



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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BHUBANESWAR-751020

No. MPM/OTFM/09-ORI/BHU/2017-18

Date: 11.06.2018

To

✓ Shri Sourav Mishra, Director & Nominated Owner,  
M/s Ghanashyam Mishra & Sons Pvt Ltd,  
At/P.o- Gorumahisani,  
Dist- Mayurbhanj, Odisha-757042

Sub: Approval of modification of Review of Mining Plan of Gorumahisani Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 349.50 ha in Mayurbhanj district of Odisha State, submitted by M/s Ghanashyam Mishra & Sons Pvt Ltd under Rule 17(3) of MCR, 2016 & Rule 12(4A) of MCDR, 2017.

Ref: - i) Your letter No. Nil dated 30.05.2018.  
ii) This office letter of even no. dated 05.06.2018.  
iii) This office letter of even no. dated 05.06.2018 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 earlier site inspection carried out on 07.04.2018 by Shri Dayanand Upadhyay, 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 modification of 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 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 Chandrabhanu Das, M/s Geo Consultants Pvt. Ltd., 853, Gobind Prasad (Medical Lane), Mahavir Nagar, Laxmisagar, Bhubaneswar – 751006.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

**Scrutiny comment on Modification of approved Mining Plan including PMCP in respect of Gorumahisani Iron Ore Mine, Area 349.50 ha. of Shri Ghanashyam Misra & Sons Pvt. Ltd. in Mayurbhanj district of Odisha State.**

**GENERAL:**

- I. Page-22, review of exploration program has not been furnished with Form-I under rule 47 of MCDR'2017 in remarks column.
- II. Page-24, Achievement of Plantation has not been furnished according to proposal considering the area in ha.
- III. Page-27, Para-3.6, reason of modification has not been furnished with quantity of ROM augmented with present proposal.
- IV. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

**GEOLOGY:**

- I. Page-33, detailed description of geology of the lease area such as shape and size of the mineral/ore deposit, disposition various litho-units indicating structural features etc. to be given.
- II. Page-34-47, the exploration carried out from 2011-12 to 2017-18 as furnished in tabular form, the bore hole no./ID is repeating in nature. The bore holes ID should be unique; therefore it may be modified accordingly.
- III. Page-48, the details of total lease area explored under UNFC have to be furnished in the tabular format provided below.

Total Lease Area: ..... Ha						Remarks/ comments including reasons for not carrying out the exploration as per UNFC norms
Item of Information	Lease area explored as per UNFC norms (in Ha) as on dt.....					
	Total lease area = A+B+C+D+E					
	G1 Level	G2 Level	G3 Level	Explored and found non- mineralized with level of exploration (Remarks)	Un-explored lease area	
	A	B	C	D	E	F
Area as per level of exploration						
No. of BH drilled						
No. of BH considered for Resource						
Meterage drilled						
Grid Interval						
Scale of Mapping						
Reserve estimated after above exploration as on dated: .....						
Remaining Resource after above exploration as on dated: .....						
Total Reserve / Resource after above exploration as on dated:.....						

- IV. In geological section the bore holes beyond UPL not shown with their lito units further the colour codes furnished are hazy.
- V. Page-49, the co-ordinate of bore holes furnished in future exploration program is not depicted in geological plan. Further the depth of holes proposed is not sufficient it may be revised in light of amendment rule 12(4)(A) of MCDR 2017.

- VI. It is observed from geological section that some of the exploratory BH have been closed in mineralized area, hence, exploratory proposal in such area up to the end of the mineralization to be given. Further, proposal of exploration to be given/revised as discussed during site visit.
- VII. All the drilled and proposed BH to be depicted on the Geological section along with mRL and its actual and proposed depth for better referencing
- VIII. Copy of form I and J as per MCDR, 2017 to be enclosed for all the drilled BH for ready and future reference as per Rule 47 and 48 of MCDR, 2017. The same should be signed by the Geologist appointed under MCDR, 2017
- IX. Page 54-55, the geological reserve and mineable reserve as furnished in tabular form have not been furnished with UNFC codes.
- X. All the previously drilled borehole logs should be enclosed with the document. The lithology shown in the borehole log should match with the lithology shown in geological sections.
- XI. As per guideline of "IBM manual on appraisal of Mining Plan 2014" at least 10% of total samples to be analyzed in accordance to BIS and reports from NABL accredited/Government Laboratory.
- XII. Reporting of Mineral Resources in the format prescribed in Part IV-A of Minerals (Evidence of Mineral Contents) Rules, 2015 to be submitted.

