



भारत सरकार GOVERNMENT OF INDIA
खान मंत्रालय MINISTRY OF MINES
भारतीय खान ब्यूरो INDIAN BUREAU OF MINES
क्षेत्रीय खान नियंत्रक के कार्यालय
OFFICE OF THE REGIONAL CONTROLLER OF MINES



REGD WITH A/D
Phone: 0674-2352463
TeleFax: 0674-2352490
E-mail: ro.bhubaneswar@ibm.gov.in
Plot No.149, Pokhariput
SHUBANESWAR-751020

No. MSM/FM/28-ORI/BHU/2017-18

Date: 06.11.2017

To

Shri Padma Lochan Mohanty,
Managing Director,
M/s M G M Minerals Ltd,
5A Forest Park, Bhubaneswar-751009

Sub: Approval of modification of Review of Mining Plan of Patabeda Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 28.397 ha in Sundargarh district of Odisha State, submitted by M/s M G M Minerals Ltd under Rule 17 of MCDR, 1988.

Ref: - i) Your letter No. Nil dated 12.10.2017.
ii) This office letter of even no. dated 17.10.2017.
iii) This office letter of even no. dated 17.10.2017 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

Sir,

This has reference to the letter cited above on the subject. The draft of modification of Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 01.11.2017 by Shri Dayanand Upadhyay, Sr. Assistant Controller of Mines. The deficiencies observed are enclosed herewith as Annexure I.

You are advised to carry out the necessary modifications in the draft modification of Review of Mining Plan in the light of the contents vide Annexure I and submit **three (3) firm bound and two (2) soft copies of the document text in CD in a single MS Word file (the drawing/plates should be submitted in Auto CAD compatible format or JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR 2017 of the Modification of Review of Mining Plan within 15 (Fifteen) days from the date of issue of this letter, for further necessary action. If the total page of annexures exceeds 50 (Fifty) then it should be submitted as separate volume. But reference of these annexures must appear in the modification of Review of Mining Plan document. The plates are also to be submitted in separate volume.

The para-wise clarifications and the manner in which the deficiencies are attended should invariably be given while forwarding the modified copies of the modification of Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the modification of Review of Mining Plan will be considered for rejection if not submitted within above due date. It may also be noted that if the deficiencies are not attended completely, the submission would be liable for rejection without further correspondence.

Yours faithfully,


(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Scrutiny comments on examination of Modification of Review of Mining Plan of Patabedal Iron ore Mine, over an area of 28.397 Ha of M/s MGM Minerals Ltd in district Sundargarh of Odisha State.

Text:

1. GENERAL

- i) On cover page "Modification and Review of the mining plan" may replace with "Modification of Review of the mining plan" and accordingly other parts of the text.
- ii) Complete details of lessee like residential and correspondence address, email address, contact number etc. to be furnished on cover page and text.
- iii) A latest list of board of directors duly certified by competent authority along with address/contact nos. to be enclosed. Latest resolution w.r.t. nominated owner to be submitted.
- iv) All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.
- v) Chapter "Introduction": Period of deemed extension of lease under section 8 of MM(D&R) Amendment Act 2015 has not been described with supplementary lease deed execution.
- vi) In chapter Review of Mining Plan the figure furnished of proposed & achieved ROM, saleable ore and mineral reject in different table at page no. 6, 7 & 8 are not matched and unit of ROM and Waste have not been furnished.
- vii) Page-8, the reason of modification is not correctly described.

2. GEOLOGY AND RESERVE:

- i) It is observed that some of the bore holes terminated in the ore zone therefore bore holes proposal may be revised as discussed during field inspection. The UPL of float ore zone may modify as discussed.
- ii) Page-13, shape and size of ore deposit has not been described with thickness and their variation along with dip & strike.
- iii) Page-14, the litho unit as described in text is not as per lithological succession as mentioned at page-15.
- iv) Page-21, geological resources table UNFC code has not been furnished.
- v) Page-22, summary of mineable reserve table UNFC code 331 and 332 has been mentioned. It may be corrected as per geological sections.
- vi) Page-25, in summary table of reserve & resources the quantity mentioned in million tonnes while in figure it is depicted in tonnes.
- vii) The proposed borehole locations along with Borehole Id, Bore hole Collar RL and estimated closing depth to be shown in the Geological Sections.

