shall be exactly as per the format prescribed in the mining plan. Along with the same a separate table to be given clearly indicating, the year wise production quantity in tonnes. The calculation sheet to arrive at the year-wise production quantities to be enclosed at Annexure.

- 17.0 A table indicating the boundary extents of the year wise proposed pit & dump, its floor & crest reduced level etc should be given in a tabular format.
- 18.0 Life of the mine to be re-defined on the basis of the re-assessed reserves and accordingly the sequence of development of the mine till it reaches its ultimate stage shall be given in the chapter on conceptual mine planning.
- 19.0 As per the present field position & during discussion with the representative of the lessee while inspection on 28.12.2017, it appears that the proposed year-wise development is hypothetical. Therefore, the same needs to be modified and should be realistic.
- 20.0 Existing productivity of major HEMM along with aerial ropeway system shall be reported.
- 21.0 The no. of shifts & period of shifts in which the mine workings are being carried out is to be stated.
- 22.0 The type of explosives used for blasting & mechanism for charging / firing operations shall be described. A copy of the magazine licence to be enclosed.
- 23.0 The details of construction of check dams/ settling tanks etc shall be given along with their design in the chapter on mine drainage. The mode of disposal of surface run-off water shall be discussed indicating the schematic route showing its discharge with proposed provisions of check dams/ settling tanks/ water quality monitoring stations etc. The proposal shall also to be shown in the reclamation plan.
- 24.0 The flow sheet indicating the limestone sizing/ loading into aerial ropeway system shall be given along with material balance & physical size parameters. The mechanism of weigh-ment of limestone to be reported. Quantity of water required per day for all mining activities to be reported with activity wise usages.
- 25.0 A risk assessment report along-with disaster management plan of the mining unit shall be enclosed duly approved by the management of the mine/ competent authority.
- 26.0 An emergency preparedness plan duly approved by the management of the mine/ competent authority to be enclosed.
- 27.0 No definite year wise proposal has been given for reclamation/ afforestation/ management of the mine/ existing refuse dumps, is not acceptable. **Almost 45 years have lapsed but still no definite concrete proposal has been proposed for the above.**

- 28.0 The name/ qualification/ experience of the mining engineer along with geologist appointed for the mine to be given with necessary documentation proof of their appointment.
- 29.0 The area considered as fully reclaimed / rehabilitated is not correct and the total land usage at the end of 5 years to be re-calculated & so on the financial assurance required.
- 30.0 All pages of the text shall be signed by the qualified person.

ANNEXURE:

- 1.0 Annexure submitted with the scheme of mining are obscure. Legible copy of annexure to be submitted

Following documents need to be enclosed in annexure:-

- 2.0 Copy of the lease deed/RML deed.
- 3.0 Copy of the acknowledgement of the last renewal application.
- 4.0 Copy of the extended lease deed/ letter from the state government regarding validity of the mining lease.
- 5.0 Copy of the certificate of incorporation of the company.
- 6.0 Article of association of the company.
- 7.0 List of the board of directors with their address/ contact no.
- 8.0 Copy of the board resolution regarding appointment of the nominated owner.
- 9.0 Proof of identity & address of the nominated owner of the mine.
- 10.0 Undertaking from each of the board of directors of the company shall be enclosed regarding their working in other organisations.
- 11.0 An undertaking from the nominated owner on commencement of mining operations only after getting the permission from all the concerned statutory bodies as well as for carrying out the proposed time bound exploration program.
- 12.0 Copy of Form-J & Form-K in respect of the existing boreholes sunk in the mine. All of the same shall be duly countersigned by the geologist of the mine.
- 13.0 Previous working experience certificate of the Qualified Person in a supervisory capacity in the field of mining.
- 14.0 Copy of the DGMS permission under rule 106(2)(b) of MMR 1961.
- 15.0 Copy of the surface water drawl permission taken from the competent authority.
- 16.0 Copy of the environment clearance letter.
- 17.0 Copy of the consent to operate from the state pollution control board.

- 18.0 Copy of the surface rights acquired.
- 19.0 Copy of the magazine licence.
- 20.0 NABL test reports on quality of limestone & tonnage conversion factor.
- 21.0 Copy of all the violations raised from IBM/ DGMS/ MoEF&CC/ SPCB with compliance status during the last period of review.
- 22.0 Colour photographs of all lease boundary pillars showing the co-ordinates.
- 23.0 Copy of the contract with cement plant for supplying limestone, clearly depicting the rate & other terms & conditions of supply.
- 24.0 Copy of the surveyors certificate to be enclosed.
- 25.0 All pages of the annexure shall be signed by the qualified person and a list of annexure to be enclosed.

PLATES:

1.0 General:

- 1.1 The name of the nominated owner shall be invariable given in all the plates of the document.
- 1.2 The period of review of the mining plan shall also be given in all the plates of the document.
- 1.3 The key plan/ surface plan / environment plan & financial assurance plan shall invariably be signed by the surveyor of the mine along-with the mining engineer employed in the mine.
- 1.4 The geological plan/ sections shall also be duly signed by the geologist of the mine.
- 1.5 The surface plan shall also to be signed by the manager of the mine.
- 1.6 All plates shall be signed by the Qualified person.

2.0 Key plan:

- 2.1 Key plan shall be prepared strictly as per the extant provisions specified under rule 32(5)(a) of MCDR 2017.

3.0 Authenticated lease plan to be enclosed.

4.0 Surface plan:

- 4.1 All the existing surface features to be updated. The existing quarry position, roads, natural drainage system etc all needs to be updated. Different period of updation has been stated in the index vis a vis in the main drawing i.e. 24/6/2013. Therefore, the surface plan needs to be first of all updated showing all surface features.

- 4.2 Quantity of limestone in each stock pile with their top & bottom mRL shall be shown. Same to be shown for the waste quantities at existing refuse dumps.
- 4.3 Grid intervals at 100m to be shown.
- 4.4 Contour not shown towards the south portion of the ML and Quarry no. 7 extents have not been shown.
- 4.5 The present surface rights acquired area within the ML to be indicated.

5.0 Geological plan/ sections:

- 5.1 The pit profile shall be updated in the geological plan/ sections along with the exposed geological features.
- 5.2 UPL shall be shown in the geological plan/ section.
- 5.3 UNFC shall be re-visited after carrying out the re-assessment/ feasibility study and accordingly to be shown properly in the plans/ sections.
- 5.4 Proper syntax/ code shall be used to indicate the ore continuity beneath the bottom of the drilled boreholes.
- 5.5 CaO%/ lithology shall be shown in the borehole logs in the geological sections.
- 5.6 The section shown at section line EE' is not matching with plan.
- 5.7 Contour not shown towards the south portion of the ML.
- 5.8 The geological plan/ section to be signed by the geologist of the mine.
- 5.9 The ML boundary extents to be shown in all the geological sections.

6.0 Mine development/ production plan & sections:

- 6.1 Separate year wise development / production plan & sections to be prepared. Also, the development / production plan & sections within the proposed boundary extents needs to be shown with reference to a key plan, in a scale of 1: 1000 for better clarity.
- 6.2 UPL shall also to be shown in the plan/ sections.

7.0 Environment plan:

- 7.1 No environment plan has been submitted.
- 7.2 Environment plan shall be prepared strictly as per the extant provisions specified under rule 32(5)(b) of MCDR 2017.
- 7.3 All existing surface features to be shown in the environment plan.
- 7.4 Existing afforestation & reclamation carried out shall be shown.
- 7.5 Contours at larger intervals should be shown in the area falling between 60m & 500m boundary.