**MINING:**

- I. Page-59, the table showing details of the existing quarries with their RL are not matched with surface plan. It is to be rechecked.
- II. Production schedule as furnished in tabular form has not been furnished with average grade of saleable ore and mineral reject.
- III. Page-64, dump re-handling has not been described with name of dumps to be re-handle, type of dump, average grade of ore and total quantity available in dump.
- IV. Total ROM production should be furnished in separate table including insitu excavation and iron ore re-handled from dump.
- V. Page-63, It is described that the average recovery of saleable ore is around 60% and mineral reject is 56% which is not correct. Production schedule as furnished in tabular form for the year 2018-19, the percentage of saleable ore is 62.5% and mineral reject is 37.5% while for the year 2019-20 the percentage of saleable ore is 85% and mineral reject is 15% which contradicts the recovery parameters considered. It may be justified.
- VI. The excavation proposal is to be given considering the grade of ore obtained from different quarries in such a way that overall grade of ore by blending with high grade would be marketable in the interest of mineral conservation.
- VII. Page-74-99, the conditions imposed by EC, FC, SPCB submitted alongwith parawise compliance report should be enclosed in annexure in place of text.
- VIII. Ultimate pit limit should be depicted on all relevant plans & sections.
- IX. It has been proposed to backfilling the quarry but in development plan and section backfilling has not been shown. Before backfilling of the quarry as proposed it should be ensured the exhaustion of ore body in terms of their depth & extension in the interest of mineral conservation.
- X. Back filling proposal has not been explained properly. Exhausted area to be backfilled by OB/Waste to be specified with mRL and area on year to year basis with description of the method & manner of disposal of waste.

- XI. Conceptual mining plan, cumulative waste generation and top soil generation and protective measures should be furnished properly. Restoration of safety zone, dead dump and slope of the dump may describe properly.

**Mine Drainage:**

It has been observed that a substantial amount of rain water supposed to be passed from the lease area. Mine drainage plan as submitted is not showing flow direction of the water, location of final discharge, arrange of arresting of solid waste etc.

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

- I. 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.
- II. 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.
- III. There are large number of mineral reject dumps have been observed in lease area in scattered manner therefore proposal should be furnished to merge the dumps and blending proposal should be initiated to consume the mineral reject.
- IV. 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.
- V. Page-85, details Existing and proposed retaining wall, garland drain, settling tank etc. to be given yearwise with their location. Location of sub-grade storage along with year to year development of the SG dumps to be given.

**PROGRESSIVE MINE CLOSURE PLAN:**

- I. Page-147, Para-8.6, the area considered under mining and waste dump at the end of 2016-17 as depicted in approved review of mining plan has been furnished same at the end of 2017-18. It should be re-checked and corrected accordingly.
- II. The lease is expiring in 31st March 2020, therefore PMCP submitted in instant document should in line with the FMCP. A separate undertaking may be given that FMCP will be submitted as per rule 24 of MCDR, 2017. Amount of financial assurance should be calculated as per rule 27(1) of MCDR-2017 and submitted accordingly.
- III. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity for last one year to be enclosed.
- IV. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished. Massive planation proposal on matured area may be given for early rehabilitation of matured area. Accordingly proposal of plantation, coir matting/geo textile etc may be revised/given.
- V. It is advised that most of the plantation work to be completed in year 2018-19 only. The year 2019-20 should be for post care maintenance only. Accordingly proposal may be revised.
- VI. Back filling proposal has not been explained properly. The proposed backfilling bottom mRL, top mRL, quantity of backfilling year to year basis etc. may be given. The sequence of backfilling in such a way that the original sequence land restoration may be insured.

**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 has not been enclosed with annexure.

- II. Wind direction may show through wind rose diagram in key plan and environmental plan is not clear. The date of magnetic meridian as shown in relevant plans is not correct. This is to be corrected.
- III. 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:**

- I. 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. Further, the nomenclature of the grid to be given both the side of the grid.
- II. Virgin area to be shown by contours and spot RL in surface plan.
- III. Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes. 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:**

- I. Data related to strike, dip, dip-direction etc. shown on the geological plans are inadequate and not legible. Some more data may be shown to understand the geology of the area.
- II. All the lithology within and outside the UPL to be shown in the Geological sections. Necessary corrections to be done in all the sections.
- III. In the Geological Plan UNFC boundaries, explored area, unexplored area, forest area, non-forest area, forest diverted area, drilled boreholes and year wise proposed boreholes in relevant colors to be shown.
- IV. The colour as depicted in sections are not shown through index. The symbol as shown in plan i.e KTD, RD, FD, ND.. not shown in index. The index of Geological features should be same in both Geological Plan and Geological sections. In Geological plan, the contour to be shown over the area wherever it is missed out.

**Development plan & Section:**

- I. The lithology of the area should be clearly shown in year wise development plan and sections in the area proposed for development.
- II. The color of Section line as shown on Development Plan not matched with section. In some of section profile not matched with development plan. All the sections should be re-checked with plans.
- III. Backfilling as proposed in text has not been shown in development plan and sections. The UPL has not been marked correctly in development plan.

**Environment plan:**

- I. The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017.
- II. The proposed and existing environment protective measures to be shown in environment plan. The drainage pattern of the lease area also to be shown on the plan.
- III. Contours should be shown in core zone.

**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.