



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



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BHUBANESWAR-751020

No. MRMP/A/29-ORI/BHU/2021-22

Date: 12.11.2021

To

Shri Padma Lochan Mohanty, Managing Director & Nominated Owner,
M/s MGM Minerals Ltd,
2A, Forest Park,
Bhubaneswar-751

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 M/s MGM Minerals Ltd under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. MGMM/CO/21-22/11-243 dated 01.11.2021 received on 08.11.2021.
ii) This office letter of even no. dated 08.11.2021.
iii) This office letter of even no. dated 08.11.2021 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 earlier site inspection carried out on 07.09.2021 by Shri Ramkishan R, Senior 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:-

- (i) Three (3) firm bound copies of text in A4 size printable paper and plate/plan in hard copy. The consents and certificates by the Lease holders/Qualified Person and copy of bank Guarantee shall be attached in hard copy of document.
- (ii) Two (2) soft copies of the document in USB Pendrive. The soft copies of the document shall be digitally signed by the Qualified Person and Nominated owner. The text of document should be in excel(.xls) and word format. The plates/plans are to be submitted in .kml/.kmz/.shp format. A few sections may be submitted in .pdf format as indicated in the CCOM Circular 1/2021. All the annexures shall be submitted in soft copy.
- (iii) Financial assurance under Rule 27 of MCDR 2017.

The aforesaid final copies of document will be submitted within **15 (Fifteen)** days from the date of issue of this letter, for further necessary action.

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.

भवदीय,
हरकेश मीना
(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action Shri Pradeept Mohapatra, At-
Telengapentha, Dist- Cuttack, Odisha-754001.

हरकेश मीना
(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

**Scrutiny comments on Modification of Review of Mining Plan including PMCP in respect of Patabeda
Iron ore Mine(28.397 ha) of M/s MGM Minerals Ltd**

PART-A

CHAPTER-1: GENERAL INFORMATION

1. The document should be prepared as per the mining plan template format provided in CCOM circular No.01/2021 dated 07.06.2021. No alteration/deletion/change in format of the mining plan template is allowed. Any additional information may be submitted as annexure only if required.
2. Company incorporation details with list of board of directors should be enclosed along with a GST certificate.
3. Under para 1.1 the lease code should be furnished. Also the financial year block period should be rechecked and rectified. Under para 1.1 the details regarding type of lessee furnished information should be rechecked and rectified. Under para 1.1 the details regarding the name of the associated minerals furnished should be rechecked and rectified in accordance with the lease deed.
4. All the information in the various table columns of different chapters as per the prescribed format in the template should be furnished. No column/rows should be left blank.
5. The final copies of the document should be digitally signed by QPs and Nominated Owner.
6. wherever year-1, year-2 etc., mentioned should be rectified as respective financial year viz.,2021-22, 2022-23 etc.,
7. List of plates and annexures should be properly indexed with page nos. and in case of plates the scale should also be mentioned.
8. Under para 1.2 land ownership details, details regarding the nature of land, etc., should be furnished. The details should be in accordance with the land schedule authenticated by competent authority of State Govt. of odisha. Under para 1.3.1 the period of approved mining plans should be furnished as exact dates viz., DD/MM/YEAR. Necessary changes should be made.
9. Under para 1.3.5 the details furnished regarding the Toposheet no. should be rechecked and rectified. Under para 1.3.6 regarding the board resolution of nominated owner proper reference of the corresponding annexure-no enclosed should be mentioned.
10. Wherever applicable in the document for the proposed year 2021-22 the exact date of the modification proposal should be furnished.

CHAPTER-2: GEOLOGY AND EXPLORATION:

11. Strike and Dip direction of the orebody furnished under para 2.1.4.8 needs to be reviewed and rectified properly. All the applicable information should be furnished.
12. The information furnished from para 2.2 should be for exploration work carried out if any during the last mining plan period should only furnished. Recheck and rectify the same.
13. The table format for the information under para 2.2.1.7 should be as per the template format. Rectify the same. The relevant information regarding ore body geometry etc., under para 2.2.3 has not been furnished. The same should be furnished. The details furnished under para 2.2.1.14 regarding the exploration areas should be rechecked and rectified.
14. the lease area explored under different category of UNFC norms is incorrect and should be recalculated as per the provision of Part II point no.4 and part III of Minerals (Evidence of Mineral Contents) Rules, 2015 (MEMC Rules, 21015) and should be furnished in the format tabulated below. The justification for area considered for G1/G2/G3 etc. have not been furnished as per the provision of MEMC Rules'2015. Necessary corrections to be done at all relevant places of the document and resource estimation.
15. Reserves and Resources have to be re-estimated as per the provision of MEMC Rules 2015 after complying point no 18. As per the provision of Part II point no.4 of MEMC Rules, 2015, the depth ward projection of ore body should be limited up to the depth up to which direct evidence of mineralization has been proved through borehole. Further, the reserves and resources estimation has to be done based on latest updated survey. Detail calculation of section wise reserves and resources based on latest updated survey and updating the borehole information by cross sectional method for various categories of UNFC should be furnished showing cross-sectional area, length of influence,

volume, bulk density and tonnage. Further, the boreholes whose chemical analysis results and borehole logs are not available should be omitted from plan and section and subsequently from resource estimation.

