



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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No. MP/A/38-ORI/BHU/2020-21

Date: 04.03.2021

सेवामे

The Managing Director & Nominated Owner,
M/s Odisha Mining Corporation Ltd
OMC House, Bhubaneswar -751001

विषय: Approval of Mining Plan of Guali Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 358.258 ha (As per DGPS)/ 365.026 ha (As per RoR) in Keonjhar district of Odisha State, submitted by M/s Odisha Mining Corporation Ltd under Rule 16 of MCR, 2016.

- संदर्भ: - i) Your letter No. 3121/OMC/PMC/2021 dated 25.02.2021
ii) This office letter of even no. dated 26.02.2021.
iii) This office letter of even no. dated 26.02.2021 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 Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office by Shri Ramkishan R, Senior Asst. Controller of Mines & Shri S R Mazumdar, Senior Mining Geologist. The deficiencies observed are enclosed herewith as Annexure- I.

You are advised to carry out the necessary modifications in the draft 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 in USB Pendrive/Flash drive (text in a single MS Word file, Annexure in PDF and the drawing/plates in Auto CAD compatible format or JPG format in resolution of 100x100 pixels should be submitted on same USB Pendrive/Flash drive)** within 7 (Seven) 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 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 Mining Plan. It may be noted that no extension of time in this regard will be entertained and the 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) 31/21

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Pradip Kumar Sahoo, M/s
Odisha Mining Corporation Ltd, OMC House, Bhubaneswar -751001.

(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Scrutiny comments on examination of Mining plan with PMCP of Guali Iron Mine over an area of 358.258 Ha (as per DGPS survey) in Keonjhar District of Odisha State of M/s OMC Ltd

GENERAL POINTS:

1. In the introduction chapter in page 2, the provision of para 2.4 of mining lease deed has not been addressed satisfactorily. Further, justification for enhanced proposed production of 30 MTPA has not been mentioned. Need to do necessary corrections.
2. The signed MDPA, if any should be furnished as annexure and accordingly changes should be incorporated in the text. Need to do necessary corrections.
3. Sequence of paragraph and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text. All the text, tables and annexures to be properly indexed/ numbered/ paged and signed by qualified persons. Correct table reference number to be mentioned at all relevant places. All the certificates / annexures should bear dated signature. Need to do necessary corrections at all relevant places in the document.
4. Period of proposals in financial year has not been furnished in cover page and in text and relevant plates of the document. Need to do necessary corrections.

GEOLOGY AND EXPLORATION:

5. **Geological Report:** It has been mentioned that Geological report has been submitted as annexure no 24 but it is observed that the copy of the Geological Report as supplied by the state government has not been submitted as separate annexure. The mineral block summary report along with text, annexures and plates of the Geological report should be submitted. All the geological information furnished has to be furnished as per the Geological report approved by state government along with documentary evidences. Need to do necessary corrections.
6. As per rule 12 (3) of MCDR 2017, G1 level of exploration proposal has not been furnished. Need to modify future exploration proposal accordingly. Further, exploration proposal should be furnished over the area currently explored under G2, G3 and unexplored area for G1 level of exploration considering the length of influence covered. Further, the exploration proposal has not been submitted as per the format specified in IBM Appraisal of MP 2014 in addition to the information submitted in tabular format. Need to do necessary corrections.

In page 23, in the table showing "lease area exploration status", the term "ROM Ore" should be omitted. Further, the information furnished should be corrected to the extent that the information furnished should be as per the information furnished in Geological report. Need to do necessary corrections.

7. All the parameters considered for like recovery factors, bulk densities etc., for estimation of reserves/resources should be as per the Geological report with referring to the relevant annexures. Need to do necessary corrections.

The detail calculation for revised estimation of reserves and resources for different UNFC codes should be based on the updated geological plans and sections which were submitted along with the Geological Report. Need to recheck calculation and do necessary corrections at all relevant places in text/tables etc. In pg 45-46, cross sectional area and length of influence has not been shown in calculation. Need to estimate reserves and resources under different UNFC categories by cross sectional method. Need to do necessary corrections.

Justification of UNFC codes as per UNFC guidelines has not been furnished. Need to do necessary corrections.

