



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



BY REGD POST
Phone: 0674-2352463
Tele Fax: 0674-2352490
E-mail: ro.bhubaneswar@ibm.gov.in
Plot No.149, Pokhariput
BHUBANESWAR-751020

No. RMP/A/36-ORI/BHU/2019-20

Date: 16.12.2019

सेवामे

The Managing Director & Nominated Owner,
The Orissa Minerals Development Company Ltd,
Plot No-271, Ground Floor, Bidyut Marg,
Shastri Nagar, Unit-IV, Bhubaneswar,
Odisha-751001

विषय: Approval of Review of Mining Plan of Bagiaburu Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 21.52 ha in Keonjhar district of Odisha State, submitted by The Orissa Minerals Development Company Ltd under Rule 17 of MCR, 2016.

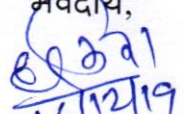
- संदर्भ: - i) Your letter No. OMDC/HO/TECH/MP/11/2019 dated 14.11.2019 received on 25.11.2019.
ii) This office letter of even no. dated 25.11.2019.
iii) This office letter of even no. dated 25.11.2019 addressed to Director of Mines, Government of Odisha copy endorsed to you.

महोदय,

This has reference to the letter cited above on the subject. The draft Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 11.12.2019 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 Review of Mining Plan in the light of the contents vide Annexure 1 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 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 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 final copies of the Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the 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)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri S.C. Nayak, M/s MINESKETCH Consultants (P) Ltd, Flat No-205, Bhagwan Tower, Cuttack Road, Bhubaneswar-751006.

(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Scrutiny comment on Review of Mining Plan including PMCP in respect of Bagiaburu Iron Mine of M/s OMDC Ltd..

GENERAL:

1. All the certificates/annexures should bear dated signature. Name of nominated owner should be furnished under applicant name. MCDR, 1988 should be replaced with relevant rules of MCDR, 2017.
2. The date of ML expiry to be mentioned as per last executed lease deed with details of period (years) from the initial execution of lease deed as mentioned on cover page. The present validity status of the ML with period of validity to be furnished with documentary evidence. The document should only be considered for the proposed period, if the subsistence of lease period confirmed by competent authority of State Govt. of Odisha.
3. The qualification of QP should be mentioned on cover page.
4. The date of execution of lease furnished on cover page and details furnished in introduction are contradicting. Check and rectify the same.
5. The board resolution regarding the nomination of owner should be enclosed. The update list of board of directors should be enclosed.
6. In the review chapter the review for the years from 2015-16 to 2019-20 should be given.
7. In para 3.1 a column should be added for the area in ha for which the mining plan were approved.

GEOLOGY AND EXPLORATION:

8. In para e. ii) the information of total no of samples analyzed in the NABL laboratory should also be furnished with analysis report and certificate enclosed annexures.
9. The lease area explored under different category of UNFC norms should be recalculated as per Part II point no.4 and part III of Minerals (Evidence of Mineral Contents) Rules, 2015 (MEMC, Rule 21015). The justification for area considered for G1/G2/G3 etc. should be given properly. Accordingly, resource estimation under different level of exploration to be revised. Necessary corrections to be done at all relevant places of the document and resource estimation. The UNFC justification should be furnished in tabular format for different categories. The reserves and resources should be estimated up to the proven depth of boreholes only. No further influence of litho below the proven depth should be considered.
10. Additionally, new core boreholes to be proposed in the location adjacent to existing drilled boreholes that have been either terminated in the ore zone or closed prematurely without intersecting the proposed ore zone in depth within G1/G2 area.
11. Adequate proposal of exploration to be given to explore entire lease area under G1 level of exploration as per MEMC, rules 2015, which should be completed in compliance to the rule 12 (3)&(4) of MCDR, 2017. Accordingly exploration proposal should be modified. only core type drilling of boreholes should be proposed. The depth of the proposed core boreholes should be around 300m or till the end of mineralization/discontinuance of ore body. The proposal to be mentioned.

12. The details of the proposed exploration to be given as per following format:

Sl.No	Year	BH No	Northing	Easting	Collar RL	Core/RC/DTH	Metage	Inclination	Forest/Non-Forest/ diverted Forest	Surface Right/ Non-Surface	Purpose of BH
1											
2											
Total		-			Total BH	Total mts	-				

13. Recovery justification considered. bulk density considered for ore and mineral reject/sub grade should be properly justified with documentary evidence.

MINING:

14. The year wise excavation proposal should be given considering the depth of mineralization i.e. established reserves depth. Accordingly the pit design parameters should be modified. Proper justification should be furnished for the site selection for the proposed plan period.

15. Existing and proposed equipment/machinery with quantity and capacity should be furnished.
16. Powder factor of the blasting parameters should be furnished with detailed calculations.
17. Conceptual Mine planning upto the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections.

STACKING OF MINERAL REJECT/SUB GRADE AND DISPOSAL OF WASTE:

18. The proposal for dumping may be given in tabulated format as shown below: 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. The method of waste dumping should be in retreating manner. The year wise buildup of dump should be described.

