



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/39-ORI/BHU/2019-20

दिनांक / Date: 23.12.2019

To

Shri R Vineel Krishna, IAS,  
Managing Director & Nominated  
Owner, M/s OMC Limited,  
OMC House, Bhubaneswar,  
Odisha – 751001.

Sub: Review of Mining Plan of Kurmitar Iron Ore Mine over an area of 651.00 ha in Sundargarh district of Odisha of M/s Odisha Mining Corporation Limited submitted under Rule-17 of MCR, 2016.

Ref:- i) Your letter no. 18675/OMC/2019 dated 28.11.2019 received on 03.12.2019.  
ii) This office letter of even no. dated 03.12.2019.  
iii) This office letter of even no. dated 03.12.2019 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

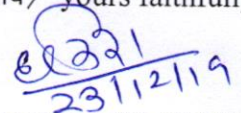
Sir,

This has reference to the letters cited above on the subject. The draft Review of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 18.12.2019 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 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 and JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR' 2017 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 modified 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 / yours faithfully,

  
23/12/19

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Copy for kind information and necessary action to:

1. Shri Sunil Kumar Kar and Shri Rabindra Mohanty, Qualified Person, M/s Odisha Mining Corporation Limited, OMC House, Post Box No.34, Bhubaneswar-751001, Odisha.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines



**Scrutiny comment of Review of Mining Plan including PMCP in respect of Kurmitar Iron Ore Mine, Area 651.00 ha. of M/s OMC in Sundargarh district of Odisha State.**

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**GENERAL:**

- I. On cover page, out of total forest area diversified forest area is to be furnished. The lease period is further extended by 20 years under provision of rule 3(1) & (2) of Mineral (mining by Govt. company) Rule 2015 which should be furnished with bullet notes on cover page.
- II. Page-9, the TOR has been issued for 6.0 million T and public hearing has been already conducted, which is to be described in text with documentary evidence and same should be enclosed in annexure.
- III. Para-3.1, Page19, date and reference with letter no. of earlier approved MP/RMP/MMP should be furnished in tabular form.
- IV. Para-3.3, Page19, review of exploration program has not been furnished with Form-I submitted to this office under rule 47 of MCDR'2017.
- V. The experience certificate of all qualified person should be as per provision of rule 15(1)(b) of MCR 1960. Qualified person address, e-mail, Phone number, Mobile number, PIN code and Fax no. should be furnished on cover page.
- VI. Recent photographs of pits, dumps, afforestation and reclamation and rehabilitation carried out if any should be enclosed.
- VII. All the annexure and text to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates/annexures should bear dated signature.
- VIII. Sequence of para and its numbering as per IBM Manual appraisal MP 2014 should be covered in text. All the headings as mentioned in the IBM Manual appraisal MP 2014 should be furnished in all chapters in the text.

**GEOLOGY:**

- I. Page-28 Disposition of all lithological units with clear nomenclature and their descriptions, contacts of litho units/rock types, attitudes like strike and dip and structural features are to be furnished.
- II. Page-29, Para-(j), it is furnished that total 33 nos. of deep and shallow pits at 200m grid interval were sunk to delineate ore body but the same has not been furnished in surface and geological plan and no analysis report has been enclosed in annexure.
- III. Page-30, in summary of drilling total 235 nos. of bore holes core drilling have been furnished but the bore hole logs have not been furnished. All the bore holes logs and erstwhile form-J should be furnished in annexure. It has been observed that the bore holes drilled in 2019-20 have not been updated and not furnished in geological plan and section
- IV. Page-31, table-1.14 and page-32, table-1.15, the area furnished under G1/G2/G3 & G4 are not furnished as per Minerals Evidence of Mineral Contents Rules 2015. The area should be re demarcated considering the bore holes under different heads with specified influence.
- V. Page 34, Para-(i), the backlog of bore holes of approved Scheme of mining not commenced due to want of forest clearance should be incorporated in instant review of mining plan. The lease area proposed to explore under rule 12(4) of MCDR 2017. All the drilled and proposed BH to be depicted on the Geological section along with RL and its actual and proposed depth for better referencing. At the end of the table cumulative number of proposed BH in forest area, non-forest area, diverted forest area, Surface right area and non -surface right area to be given. The details of individual proposed BH to be given in following format:

Year	BH No	Northing	Easting	Collar RL	Core/RC/DTH	Metage	Inclination	Forest/Non-Forest/diverted Forest area	Surface Right/Non-Surface area	Purpose of BH

- VI. Page 42-49, the reserve and resources as furnished in tabular form are not in chronicle order. The resources furnished under 331 and 332 should be re-organized then cumulative resources should be furnished.
- VII. Reserve and resources are not prepared as per Minerals Evidence of Mineral Contents Rules 2015. From the G1 category of mineral resources, the blocked mineral resources is furnished under 221 category is not correct. The 221 category of blocked resources should be replaced with 211 category.
- VIII. Page-58-59, The justification of UNFC coding should be furnished as per Minerals (Evidence of Mineral Contents) Rules, 2015.