MINING:

8. Justification for site selection for mining during the proposed plan period has not been furnished. Proposed method of mining has not been furnished in light of development proposal i.e. annual production capacity, nos. of pits proposed for production, site of waste dump and other mine design parameters. Need to do necessary corrections.
9. The proposal furnished for dump-rehandling is incorrect as no proposal has been furnished for recovery of mineral from dump. Hence, the proposal may be modified accordingly and shifting of dump may be discussed in chapter 4. Further, the site selection for waste dumping should be in non-mineralized area and outside UPL. In case of permanent mineral reject stacks, area selected for stacking should be non-mineralized and outside UPL. Need to do necessary corrections.
10. Selection of mining machinery should be considered in view of limited area constraints for safe movement of mining machineries, protection of environment, systematic and scientific development of the proposed quarries. Need to do necessary corrections.
11. In the extent of mechanization, the capacity and quantity (in nos) have not been furnished. Need to do necessary corrections.
12. The area proposed for establishment of stationary crushing and screening plant, conveyors etc. should be explored through drilling and proved for non-mineralization before setting up the plants and related facilities. Further, the site selected should not restrict the mine development. Need to do necessary corrections.

13. Conceptual Mine planning should be modified taking into consideration of the production from in-situ excavations, available reserves after ensuing plan period describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections. Need to do necessary corrections.
14. Conceptual land use patterns details have not been furnished. Need to furnish the same. The basis of calculation of furnished powder factors figures should be furnished. The details regarding the blasting should be elaborated.
15. In pursuant to the order dated 14.01.2020 passed by MoM, GoI, consequent up on the order dated 08.01.2020 of the Hon'ble Apex Court passed in W.P.(C) No. 114/2014, the lessee shall carryout "regrassing in mining area after closure of mines". Accordingly proposal has not been submitted in conceptual planning, conceptual plan and sections.

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

16. The year wise buildup of waste dumps has not been described in detail. The information should be furnished in the following table. No proposal should be submitted for stacking of mineral rejects over existing minerals rejects stacks/mineral reject dumps of previous lessee within the stipulated time frame as allowed by State Govt. to remove it in favor of earlier lessee as per rule. Need to do necessary corrections.

Year	Waste Generation (in m3)	Waste Dumped (in m3)	Dump Name	Location of Dump (coordinates)	Existing or new dump	Top RL of the Dump	No of terrace proposed.	Individual Terrace height	Slope of the terrace	Overall slope angle of dump

USE OF MINERAL and MINERAL REJECT:

17. The utilization of different end products produced from ROM processing of Iron ore viz., lumps and fines products, whether utilized in captive plant/sold in the open market should be mentioned clearly for individual different size and quality products.

PROCESSING OF ROM AND MINERAL REJECTS:

18. The material balance chart furnished is incorrect. The ROM feed grade and tonnage with recovery%, grade and tonnage of product at each stage of processing may be shown in the flow sheet along with block diagram processing plant. The summary of the physical and chemical composition of feed material, grade and quantity along with different output products with physical and chemical composition (with nomenclature of product) should be furnished with recovery percentages. The recovery percentage considered at each stage of processing should be justified properly. Accordingly, it should be corrected and modified.

PROGRESSIVE MINE CLOSURE PLAN:

19. Baseline information of the lease area has not been described as per guidelines. Further, base line information to be furnished for surrounding 500 meter form lease boundary. The monitoring of various environmental parameters as per the relevant statue should be proposed in the core and buffer zone the lease area. The details of monitoring stations should be marked on the environment plan.
20. The plantation proposal over matured waste dump slopes should be reviewed and furnish proposal accordingly.
21. In FA table the different heads should be kept as per the format specified in IBM manual appraisal 2014. The area under different heads of FA table should be properly shown in different hatching with present area and additional area in FA plan. Financial assurance in form of Bank Guarantee as per rule 27 of MCDR 2017 to be submitted. Need to do necessary corrections at all relevant places.
22. Year wise mining plan proposals and land use pattern should be submitted in softy copy in the format of .kml or .shp file along with document. Need to do necessary corrections.

PRE-FEASIBILITY REPORT

23. Prefeasibility Study report conforming to Part V of Minerals (Evidence of Mineral Contents) Rules, 2015 has not been submitted particularly with reference to Cost and revenue factors such as the derivation of, or assumptions made, regarding projected capital and operating costs, the assumptions made regarding revenue including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, etc., the allowances made for royalties payable, both Government and private, Basic cash flow inputs for a stated period, Yearly planned production, Net Present Value (NPV) and Internal Rate of Return (IRR) of the deposit, intrinsic value of the deposit based on annual projected production has not been furnished. Market sensitivity study has not been submitted. Accordingly, necessary corrections should be made at all relevant places.
24. The production proposed furnished has not been considered the present available reserves. Need to do necessary correction.