- viii) The existing forest, non-forest and mineralized zone boundary should be shown over the Geological map in contrasting colours.
- ix) The summary of boreholes drilled with total nos. of boreholes, grid interval, and minimum and maximum borehole depth with level of exploration to be shown in tabulated format.
- x) The reserves & resources of different ore types with grade should be shown in tabulated format.
- xi) A test report of bulk density analysis from NABL accredited lab/ Govt. lab may be submitted and described in text also.
- xii) Chemical Analysis Report of BHs samples should be enclosed from NABL Accredited laboratory or Govt. lab. as per guideline of "IBM manual on appraisal of Mining Plan-2014".
- xiii) Reporting of Mineral Resources in the format prescribed in Part IV-A of Minerals (Evidence of Mineral Contents) Rules, 2015 to be submitted.

3. MINING:

- i) Modification of review of mining plan has been submitted from 2017-18, however 07 month has been lapsed. Therefore date of modification may be modified so that it should be prospective in nature.
- ii) Page-30, "Proposed method of Mining" drilling and blasting has not been dealt with blasting pattern, loading of explosive in blast hole and powder factor.
- iii) Page-32, Insitu excavation table total ROM yearwise depicted is more than 1.5 million tonnes as proposed.
- iv) Page-38, "Extent of Mechanisation" the parameters considered for machineries calculation, spacing of blast hole is taken 3.0m and burden is taken 3.5m. In any case the burden should be less than or equal to spacing. It may be verified and corrected.
- v) In the development and production tables bench wise, year wise area of excavation and average thickness of the excavation or average area of cross section of bench and its average advance is to be given along with RL of bench with direction of advance at the end of the year.
- vi) The haul road/ramp with proper gradient has not been mentioned and not shown in development plan.
- vii) Conceptual mining plan, cumulative waste generation and top soil generation and protective measures have not been furnished.

viii) Dump re-handling in conceptual periods may be described clearly.

4. Mine drainage:

RL of present and proposed workings and summer and post monsoon water table in the area supported with ground water monitoring study done in the area may be given.

5. “Stacking of mineral reject/ sub grade material and disposal of waste”

- i) All existing Sub-grade dumps and waste dumps may describe with its location along with mRL in text. The top mRL of all above to be depicted clearly on plans.
- ii) Further, Build-up of dumps from year to year to be mentioned in text w.r.t. designed capacity of dumps, bottom and top mRL of individual terrace, dump slope, individual terrace height and slope with description of method & manner of disposal of waste should be mentioned.
- iii) The proposal given for construction of retaining wall, garland drain seems to be insufficient in view of proposed spread of the waste dump/mineral reject and mineral stacks. Hence, revised proposal may be given.
- iv) Specific proposal for stabilization of existing dumps, by plantation, coir matting etc. should be given.

6. Use of Mineral and Mineral Reject:

Requirement of end-use industry to be given in terms of physical & chemical composition matching with proposed production of mine. Production of Lumps & fines to be specified with quantity and grade along with its proposed sell to end-use industries.

7. “Other”:

- i) Existing manpower both direct and contractual has to be mentioned in the text.
- ii) An organizational chart has to be provided for risk assessment study to whom communication to be made in case of any accident.

