



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. RMP/A/46-ORI/BHU/2019-20

Date: 24.01.2020

सेवामे

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

विषय: Approval of Review of Mining Plan of Daitari Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 1018.3085 ha in Keonjhar & Jajpur districts of Odisha State, submitted by M/s Odisha Mining Corporation Ltd under Rule 17 of MCR, 2016.

- संदर्भ: - i) Your letter No. 820/OMC/2020 dated 14.01.2020.
ii) This office letter of even no. dated 16.01.2020.
iii) This office letter of even no. dated 16.01.2020 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 21.01.2020 by Shri Ramkishan R, Senior Assistant 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 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 मिश्रा)

क्षेत्रीय खान नियंत्रक

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

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Scrutiny comment on Review of Mining Plan including PMCP in respect of Daitari Iron ore Mines of M/s OMC Ltd over an area of 1018.2085 Ha in Keonjhar & Jajpur districts, Odisha

GENERAL:

1. Sequence of paragraph, formats and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings, formats as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text.
2. In the cover page, the period of proposal has not been furnished in "financial year". Need to do necessary corrections in the cover page and at all relevant places in the document.
3. In the introduction chapter, the supplementary lease deed execution details have not been furnished. Need to submit the same.
4. All the categories/grade of Ore above cutoff grade should be termed as "Ore" and between threshold value and cutoff grade as "Mineral Reject". Necessary corrections to be done at all places in text, table and plates.
5. "Consent letter/ Undertaking/ Certificate" from the applicant and "Certificate from Qualified Persons" are not in the format specified in IBM Manual of Appraisal of Mining Plan 2014. Need to do necessary corrections.
6. In Para 2(a), the reference of DGPS survey has not been mentioned for the boundary pillar coordinates. Need to mention the same.
7. In Para 3.1, the date of approved mining plan/review of mining plan etc. should be given in tabulated format.

Sl. No	Mining Plan / Review of Mining Plan/ Modified Mining plan/ FMCP etc.	Lease area/ Area (in Ha)	Submitted Under (Rule Reference)	Approval Letter No. & Date	Period of proposal	Valid up to

8. In Para 3.3, in the review of earlier approved proposal in respect of exploration, ROM Production, excavation, reclamation etc. the reason for deviation along with status of working of the mine have not been furnished in detail. A separate column showing ROM production including mineral reject part of ROM need to be shown. Need to do necessary corrections.

PART-A: (1). GEOLOGY AND EXPLORATION:

9. In the table from page 32-35, the information on angle of drilling and type of drill holes have not been furnished. Need to furnish the same.
10. In table 1.9, the statement made in remarks column is not relevant and should be omitted. Instead proposals for carrying out exploration to convert area explored under G2 level to G1 level of exploration and the level of exploration proposed over unexplored lease area should be furnished with justification. Need to do necessary corrections.
11. The future exploration proposal is inadequate to the extent that the potentially mineralized area and non-mineralized area as per the available Geological information/data have not been demarcated in Geological plan. The unexplored area of 874.9169 Ha as mentioned in table 1.9 has not been shown in geological plan. The proposal for drilling over unexplored area as submitted is not in grid pattern. The depth of the proposed boreholes should be 300m or till the end of mineralization, whichever is earlier. The proposal for drilling in 100*100m grid pattern should be rechecked and corrected. Further, in areas outside G1 and G2 area, the boreholes which have been closed or terminated prematurely without intersecting the ore thickness at depth should be proposed for drilling. Further, the proposal for G1 level of exploration over potentially mineralized area within two years and area proposed for waste dumping i.e. 2020-2021 and 2021-22 have not been submitted. The year wise summary of exploration proposal need to be submitted in the following tabulated format. Need to do modify future exploration proposal accordingly.

Year	No. of boreholes (Core/RC/DTH)	Grid interval	Total meterage	No. of Pits, dimensions and volume	No. of Trenches, dimensions and volume
I					
II					
III					
IV					
V					

12. As per MEMC Rules 2015, check analysis of at least 10% of samples may be analyzed from third party NABL accredited/or department of science & technology (DST) / BIS recognized laboratories or government laboratories for assessing the acceptable levels of accuracy. Accordingly, the proposal should be given under future exploration programme.
13. The details of the proposed boreholes shown in table 1.10 should be furnished in the following tabulated format. Need to do necessary corrections.