PLATES (General):

25. The conventions provided under the Metalliferous Mines Regulations, 1961, shall be used in preparing all plans and sections. All plans and sections should comply with the provisions of Rule 32 of MCDR 2017. The plans and sections submitted should bear the certificate that - the plans and sections are prepared based on the lease map authenticated by the state government. All plans and sections should be signed with date by Qualified Person. Date of observation of Magnetic meridian should be shown in all plans. Need to do necessary corrections.
26. 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. Accordingly, necessary changes in the consent letter from the lessee should be made. Need to do necessary correction.
27. All plans and sections have not been signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist. Date of survey has not been mentioned in the plans submitted. Need to do necessary corrections.
28. The copy of the lease plan should be submitted as it was in original under counter signature of qualified persons only without logo/index of lessee. Need to do necessary corrections.

Key Plan:

29. The key plan has not been prepared as per the provision of rule 32 (5) (a) of MCDR 2017. The key plan preferably should be prepared in the new toposheet having the index of toposheet no. The reference of the toposheet numbers has not been mentioned. Need to do necessary corrections.

Surface Plan:

30. Nomenclature of the existing waste and mineral reject dumps along with fines stack should be properly demarcated. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017. Need to do necessary corrections

Geological Plan & Section:

31. The Geological Plan should be prepared complying the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017. The mineralized and non-mineralized area as demarcated in Geological plan of Geological Report has not been shown properly. Need to do necessary corrections.
32. The revised exploration proposal as mentioned in the scrutiny point should be incorporated in geological plan. The proposed boreholes to be shown in dotted lines in Geological sections along with proposed borehole number, RL and proposed closing depth at the bottom of the borehole. The year wise proposal for drilling to be shown in different contrasting color in both Geological Plan and Geological sections. The year wise color of the boreholes proposed in Geological plan should match with the plotted proposed boreholes in Geological sections. Need to do necessary corrections.
33. The UNFC codes should be rechecked and corrected in all plans and sections after complying above scrutiny points. The revised UPL and UNFC codes to be shown in sections. The blank portions of the sections above the UPL should be filled with relevant lithologies. Need to do necessary corrections.
34. The demarcation of ore and mineral reject should be rechecked and corrected justifying the calculations for reserve and resource estimation for the same by cross sectional method. Need to do necessary corrections.

Development plan & Section:

35. The development plans and sections should be prepared on updated geological plan and sections. Year wise mining plan proposals should be submitted in soft copy in the format of .kml or .shp file along with document. Need to do necessary corrections.
36. Year wise development plan and sections submitted should be rechecked and corrected. UPL has not been shown in development plans and sections. The development boundaries have not been shown in the plan and section and also in index. Need to do needful.
37. Quarry name, existing and proposed year wise bench profiles, waste dumps, mineral reject dumps etc. to be shown in the development plans and sections including legend. The lithology of the area should be clearly shown in year wise development plan and sections in the area proposed for development. In development plan, proposed benches RL should be clearly depicted. Proposed infrastructure and waste dumping should be furnished year to year basis in different color codes. The nomenclature of existing and proposed dumps should be clearly marked. In development section progress of dumping and others protective measures should be clearly depicted. The UNFC codes should be rechecked and corrected after complying the above scrutiny points. Need to do necessary corrections

Environment plan:

38. The Environment Plan as prepared should be satisfy the provision as laid down rule 32 (5) (b) of MCDR'2017. The proposed environment protective measures to be shown in environment plan. Air, water and noise monitoring stations and wind rose diagram should be shown. Need to do necessary corrections.

Reclamation plan:

39. Reclamation plan should be submitted as per IBM appraisal of mining plan describing the proposals to be implemented for reclamation and rehabilitation of mined-out land including the manner in which the actual site of the pit will be restored for future use. The proposals may be supported with yearly plans and sections depicting yearly progress in the activities for land restoration/ reclamation/rehabilitation, afforestation, protective measures etc.

FA Plan

40. The area under different heads of FA table should be properly shown in different hatching with present area and additional area in FA plan. The FA table should be furnished.

Samagundes
02/02/21

(Sudip Ranjan Mazumdar)
Senior Mining Geologist

R. Dauliy
02/3/21

(Ramkishan R)
Senior Asst. Controller of Mines