**MINING:**

- I. Page-60, para-2.0, existing method of mining should be described in brief. Proposed method of mining should be furnished in light of development plan i.e production capacity, nos. of pits proposed for production, waste dump and other designing parameters to be discussed.
- II. Table-2.1, The area of existing quarry-I & II is not correctly furnished. Total number of benches in ore and OB are to be furnished. The overall pit slope of both the quarry should also be furnished.
- III. Page-64, Table-2.6, in year wise tentative excavation the ROM production proposed in 2023-24 is 6.12 million tonnes while EC capacity of the mines is processed for 6.0 million tonnes for which TOR has been issued. It should be re-checked and corrected accordingly at all places.
- IV. It has been observed during field inspection that quarry-I& II is having variation in grade. Therefore excavation proposal is to be given considering the grade of ore obtained from both the quarries in such a way that overall grade of ore by blending proposal with high grade would be marketable in the interest of mineral conservation.
- V. The insitu tentative excavation as proposed year wise has not been furnished with calculation table of ore and OB year wise and quarry wise. A detailed calculation of ore and OB considering the cross section as furnished in development plan and section should be furnished.
- VI. Page-49, Para-9( e), describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc.. The layout of faces to be shown in the following tabulated format.

me of Pit	Description	1st Year	2nd year	3rd year	4th Year	5th Year
	ce RL					
	ngth of Face					
	rection of advancement					
	ngth of advancement					

- VII. Page-69, Para(c), the loading and transported should be described within the lease area. Since stack yard proposed outside lease area it should be omitted. As discussed during field visit transportation of iron ore outside lease area will be transported through belt conveyor as per NEERI condition while in

text it has not been described. It should be clearly mentioned that after processing of ore it should be transported outside lease area by belt conveyor by paying royalty as per rule. The location of transfer point and proposed belt conveyor should be marked in relevant plan.

- VIII. In conceptual mining plan, cumulative waste generation and protective measures should be furnished properly. Restoration of safety zone and slope of the dump may describe properly.

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

- I. Page-88, the details of existing waste dump-WD has not been furnished with their location, and protective measures proposed to stabilized the dump yeariwise.
- II. Page-89, a new waste dump-WD-1 has been proposed therefore it should be ensured that the area proposed for dumping should be proved non-mineralized. Accordingly exploration program should be initiated on priority basis before dumping.
- III. The mineral reject generated during mining operation has been proposed for blending but the average of mineral reject and final grade achieved after blending has not been described in text.
- IV. It has been observed during inspection that some of the dumps are lying within the UPL. Therefore a proposal should be furnished to re-handle the dumps lying within ultimate pit limit.
- V. The extent/location of the proposed dumps to be given also mentioned whether within UPL or not. Also give the details of the existing dumps (top soil, waste dump, mineral reject dump) within the lease area in tabulated form comprising dump number, designed capacity, present quantity, remaining quantity, bottom RL and top RL.
- VI. The details of sub grade dumps and their analysis report should be submitted and discussed for their future use on the basis of their physical and chemical properties. Further, a detail programme for dump analysis to be given to assess the quality and quantity of all waste dumps.
- VII. Page-91, details Existing and proposed retaining wall, garland drain, settling tank etc. to be given yearwise with their location.

**PROGRESSIVE MINE CLOSURE PLAN:**

- I. Page-132, para-8.6, the area furnished under excavation at the start of plan period is not correctly furnished. The existing area under excavation as furnished is less than area depicted in annual return for the year 2018-19 submitted to this office. Further the area proposed under waste dump is furnished 27.43 ha while in FA table it is furnished 27.420 ha. It should be re-checked and amount of financial assurance should be re-calculated as per rule 27(1) of MCDR-2017 and submitted accordingly.
- II. Monitoring station of air, noise and water should be described in text and their locations furnished in tabular form.
- III. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity to be enclosed.
- IV. Under impact on land, cumulative land degradation at present, at the end of proposal period and at the end of conceptual period may be given referring to conceptual mining plan.
- V. Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are not given properly. The same to be elaborated.
- VI. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished.

**PLATES (General):**

- I. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist. The permission of change of scale other than prescribed scale is to be enclosed with annexure.

- II. Wind direction may show through wind rose diagram in key plan and environmental plan. is not clear. The date of observation of magnetic meridian and its declination is to be shown in relevant plans.
- III. 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.
- IV. 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 sign conventions under MMR 1961.
- V. Lease plan of original lease area properly demarcated with part surrender area should be submitted. Key plan as submitted is be demarcated with co-ordinate in terms of latitude and longitude.
- VI. Existing and proposed bench mRL to be mentioned in the all plans and sections. The UPL should be shown in red colour in all relevant plans and sections.

**Surface Plan:** Information of boundary pillars in UTM coordinates as well as in Latitude and longitude of all ML boundary points should be depicted in tabulated form on surface plan. Virgin area to be shown by contours and spot RL in surface plan. Forest & Non forest area, Surface right acquired area etc. should be marked clearly.

**Geological Plan & Section:** Data related to strike, dip, dip-direction etc. shown clearly on the geological plan. In the Geological Plan UNFC boundaries, explored area, unexplored area, drilled boreholes and year wise proposed boreholes to be shown in relevant colors. In sections UNFC codes have not been furnished as per Minerals Evidence of Mineral Contents Rules 2015. Some of the bore holes are not matching with plan and existing benches are not clearly marked. The proposed bore holes are to be marked in sections and litho units should be matched bore hole logs.

**Development plan & Section:** The existing benches are not shown distinctly with their RL. The sequence of development of benches of previous year should be followed in next year development plan. The color codes of Development Plan and Section should be same. Different types of ore encountered through bore holes and based on bore holes data, ore profile and their nomenclature to be corrected accordingly.

**Environment plan:** The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017. The proposed and existing environment protective measures to be shown in environment plan. The drainage pattern of the lease area, contours in core zone and surface structure in buffer zone should be shown.

**Conceptual plan:** Conceptual plan may be prepared considering mineralization as revealed from the borehole logs. Direction of run off from the area based on surface contours may be shown on the plan and the sections.

**Reclamation Plan:** Proposals of land restoration/reclamation/rehabilitation, afforestation, waste dump management etc should be depicted in Reclamation Plan yearwise with different color codes. The proposed retaining & garland wall, settling pond should be furnished.

**FA Plan:** Types of land degradation with area in hectare should be shown through solid boundary color. Infrastructure existing and proposed are to be marked clearly.