Year of drilling	Borehole No	Section No	UTM Coordinate		Collar mRL	Bottom mRL	Borehole Depth	Angle of drilling	Borehole Diameter	Type of drill hole(Core/RC/DTH)
			Northing	Easting						

14. In page 66, the cutoff grade value mentioned is incorrect and should be corrected.
15. In table no 22, the threshold value should be rechecked and corrected as per latest threshold value of minerals (Gazette Notification dated 25th April, 2018). Lateral influence should be rechecked and corrected considering the provision of Part II point no.4 and part III of Minerals (Evidence of Mineral Contents) Rules, 2015 (MEMC Rules, 2015). Justification of recovery factor has not been furnished. The reference of Bulk density test report has not been mentioned and should be corrected. Necessary corrections to be made at all relevant places.
16. Justification of UNFC codes in tabulated format as per UNFC norms has not been furnished. Feasibility report should be submitted separately as annexure to the document and should be removed from text. Need to do necessary corrections.
17. In page 67, the parameters considered for resources/reserve assessment, mining method, recovery factor, mining losses, processing loss, ultimate pit depth proposed etc. have not been described. Justification of recovery factor considered has not been furnished. Determination of bulk density and recovery factor based on field test should be furnished. Method of resource/reserve estimation, section interval etc. have not been defined. Need to do necessary corrections.
18. In table no 1.16, the code "L/F" should be elaborated. The resources shall be assessed up to the threshold value and the resources between the threshold value and the cut-off grade have not been reported separately. Detail section wise calculations of resources by cross sectional method under different categories of UNFC have not been shown. Further, applying modifying factors, the detail calculation of section wise reserves and remaining resources under various categories of UNFC has not been shown. Section no in table 1.16 does not match with section no in geological plan. In table 1.24, the quantity and grade of reserves and resources under different UNFC categories between 45 to 55% Fe and +55% Fe should be furnished. Need to do necessary corrections at all relevant places.

PART-A: (2). MINING:

19. Justification for area proposed for mining particularly with respect to development of new quarries Sindurmundi-1 and Sindurmundi-2 has not been furnished with respect to level of exploration, reserve/resource estimation with grade and mineral conservation point of view. Need to do necessary justification.
20. Detail calculation of section wise ROM quantity (Ore and Mineral Reject separately), OB/waste and soil quantity from Hilltop quarry, Sindurmundi-1 and Sindurmundi-2 has not been furnished. Need to furnish the same.

21. In table 2.4, the reference of bulk density study report has not been mentioned. Need to do necessary corrections.
22. Year wise development and production plan should be furnished in the following tabulated format.

Particular for the year...		
Bench Geometry	Height (in m)	
	Width (in m)	
	Individual bench slope angle	
Quarry Development	Location (Quarry Name)	
	Extent of Development (in UTM coordinate)	
	Sections considered for development	
	Number of benches	
	Benches considered for development with RL	
	Top RL	
	Bottom RL	
	Direction of advancement	
	Dimension of the quarry at the end of the year including existing benches	
	Area occupied (in sq.m)	
	Overall quarry slope angle	
	Production of Ore (in MT)	
	Generation of Mineral rejects ore from quarry (in MT)	
Production of ROM (Ore+Mineral Reject) in MT		
Total Generation of waste (in cum)		

23. The conceptual mine planning have not been described in detail. Justification for waste dumps to be created with respect to their capacity, dump stability, location should be furnished for the entire waste quantity that would be generated and handled during conceptual stage along with details of backfilling. Need to submit necessary justification.

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

24. In table 4.1 & 4.3, the year wise generation of mineral rejects and waste from Sindurmundi-1 and Sindurmundi-2 respectively should be furnished separately. Need to do necessary correction.
25. In Para 4(b), it should be mentioned that waste dumping will be done in the proposed waste dump location only after proving the area to be non-mineralized through drilling. Need to submit proposal accordingly.
26. 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. or their maintenance to be given along with their location. Proposal for protective measures have not been submitted around mineral reject dumps and waste dumps.