Year	Waste to be dumped (in m ³)	Dump No	Location of dumping (coordinates)	Proposed area (m ²)	Proposed dumping mRL.	No of terrace proposed.	Individual Terrace height	Slope of the terrace

19. The location of dumping/stacking of waste and mineral reject should be proposed in the non mineralized area with due justification of proven area of non mineralization.
20. Old dumps existed in the lease area which may contain mineral. So dump re-handling may be proposed and accordingly the disposal of waste, mineral should be addressed. The proposed dumps should be proposed in a new location as the old dumps may contain mineral.
21. Existing as well as proposed protective measures like retaining wall, garland drain, check dams etc., should be furnished in tabular format with details of location, length, dimensions etc., a separate table should be given showing the year wise construction of retaining wall, garland drain and settling tank having specific proposal. Details of year wise proposal for construction of retaining wall, garland drain, settling tank etc. to be given with their location.

PROCESSING OF ROM AND MINERAL REJECTS:

22. The material balance chart to be given with the quantity and quality of feed and recovery quantity and quality of the final product. The arrived percentage of recovery of saleable ore and sub grade ore should be justified properly with documentary evidence.

PROGRESSIVE MINE CLOSURE PLAN:

23. Baseline information of the lease area should be described on the basis of information incorporated in first approved mining plan at the time of grant of ML. Existing base line information to be furnished on the basis of environment monitoring parameter carried out. The environment monitoring data of last one year to be enclosed for ready reference. Further, base line information to be furnished for surrounding 500 meter form lease boundary.
24. As a part of reclamation and rehabilitation measures in waste land some gap planation should also be proposed. The system for periodical monitoring of environmental parameters like quality of air, water and noise etc., as per relevant statue should be proposed.
25. It should be re-calculated and submitted accordingly as discussed during the site visit. FA table should be as per the format provided in Manual. The area degraded due to mining and allied activity to be considered in FA calculation. Relevant rules of MCDR, 2017 should be quoted under FA amount calculation.

PLATES (GENERAL):

1. 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. Plan and section should be drawn on 1:1000 scale.

2. **LEASE PLAN:** The lease plan authenticated by competent authority of state government should be submitted.
3. **KEY PLAN:** 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.
4. **SURFACE PLAN:** All the boundary pillars to be given in 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. 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.
41. **DGPS PLAN:** The Geo-referenced mining lease map prepared using DGPS shall be superimposed on Geo-referenced vectorised cadastral map should be submitted.
5. **GEOLOGICAL PLAN & SECTION:** (i) Geological information to be highlighted in geological plan and section. All other information like contour, quarry etc. to be suppressed. All drilled BH, quarries and trial pits to be shown with red color and BH nomenclature with black color. (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 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. Proposed boreholes should be shown in dotted line. Iron ore mineralization area should be clearly demarcated on the Geological plan. The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017. Plan and section should be drawn on same scale.
6. **DEVELOPMENT PLAN & SECTION:** (i) present pit profile configuration with UPL to be shown with red color and proposed development with some other color. All development section to be submitted for which development is proposed. (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. The proposed and existing haul road to be depicted on the development plan. (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. Plan and section should be drawn on same scale.
7. **RECLAMATION PLAN:** All revised year wise proposals as per comments in PMCP chapter to be depicted on the plan.
8. **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.
9. **Financial Assurance Area Plan:** The area degraded due to mining and allied activity to be considered in FA calculation. The FA table format should be depicted. The existing area and additional area under different heads should be shown properly under different coloured hatching.

ANNEXURES:

10. The updated list of all the directors to be enclosed and same to be given in the text. The latest copy of board resolution about nominated owner to be enclosed.
11. The copy of the qualification & experience certificate in respect of the QP to be enclosed.
12. Copy of latest lease deed executed with copy of authenticated land schedule should be enclosed. The lapse order of ML issued by state government and Revision Authority orders should be enclosed.
13. Copy of quality of air, water, soil, noise and other environmental a parameters monitoring report of the last year should be enclosed.

14. All the annexure to be properly numbered/paged and relevant annexure to be signed by Geologist/surveyor/QP etc. It is observed that many of the annexures are not legible. A legible copy of same to be enclosed.
15. A legible copy of photo id, address proof and signature proof of lessee to be enclosed.
16. Copy of previous approved mine plan & scheme of mining letter should be enclosed.
17. The details of all the BH to be annexed year wise BH wise. The lithology of the borehole logs should match with the lithology shown in Geological sections.
18. Copy of EC, FC, CTO etc. to be enclosed. Environment monitoring data to be enclosed at least for last one year. Copy of surface right order. Certificate of surveyor. Approval letters of last MP/SOMs.
19. Recovery test, bulk density test reports carried out in NABL laboratory should be enclosed.
20. Copy of bank guarantee should be enclosed. Photographs of boundary pillars should be enclosed.
21. Certificate from the lessee should also include: The information furnished in the Modification of mining plan and Progressive Mine Closure Plan is true and correct to the best of my knowledge and records. It is to undertake that all the measures proposed in this Progressive/Final Mine Closure Plan will be implemented in a time bound manner as proposed.

In view of above, wherever necessary correction required to be made.

-----x-----x-----x-----