



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. MSM/FM/08-ORI/BHU/2019-20

Date: 26.07.2019

To

✓ Shri Venkatesan Thyagarajan, Nominated Owner,  
M/s OCL India Ltd,  
At/Po- Rajgangpur, Dist- Sundargarh,  
Odisha-770017

Sub: Approval of modification of Review of Mining Plan of Lanjiberna Limestone & Dolomite Mine along with Progressive Mine Closure Plan (PMCP), over an area of 873.057 ha in Sundargarh district of Odisha State, submitted by M/s OCL India Ltd under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. Nil dated 05.07.2019 received on 15.07.2019.  
ii) This office letter of even no. dated 15.07.2019.  
iii) This office letter of even no. dated 15.07.2019 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 site inspection carried out on 23.07.2019 by 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 modification of 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 or JPG format in resolution of 100x100 pixels on same CD )** with financial assurance under Rule 27 of MCDR 2017 of the Modification of 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 modification of 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 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.

Yours faithfully,

  
(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Copy for kind information and further necessary action to Shri P S Acharya & Shri S M Patra, M/s Gemtech Consultants Pvt Ltd, K-8/625, Kalinga Nagar, Ghatikia, Bhubaneswar- Odisha 751029.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

**Scrutiny comment on Modification of Review of Mining Plan including PMCP in respect of Lanjiberna limestone & Dolomite Mine of M/s OCL India limited over an area of 873.057 Ha**

**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. The term "subgrade" should be replaced with "mineral reject" at all places in the document.
3. In Para 3.1, the date of approved mining plan/scheme of mining should be given in tabulated format

Sl. No	Mining Plan / Review of Mining Plan etc.	Submitted Under (Rule Reference)	Approval Letter No. & Date	Period	Valid up to

**GEOLOGY AND EXPLORATION:**

4. The borehole proposal submitted under "future exploration program" is incorrect to the extent that proposal for drilling over lease area in 100m x 100m grid interval have not been submitted for completion within 2019-20 and as per rule 12 (4A) of MCDR 2017 (as amended up to 27th March, 2018) the depth of proposed boreholes have not been proposed to 300 meters or up to discontinuance of ore body, whichever is earlier, in such a manner that both G2 and G3 area and resources is converted to G1 area and resources. In the table under proposed exploration program, a column should be inserted showing the purpose of borehole (for lateral extension or depth ward) conversion of G2 or G3 area to G1. Necessary changes to be done in exploration proposal.
5. The lease area explored under different category of UNFC norms as shown in table in page no 39 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). 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.
6. Details calculation of section wise reserves and resources as per the provision of MEMC Rules 2015, by cross sectional method for various categories of UNFC have not been furnished showing cross-sectional area, length of influence, volume, bulk density and tonnage. For General (G2) and detailed (G1) stages of exploration the depth continuity of mineralization may be considered limited to the depth up to which direct evidence of mineralization is established. Further, it has not been specified the RL up to which G1, G2 and G3 resources have been established. Hence, resources under 331 & 333 may be rechecked and justified accordingly. Justification of UNFC to be given in tabulated format.

**MINING:**

7. Justification for area proposed for mining has not been given with respect to exploration, targeted quantity and grade considering mineral conservation and grade.
8. The description of the existing pits/waste dumps/Mineral rejects stacks in the following table to be furnished. Temporary and permanent waste dump details should also be furnished. Their nomenclature should be also reflected in relevant plans and sections.

**Existing Pits:**

Location (Grid)	Block	Size of Pit (in m)		Surface area covered (in Ha)	Top RL (m)	Bottom RI (m)	No of benches
		Length	Breadth				

**Existing waste Dumps/mineral reject:**

Name of the dump	Block	Location (Grid)	Length (max) in mts	Breadth (max) in mts	Area occupied		Grade
					(m <sup>2</sup> )	(ha)	

9. In para 2.A (b) (1), the total of in-situ excavation figs have not been furnished in the format specified in IBM appraisal of MP 2014 both in cum and in tones in separate table. In situ excavation of OB/IB/waste, Ore, Mineral reject have not been calculated both RL wise and section wise considering cross section area, volume, bulk density, tonnage and recovery factors. The estimation should be carried out by cross sectional method.
10. The proposed areas for various mine activities like waste dumping sites, mineral storage areas, and mineral rejects area, any other should be addressed in detail with nomenclature of the same in relevant plans and section either temporary or permanent. The same should be reflected in FA calculation.
11. The drilling and blasting parameters should be relooked to control generation of oversize boulders, and subsequent secondary blasting etc. The manner in which the oversize boulders are handled from ROM stage to feed size for crushers has not been discussed in details. The area for stacking of oversize boulders has not been shown in relevant plans. Further, the land degradation due to storage, secondary blasting should be rechecked for net area considered for FA calculation.