PROCESSING OF ROM AND MINERAL REJECTS:

27. A material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery, and its grade at each stage of processing has not been furnished. The arrived percentage of recovery of saleable ore and mineral reject should be justified properly with documentary evidence.
28. Existing and proposed processing facilities need to submit in tabulated format. The flow sheets submitted are not legible. Need to submit the legible flow sheets as annexures.

OTHERS:

29. Information in respect to the existing and proposed manpower right from management level to unskilled labor both on role and contractual has to be mentioned separately in the text.

PROGRESSIVE MINE CLOSURE PLAN:

1. The air, water and noise monitoring stations and their frequency of monitoring have not been furnished in tabulated format. Accordingly, monitoring proposal to be submitted.
2. All the paragraphs should be addressed in detail under PMCP chapter as per IBM Manual Appraisal MP 2014. The present land use pattern should be furnished as per the format of FA table of different heads.
3. In Para 8.3.1, it should be mentioned that "the pits are not matured for reclamation and rehabilitation". Therefore proposal for reclamation and rehabilitation of the quarry have not been proposed. Need to do necessary corrections.
4. In FA table the different heads should be kept as per the format specified in IBM manual appraisal 2014. The area put to use at start of plan period, total area at the end of plan period and net area considered for financial assurance under different heads should be rechecked and corrected. 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 has not been submitted. Need to do necessary corrections and submit required bank guarantee.

ANNEXURES:

1. Few photographs showing land use of the lease area, environmental status of the area have not been enclosed
2. Copies of analysis report from NABL accredited laboratory should be enclosed. Copy of quality of air, water, soil, noise and other environmental parameters monitoring report of the last year should be enclosed.
3. Copies of Form J of all drilled boreholes have not been submitted. 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. Indexing of borehole logs with page numbers have not been done in sequence.
4. Financial assurance in form of bank guarantee has not been submitted. The copy of bank guarantee should be submitted.

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 & 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. 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. The index should be kept same in all the plans and sections.
2. **KEY PLAN:** The key plan on a scale of 1:50000 should incorporate all features as mentioned Rule 32 (5) (a) of MCDR 2017. The approach road to the lease area, the adjoining area lying preferably within five kilometers thereof from the lease boundary has not been shown properly.
3. **SURFACE PLAN:** The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017. All the pits should be suitably nomenclature. Block boundaries have not been shown properly. Need to do necessary corrections.
4. **GEOLOGICAL PLAN & SECTION:**
 - (i) the Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017
 - (ii) Proposed boreholes should be shown in plan and sections. The proposed borehole should be shown in dotted lines in geological sections.

- (iii) In Geological plan, some of the areas have been shown as blank. In those areas, geology of the area should be shown. Longitudinal sections have not been submitted.
- (iv) In section line -400 N, the unwanted drawings shown should be omitted. Need to recheck other sections as well.
- (v) UNFC codes, UPL should be shown in Geological sections. The blank areas in geological sections should be filled with relevant lithologies

5. DEVELOPMENT PLAN & SECTION:

- (i) The proposed and existing bench mRL to be shown clearly over year wise development plan and sections, dump plan and sections.
- (ii) Geological information (lithology) to be furnished on development plan and sections. The area shown as blank should be filled with relevant lithologies.
- (iii) Existing and proposed protective measures and plantation should be shown in different colors around all waste dumps and mineral reject dumps. Index of safety zone boundary and surface right area should have distinct color.

6. RECLAMATION PLAN:

Existing and proposed protective measures and plantation should be shown in different colors along all waste dumps and mineral reject dumps. Index of safety zone boundary and surface right area should have distinct color.

7. FINANCIAL ASSURANCE AREA PLAN:

The area degraded due to mining and allied activity and waste dump sites to be considered in FA calculation. The existing area and additional area under different heads should be shown properly under different coloured hatching.

S. Mazumdar
22/1/20
(Sudip Ranjan Mazumdar)
Senior Mining Geologist

R. Ramkishan R
22/1/20
(Ramkishan R)
Sr.ACOM