8. “Progressive Mine Closure Plan”:

- i) Amount of financial assurance should be calculated as per rule 27(1) of MCDR-2017 and submitted accordingly.
- ii) Page-66 & 69 total sum of existing land use pattern as furnished in table respectively is not matched with financial assurance table.
- iii) Proposed plantation should be furnished with area in hect within lease and outside the lease area yearwise with no. of saplings proposed.
- iv) Proposed location of plantation to be mentioned in tabulated form in text part of the document and same to be depicted in reclamation plan.
- v) Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity for last one year to be enclosed.

vi) There is nos. of stacks of Mineral reject/low grade ore/fines/screened fines lies in the mine. To dispose them, manner of disposal of Mineral reject/low grade ore/fines/screened fines etc. to be specified in terms of blending, beneficiation or selling to intermediate industries involved in up-gradation of mineral.

9. Plates(General):

- i) The plans and sections submitted do not bear the certificate that --the plans and sections are prepared based on the lease map authenticated by the state government.
- ii) All plans and sections shall show a scale of the plan at least twenty five centimeters long and suitably subdivided. All plans & sections prepared shall follow the conventions mentioned under MMR 1961.
- iii) Wind direction may show through wind rose diagram in key plan and environmental plan.
- iv) All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist.
- v) Magnetic Meridian and date of observation of should be given on all relevant plans.

10. Key Plan/Lease plan:

The approach road upto the Mining lease has not been marked.

11. Surface Plan:

- i) It is observed during field inspection that mineral reject dump-1 has not shown in updated surface plan.
- ii) mRL of waste and sub grade dumps and fine stacks should be shown clearly.
- iii) Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes.
- iv) Forest & Non forest area, Surface right acquired area etc. should be marked clearly over a separate Lease Plan & Surface plan.

12. Geological Plan & Section:

- i) Geological features like strike, dip, dip direction etc to be marked clearly. Symbol as shown in plan not clearly marked in legends.
- ii) The UNFC has not been correctly depicted in geological plan. The proposed bore holes may be revised as discussed during inspection. The reserve under G1 & G2 category and limits of reserves/resources under different codes may be marked on geological plan and sections in different colour codes.
- iii) The proposed boreholes to be plotted in dotted lines in Geological sections along with Collar Id, RL and proposed closing depth at the bottom of the borehole.

- iv) The UNFC codes in geological sections are not legible enough. Accordingly the proper UNFC boundaries to be shown in Geological sections.
- v) The index of Geological features should be same in both Geological Plan and Geological sections.
- vi) In geological section some mRL of vertical column is not matched with profile mRL as mention in Plan.
- vii) The direction along which geological section has been prepared to be depicted on geological section.

13. Year wise development plan:

- i) Profile of development sections should be re-checked with mRL as depicted in vertical coloumn.
- ii) Existing position of sub grade and waste dump and proposed dump height has not been marked with mRL.
- iii) Yearwise wise progress of sub grade and waste dump may show clearly with different colour.
- iv) Spot levels at sufficient no of places on original surface, in the pit, and at the toe of benches may be shown so as to ascertain the average depth of excavation in a particular bench.
- v) A composite development plan may be submitted.

14. Environment plan:

- i) The Environment Plan as prepared should be satisfied the provision as laid down rule 32(5)(b) of MCDR2017.
- ii) Contours in 60m periphery of lease boundary may be shown.
- iii) Surface features of adjacent mine has not been shown in buffer zone.
- iv) The proposed and existing environment protective measures to be shown in environment plan. The drainage pattern of the lease area also to be shown on the plan.

15. Financial Assurance Area Plan:

In the Financial Assurance plan area of each individual land i.e land degradation due to mining activity and processing unit etc at the end of plan period may be shown separately on this plan with highlighted boundaries and different colour codes for FA calculation.

16. Reclamation Plan:

Year wise progress of dumping, stacks, afforestation using different colour codes for easy understanding may be shown.

17. Conceptual plan:

Conceptual plan may be prepared considering mineralization as revealed from the borehole logs. One longitudinal section may also be submitted. Direction of run off from the area based on surface contours may be shown on the plan and the sections.