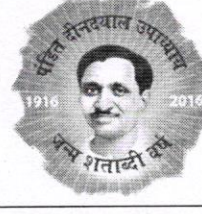




भारत सरकार GOVERNMENT OF INDIA
खान मंत्रालय MINISTRY OF MINES
भारतीय खान ब्यूरो INDIAN BUREAU OF MINES
क्षेत्रीय खान नियंत्रक के कार्यालय
OFFICE OF THE REGIONAL CONTROLLER OF MINES



By Speed Post/E-mail
Phone: 0674-2352463;
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eMail:
ro.bhubaneswar@ibm.gov.in
Plot No.149, Pokhariput
BHUBANESWAR-751020

No MPM/OTFM/11-ORI/BHU/2018-19

दिनांक / Date: 25.06.2018

To

Shri M. D. Rustagi,
Director & Nominated Owner,
M/s Rungta Sons (P) Limited,
Rungta Office, Main Road, Barbil,
Dist-Keonjhar, Odisha – 758 035.

Sub: Approval of Modification of Mining Plan of Kanther Koira Manganese Mines over an area of 73.653 ha in Sundargarh district of Odisha of M/s Rungta Mines Limited submitted under Rule-17 (3) of MCR, 2016 and Rule 12 (4A) of Mineral Conservation and Development (Amendment) Rules, 2018.

Ref: - i) Your letter no. RML/ED/GEO/2018-19/415 dated 12.06.2018 received on 15.06.2018.
ii) This office letter of even no. dated 15.06.2018.
iii) This office letter of even no. dated 15.06.2018 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 Modification of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 15.04.2018 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 Modification 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 Modification 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 Mining Plan. It may be noted that no extension of time in this regard will be entertained and the Modification 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,

(HARRESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Copy for kind information and necessary action to:

1. Dr. S. K. Dash, Shri A. K. Behera and Shri S. Sarangi, Qualified Person, M/s Rungta Sons (P) Limited, Rungta Office, Main Road, Barbil, District-Keonjhar, Odisha-758035.

(HARKESH MEENA)
क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Scrutiny comment on Modification of Approved Mining Plan including PMCP in respect of Kanther-Koira Manganese Ore Mine of M/s Rungta Mines Limited over an area of 73.653 Hectare in Keonjhar district of Odisha State.

1.0 GENERAL:

- i) Page-7, table-2.2, the co-ordinates of boundary pillars should be furnished with UTM co-ordinates along with latitude and longitude.
- ii) Page-7, para-3.3.1, review of exploration program the intimation of bore holes drilled should be furnished with Form-I for the year 2017-18 as per rule 47 of MCDR 2017.
- iii) Page-11, para-3.3.2.13, details of plantation proposed and actually done should be furnished with area in ha. and its rate of survival.
- iv) The extent and nature of surface right being held by the Lessee to carry out various mining activities be indicated with documentary evidence.
- v) All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.
- vi) Few photographs in support of the quarry/ dump/ stacks/reclamation & rehabilitation/ afforestation etc to be enclosed with the document.

2.0 GEOLOGY & RESERVES:

- i) Page-14, the structural information like strike, dip, dip-direction etc have not been shown. All these information should be reflected on geological plan and section. Further, Ore zone should be depicted on plan and section based on surface exposure, exploration data and threshold value.
- ii) Page-17, the details of exploration carried since inception of mining operation till 2017 to be given in tabulated form i.e. year, BH number, Location (Coordinate), nature of BH (Core/DTH), Depth (max-Min), mineralized/non-mineralized, Inclination etc. The relevant forms for intimation of borehole and borehole logs to be submitted as annexures.
- iii) Page-17 & 18, Table-4.3, the distribution of lease area as per exploration has not been furnished correctly by taking influence bore holes 25m each side for G1 category and 100m or less for G2 category.
- iv) Page-19, the proposed bore holes have not been described with core/non-core drilling. 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. The details of the proposed boreholes have to be furnished in following tabular format.

