

**Scrutiny comments of Review of Mining Plan with Progressive Mine Closure Plan of Aniali Limestone Mine of M/s Tata Chemicals Ltd over an area of 21.04 Ha., situated in village – Aniali, Taluka - Kutiwana, District – Porbandar, submitted under Rule 17(2) of MCR 2016 and 23 of MCDR 2017 for approval period 2020-21 to 2024-25.**

**1.0 Cover page & Introduction- (Page 1 to 4)**

- Category of lease may be mentioned correctly in the cover page, page 33 & in other places.
- The brief annual target of ROM production to be mentioned.
- ROM production reported in past & net excavated area needs to be discussed & justified.
- Production proposal should be as per available EC.
- Status of annual return and monthly return may be mentioned.
- A material balance sheet may be given considering total demand of chemical grade limestone & cement grade limestone vs production of the same from different leases of Tata Chemical Ltd. in the surrounding areas.
- Supplementary deed (as mentioned in Annexure 4A) may be executed and the copy of the same may be enclosed
- Lease details of the existing mines of the lessee may be mentioned correctly in the table 1. (Page 3)

**2.0 General & Location and Accessibility (page 6 to 9)**

- The photo ID, address & contact details of remaining board of directors/Partner needs to be submitted in the form of annexure.
- Photographs Boundary Pillars may be attached.
- **KML file showing** the area with clarity (boundary pillars) are to be given.

**3.0 Details of approved mining plan (Page 10 to 14)**

- Full form of the abbreviations used in the text may be mentioned.
- Proposed vs Actual of progressive mine closure plan details may be mentioned in a tabular form to describe plantation, fencing, garland drain etc. till November'19 need to be discussed.
- Last date of inspection and status of violations pointed out by the IBM and its compliance status may be given in details.
- Plantation status along with its survival rate supported by field photographs may be submitted.
- It is a matter of astonishment that no periodical monitoring in respect of ambient air & water quality and noise level has been carried out. It reflects very severe lapse on the part of M/s Tata Chemicals Ltd. Give detail justification. Special condition is also given in EC for carrying out vibration study but so far it has not been carried out. It needs clarification as well as corrective action.

**Part-A**

**Chapter - Geology & Exploration**

- Distinct color code may be used to depict the proposed borehole.
- All the text & plates should be as per the IBM guidelines.
- Reserve/resource may be recalculated.
- Surface Geological Plan may be given in 1:1000 scale considered for reserve/resource calculation.
- Reserve/resource in the proposed crusher location cannot be shown under proved or

probable category as the mineral blocked in the location cannot be mined during this plan period. Necessary corrections may be made accordingly.

- The area considered for reserve & resource calculation may be mentioned correctly in the text in a table and also in Surface Geological Plan & Sections with distinct hatch and the same may be mentioned in the index also. G1, G2 & G3 area to be defined and the same are to be shown clearly in text as well as in the related plans & sections.
- Area/width of influence considered for reserve/resource calculations may be supported with proper justification. Entire reserve/resource may be re-estimated in UNFC codes (G1/G2/G3).
- The table 23 of Mineral Reserve/Resources may be corrected accordingly. (Page – 32)
- In the table 23 (page-32) separate rows may be used all 10 different categories of UNFC coded reserve/resource.
- Bulk density of minerals should be supported with documentary evidences & test results.
- Analysis result needs to be submitted from NABL accredited laboratory and relevant certificate may be used.
- Table serial no may be given in correct order in entire text.
- Full form of all the abbreviations may be used in the entire text part.