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

12. The disposal of waste and mineral reject and soil to be furnished as per table furnished in IBM Manual appraisal MP 2014.
13. It has been observed during inspection that an old dump exist between boundary pillar no O and P extending beyond the southern side of the lease boundary over an area of approximately 2.7 Ha. Waste /overburden dumping outside the lease area is not allowed. Furnish details of permission from competent authority of state government for the same, if any.
14. The details of all the existing waste dumps temporary and permanent, Mineral reject dumps/stacks to along with their location inside or outside the UPL have not been furnished in tabulated form.
15. 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 m3)	Dump No	Location of dumping (coordinates)	Proposed area (m2)	Proposed dumping mRL.	No of terrace proposed.	Individual Terrace height	Slope of the terrace

16. 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:**

17. 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.

**OTHERS:**

18. 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:**

19. 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.

20. In Para 8.3.1, it has not been mentioned that the area is not matured for reclamation. Specific proposals for three quarries have not been furnished. The proposal should be limited to the end of review of mining plan period only. Accordingly, necessary corrections to be made.
21. In FA table the different heads should be kept as per the format specified in IBM manual appraisal 2014. The FA should be submitted over 226.65 Ha. The area under different heads of FA table should be properly shown in different hatching with present area and additional area in FA plan.

#### **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 should incorporate all features as mentioned Rule 32 5 (a) of MCDR 2017. The approach road to the lease area should be shown with co-ordinates of extremity of lease area.
3. With reference to **CCOM Circular No 2/2010**, the geo-referenced mining leases map superimposed on latest highresolution satellite data (cloud-free) derived from merging of Cartosat-2 and LISS-IV (Scale 1:5,000) covering an area of 500 meters from the mining lease boundary has not been submitted..
4. **SURFACE PLAN:** The index of surface right area shown should be distinct from index of safety zone. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017.
5. **GEOLOGICAL PLAN & SECTION:**
  - (i) The redefined UNFC boundaries to be shown in Geological Plan and sections.
  - (ii) Cross section lines with nomenclature have not been shown on the geological plan.
  - (iii) the Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017
  - (iv) The saleable ore and mineral reject grade of limestone should be properly demarcated and grade wise resources should be calculated by cross sectional method.
  - (v) Mineralized and non-mineralized area should be recalculated considering the dip of the ore body and same should be shown in geological plan and surface plan.
  - (vi) Index of different grade of limestone do not corroborate with the index shown in plan and sections. Need to recheck and correct at relevant places.
6. **DEVELOPMENT PLAN & SECTION:**
  - (i) UPL has not been shown in development plan. UNFC codes have not been shown development sections.
  - (ii) The proposed and existing bench mRL to be shown clearly over year wise development plan and sections.
  - (iii) Geological information (lithology) to be furnished on development plan and sections. Plan and section should be drawn on same scale.
  - (iv) Existing and proposed protective measures and plantation should be shown in different colors. Index of safety zone boundary and surface right area should have distinct color.
  - (v) Development section numbers have not been shown in development plan.
  - (vi) In the development sections, in the index the current bench position and position at the end of 2019-20 have not been shown Instead bench position at the end of 2018-19 have been shown at some places. Need to rectify the same.

**7. WASTE DUMP PLAN AND SECTION:**

- (i) The section reference number has not been marked on the section.
- (ii) In the index, the index of litho units shown in section has not been furnished. UPL has not been shown in the index.
- (iii) Existing and proposed protective measures and plantation should be shown in different colors. Index of safety zone boundary and surface right area should have distinct color.

8. **ENVIRONMENT PLAN:** The environment plan has not been prepared as per the provision laid down in rule 32 (5) (b) of MCDR'2017.

**9. RECLAMATION PLAN:**

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

10. **FINANCIAL ASSURANCE AREA PLAN:** The area degraded due to mining and allied activity to be considered in FA calculation. It should be re-calculated and submitted accordingly. The existing area and additional area under different heads should be shown properly under different coloured hatching.

**ANNEXURES:**

1. 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.
2. Copy of quality of air, water, soil, noise and other environmental a parameters monitoring report of the last year should be enclosed.
3. All the annexure to be properly numbered/paged and relevant annexure to be signed by qualified person etc. It is observed that many of the annexures are not legible. A legible copy of same to be enclosed.
4. 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.
5. Copy of bank guarantee should be enclosed. Photographs of boundary pillars should be enclosed.
6. Copies of Form J and Form K of all drilled boreholes have not been submitted.
7. The chemical analysis results of borehole samples from NABL accredited laboratory have not been submitted.
8. NABL accreditation of the laboratory have not been furnished.
9. Indexing of borehole logs with page numbers have not been done in sequence

*Sudip Ranjan Mazumdar*  
26/07/19  
(Sudip Ranjan Mazumdar)  
Senior Mining Geologist