16. Further in the calculation of reserves and resources the ore and Mineral reject/Subgrade (between threshold value and cut off grade) to be furnished separately. As per MEMC Rules 2015, For General (G2) and detailed (G1) stages of exploration, the lateral extension of the ore to be considered for resource assessment shall depend on geological considerations supplemented by geological continuity by mapping or by other means and in any case shall not be more than 50% of the grid spacing of the probe points. Therefore, the projection of resources in the sections should not be more than 50% of the grid spacing. Hence, geological sections have to be modified and section wise resources and reserves have to be re-estimated and new UPL has to be drawn. Accordingly, the resources and reserves are to be updated in all relevant places in the text and in tables.
17. The demarcation of mineralized and non-mineralized area in Geological plan is incorrect as per the borehole information furnished. Need to rectify the same.
18. The information under para 2.2.2.9 and 2.2.2.10 should be furnished. The information furnished under para 2.2.2.14 should be rechecked and rectified.
19. The information furnished under para 2.2.4.2 should be as per the table format provided in the template. Accordingly it should be rectified. Under para 2.2.4.2 the details furnished regarding level of exploration and the method used for resource estimation for quantity and quality should be rechecked and rectified. Under para 2.2.4.13 the mineral rejects (+45-55% Fe) quantity should also needs to be furnished under reserves and resources in separate rows. Rectify the table accordingly.
20. Under para 2.2.5.6 the area cover in ha information should be furnished.

CHAPTER-3: MINERAL PROCESSING

21. Under para 3.1 the details regarding the valuable mineral name and mineral percentage furnished needs to be rechecked and rectified. Analysis report in support of the same carried out in NABL accredited laboratory/Government laboratory should be enclosed as annexure. Under para 3.2 complete chemical analysis of ROM for all radicals should be furnished with supportive document annexure of analysis carried out in NABL accredited laboratory.
22. Overall water requirement water balance diagram for mining and processing should be enclosed annexure under para 3.9. The information furnished under para 3.5.3 is not relevant so it should be omitted. Material balance chart of mineral processing should be enclosed annexure under para 3.10

CHAPTER-4: MINING OPERATIONS

23. Under para 4.2.2.1 the details regarding the slope angle of haul roads slope of bench tec., should be rechecked and rectified. Under para 4.2.2.2 the details should be furnished regarding the Pit details and recovery should be rechecked and rectified. Ore to OB ratio furnished under para 4.2.2.2 should be rechecked and rectified. The supporting document for justification of recovery viz., recovery test report should be enclosed.
24. The information furnished under 4.6.1 to 4.6.8 should be rechecked and rectified. All the information should be furnished shift wise as prescribed in the format. Under para 4.6.2 the details furnished should be rechecked as per statutory guidelines. Under para 4.7.3 the details regarding the existing stacks only should be furnished.
25. Under para 4.7.2 the waste quantities furnished should be rechecked as per the proposed quantities during the plan period.
26. Backup calculation table for production like section wise calculation details should be enclosed as annexure.

CHAPTER-5: SUSTAINABLE MINING:

27. SDF at mine level should be descriptive under para 5.1. Accordingly details should be furnished.
28. Under para 5.2 all the cumulative work done details till date should be furnished. The information furnished should be rechecked and rectified. Also the year wise proposals from para 5.2.1.1 to 5.3 should be furnished. They should not be kept as Nil which not acceptable. Proposal must be furnished.

CHAPTER-6: PROGRESSIVE MINE CLOSURE PLAN

29. The details furnished under para 6.1 should be rechecked and rectified. Under para 6.2.1 the details furnished regarding the waste quantities and top soil quantities should be rechecked and rectified. The estimated expenditure if any needs to be furnished.
30. All the proposals under para 6.2.2 to 6.2.8 should be furnished. It is furnished as Nil which is not acceptable. Estimated expenditure wherever asked in the proposed PMCP measures should be furnished. It should not be kept as Nil. The coordinates furnished should be rechecked and rectified. the coordinates point should be combination of latitude and longitude.
31. The details furnished under para 6.2.11 regarding the land use at the expiry of the lease period should be rechecked.

CHAPTER-7: FINANCIAL ASSURANCE/PERFORMANCE SECURITY

32. Under para 7.1 the details furnished in the table should be rechecked and rectified. The area degraded due to mining and allied activity to be considered in FA calculation. Year wise details of FA calculations should be furnished. The details regarding the BG amount and information as per the Mineral Conservation and Development (Amendment) Rules, 2021 under para 7.2 should be furnished.