#### **Chapter – Mining**

- The name of the Mines manager, agent, nominated owner may be mentioned as per MMR, 1961.
- In page no 34, it is mentioned no processing of ROM will be done inside the ML area. In page no 33, it is mentioned ore will be transported to proposed crusher location. But during field inspection crusher was observed under commissioning. The same may be clarified.
- Production proposal should be as per available EC i.e. 43000 tones or 0.043 MTPA. It is not yet understood how proposed scale of production shall be achieved without valid EC.
- In the third year (2022-23) proposed production area (North western part of lease area) is having existing RL around 68 m to 69 m. But end of third year RL is shown as 61 m to 62 m. Consequently the effective bench height will be around 7 m which is more than the maximum bench height proposed. The production plan, bench orientation, no of working benches may be planned accordingly.
- In page 41, in the given table depth of the bore hole has been mentioned as 4.18 m with 10% subgrade drilling, whereas bench height is 6 mt. The same may be justified.
- All the calculation for material handling, drilling, loading, haulage & transportation may be corrected with proper description field with calculation details. (Page 40, 41, 42)
- The boundary pillar to be set in the field as per IBM guideline and proper fencing may be constructed to protect au-authorized entry to the mine.
- Bench parameters should be proposed correctly.
- Category of mines may be mentioned correctly.
- Year wise development proposals may be revised considering the year wise plantation proposal. Green belt development proposal should not be proposed in the mineralized zone.
- Life of the mine may be corrected accordingly. (page no 44)

#### **Chapter - Mine Drainage.**

- Water table of the area needs to be supported with documentary evidences.

#### **Chapter - Stacking of mineral rejects/Subgrade material & Disposal of waste, Use of Minerals, Others**

- Generation and Stacking subgrade mineral, mineral rejects, top soil and disposal of waste may be suitably elaborated as per IBM guideline.
- Full form of all the abbreviations may be used in the entire text part.
- Details of full time mining engineer, geologist as per MCDR may be given.

#### **Chapter - PMCP**

- Out of 21.04 ha lease area, 19.57 ha area will already been degraded but no proposal for restoration of land degraded by mining operation have been made in PMCP. Entire PMCP needs to be revised accordingly.
- The area put to use at the start and end of the plan period may be corrected at page 44,6, & 75. Area put to use under green belt at the start and end of the proposal period needs to be corrected accordingly.
- The impact on water, air other environmental parameters needs to be discussed specifically as per the guide lines.
- Appropriate bank guarantee may be submitted after appropriate green belt development proposal.
- Latest periodic environmental monitoring reports may be enclosed like ambient Air, Water quality and Noise monitoring data needs to be enclosed. The reports given in Annexure – 17 A,B,C,D,E pertains to year 2015. Such out dated data will not serve the purpose. **QP should desist himself from submission of irrelevant information.**

#### **Plan & Section: - All plan & section need to be modified/updated as per above scrutiny.**

- Surface plan, Surface Geological Plan may be given in 1:1000 scale.
- Plate 1 is missing. Same may be attached.
- Plate serial no may be correctly given.
- Title of the Plate 3A to be corrected.
- A composite production plan may be given with distinct color code.
- Distinct color code may be used to depict the proposed borehole in plate no 3.
- Plan and text needs to be updated as per the scrutiny comments.
- Scale of all the maps to be corrected with proper title and appropriate index.
- Index of all the plates needs to be corrected as given in the maps.
- All plates to be signed with date by Mines Manager, RQP and other concerned person.
- The geological axis of G1/G2/G3 area needs to be modified and the same may be shown in the concerned plates with distinct color code.
- Blanks area in all the cross sections needs to be corrected as per subsurface lithological information.
- **Production & Development Plan:** Entire proposed ROM planning needs to be revised based upon above scrutiny by leaving statutory barriers etc.
- **Environment Plan:** The environmental monitoring stations needs to be marked in the plan and wind rose diagram may be shown all the relevant plates.
- **Reclamation plan/ Conceptual Plan/ Financial Area Assurance Plan:** Plan should be updated & modified as per above scrutiny.

**Annexures-**

- All the annexures mentioned in the different parts of the text may be annexed and the same be mentioned in the list of annexures accordingly.
- Entire annexures may be set correctly.
- Chemical analysis and logs mentioned in page 21 may be annexed.
- Annexure 6, 14,14A, 15A is missing. Same may be made available.
- The copy of DLR map duly sign with date by authorized person of the concerned State Government may be enclosed.
- NABL accredited laboratory certificate is missing at annexure 12A. The same may be attached.
- The copy of all Gujarati letters needs to be translated either in Hindi/English & Notarized & submitted in the form of annexure.
- The copy of field photographs of present mine workings, exploratory pit/trenches/lithologs, location, Boundary Pillars with no; Lat & Longitude, mRL etc. should be submitted.
- Photo ID & contact details of lessee/partners of firm, resolution of board of director of nominated owner may be enclosed.
- Environmental monitoring reports to be enclosed.

\*\*\*