CHAPTER-8: REVIEW OF PREVIOUS PROPOSALS

33. The details furnished under para 8.1.1 regarding lease area utilization needs to be reviewed and rectified properly. Further reasons for deviation if any should be furnished.
34. The proposals and achievement furnished under para 8.1.2 regarding SDF and CSR expenditure needs to be reviewed and rectified properly. Wherever the deviations are observed regarding the proposals vs actual achievements the reasons for deviation should be furnished.

CHAPTER-9: IMPACT ASSESSMENT

35. The information furnished is not applicable so the chapter information may be omitted.

PART-B

ANNEXURES

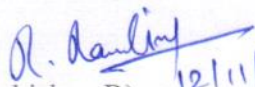
36. The form I and J as per MCDR,2017 for the boreholes drilled should be enclosed. Chemical and mineralogical analysis reports.
37. Environmental monitoring reports should be submitted. Qualification and experience of QPs as per rule 15 of MCR, 2016. Surveyor certificate should be enclosed.
38. All the study reports should be enclosed as per para 4.3.1 should be enclosed. Pre-Feasibility/Feasibility report should be enclosed.
39. All the lithologs with chemical analysis of the all the exploration work carried out till date should be submitted. Any other annexures as referred in the text should be submitted.
40. Copy of surface right granted letter. GST certificate should be enclosed.

PART-C

PLANS AND SECTIONS

41. Magnetic Meridian and date of observation should be given on all relevant plans. Date of survey should be given on all plans and sections and signature should bear date of signature. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist as per provisions of MCDR, 2017 and MMR, 1961. All plans & sections prepared should follow the conventions mentioned under MMR 1961. All plans and sections shall show a scale a scale of the plan at least twenty five centimeters long and suitably subdivided.
42. All plans and sections should be prepared on UTM grid. All plans and sections should be prepared on same scale. Northing and easting should be written on grid with proper nomenclature
43. All the plans should be submitted as hard copies and also soft copy of all plans and sections in KML/KMZ/SHP should also be submitted which were geo-referenced.
44. Progressive Mine closure plan and sections should be submitted.
45. Authenticated lease plan from Stae Govt of Odisha should be submitted. With reference to CCOM Circular No 2/2010 and its addendum, the geo-referenced mining leases map superimposed on latest high-resolution satellite data has not been submitted.

46. Key Plan: the key plan has not been submitted so the same should be submitted. The key plan should incorporate all features as mentioned Rule 32 5 (a) of MCDR 2017. The prominent wind direction to be shown by rose diagram in key plan and other relevant plans. The approach road to the lease area should be shown with Co-ordinates of extremity of lease area.
47. Surface Plan: all the old lessee mineral stacks details should be clearly demarcated on the plan as observed during field inspection. All the boundary pillar coordinates to be given UTM too. All the updated boundaries of Fines stack, Waste dump, Mineral reject dumps to be shown on the plan. Surface right area to be shown on the plan with different type of land schedules. All the features have not been shown in the index. Pit Id names should be clearly demarcated on the plan with distinctive boundary. Common boundary with other lessees if any should be shown on the plan. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017.
48. Geological Plan & Section: (i) geological plan and sections should be prepared on same scale (ii) Geo structural information has not been furnished adequately. (iii) Limit of estimation should be as per MEMC rule 2015. (iv) The redefined UNFC boundaries and UPL to be shown in Geological Plan and sections. (v) All the geological information to be furnished on geological plan and section based on drilled BH, exposed pit, trial pits etc with their configuration profile (dimensions) like depth. Section lines with nomenclature should be highlighted on the plan. The litho sequence should be shown as per the borehole logs data in the sections. The sections should be prepared on the same scale as prepared for plan. Proposed boreholes should be shown in dotted line. Mineralized area and non-mineralized area should be demarcated The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017.
49. Development plan & Section: (i) present pit profile configuration of benches with UPL to be shown with red color and proposed development benches of each year with some other color. All development section to be submitted for which development is proposed. The proposed yearwise development area boundaries should be clearly depicted. (ii) The layout of the haul road for present and future excavation proposal should be properly addressed in line with safe movement of fleet of the machinery.(iii) The proposed and existing bench mRL to be shown clearly over year wise development plan and sections. (iv) Geological information to be furnished on development plan and sections like litho units. v) Year wise mining plan proposals should be submitted in softy copy in the format of .kml or .shp file along with document. Need to do necessary corrections.
50. Progressive Mine Closure plan and sections: All revised year wise proposals as per comments in PMCP chapter to be depicted on the plan and sections.
51. Conceptual plan and sections: the plan and sections should be prepared taking into consideration of the production from in-situ excavations, available reserves and resources describing the excavation, , Disposal of waste, backfilling of voids, reclamation and rehabilitation measures, end of lease period etc.
52. Environment plan: The Environment Plan as prepared should be satisfy the provision as laid down rule 32 (5) (b) of MCDR'2017. Wind rose diagram should be depicted.
53. Financial Assurance Area Plan: The existing and additional area requirement should be separately hatched on the plan with FA table.


(Ramkishan R) 12/11/21

Senior Asst. Controller of Mines

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