Year	BH no.	Northing	Easting	Collar RL	Core/ RC/ DTH	Meterage	Inclination	Forest/ Diversified forest/non fores	Surface right/ non surface right	Purpose of bore holes

- v) 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.
- vi) Page 20, as the lease is going to expire in 2020 the exploration proposal may be revised to explore the entire potentially mineralized area at least G2 level as per rule 12(4A) of amendment MCDR 2018. The depth of exploration to be proposed shall be upto 300m or discontinuance of ore body whichever is earlier.
- vii) Level of exploration marked in the geological plan on the basis of exploration has not been indicated as per guidelines of Minerals Evidence of Mineral Contents Rules 2015. Accordingly the G1/G2 level of exploration should be re-defined.
- viii) The details like potentially mineralized area and its extent (coordinate in WGS 84), potentially mineralized area explored (in forest and non-forest area, Govt. land, Pvt. land etc.), remaining area, proposal of exploration to explore remaining potentially mineralized area to be given with justification of adequacy.
- ix) The quantity of different ore types in terms of quantity with grade lying in lease area to be given.

- x) Page-25, table-4.7, comparative estimation of reserves and resources it is mentioned that after re-estimation, the proved ore reserve is estimated 423583T which is not represented in final table of reserves and resource estimation and not shown in cross section.
- xi) The ore zone encountered in the bore holes drilled during 2017-18 is not taken into consideration for estimation of reserve and resources. Section along E-200 between gird S-600 & S-500 the ore zone depicted is not taken into consideration for estimation of reserve and resources.
- xii) Geological Reserves/resources estimation to be furnished as per following table:

Sec. considered	LO I(m)	BD saleable ore	BD sub grade ore	X-sec. area saleable ore(sq.m)	Qty saleable ore(tonnes)	X-sec. area mineral reject(sq.m)	Qty mineral reject(tonnes)	X-sec. area of waste (sq.m)	Vol. of waste	Stripping ratio (cu.m/T)
a	b	c	d	e	$q1=b*c*e$	f	$q2=b*d*f$	g	$q3=b*g$	$S=q3/(q1+q2)$

- xiii) Page-26, para-4.8, cross sectional area mentioned in table of resource and reserve estimation does not match with sectional area presented in geological sections at places. Verify and rectify.
- xiv) 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.
- xv) Reporting of Mineral Resources in the format prescribed in Part IV-A of Minerals (Evidence of Mineral Contents) Rules, 2015 to be submitted.

3.0 MINING:

- i) Page-29, para5.0, existing method of mining has not been described properly. The nos. of benches in ore & OB, top & bottom mRL, stripping ratio may be described.
- ii) Page-31, table-5.1, the dimension of the pits as furnished in tabular form is not updated and it is not matched with the updated plan.
- iii) Page-34, table-5.5, the ore zone considered in development section mRL wise is not matched with the calculation furnished in tentative quarry development & production. Similarly table 5.6 not matched with development section. The ore zone encountered in number of proposed benches is not taken into account of ROM production. It may re-check and corrected.
- iv) Page-48, the type of explosive used should be described with class, division etc. The blasting parameters like length of charge column, length of stemming, Charge per hole(Kg), Max. charge per delay(Kg) etc have not been described.
- v) The quantity of Sub-grade to be generated during conceptual period and its utilization and future planning for beneficiation may be given.
- vi) Conceptual mining plan, cumulative waste generation and top soil generation and protective measures have not been described properly.
- vii) Specific proposal for stabilization of existing dumps, by plantation, coir matting etc. should be given.
- viii) Ultimate pit limit should be depicted on all relevant plans & sections.

4.0 Mine Drainage:

It has been observed that a substantial amount of rain water supposed to be passed from the lease area. Therefore a mine drainage plan should be submitted showing flow direction of the water, location of final discharge, arrange of arresting of solid waste etc.

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

- i) Page-58, it has been proposed to re-handle the dump D1 and will dumped in dump no. D2. It has been observed during field inspection that the dump D1 is mostly sub grade /mineral reject therefore re-handling and its dumping on waste dump D2 is not allowable. Therefore location of re-handling of dump D1 should be proposed at suitable location separately.
- ii) The extent of dump D1 to be re-handle has not been described and not furnished its co-ordinates in text.

- iii) para-7.3.2, the dumping of low grade/mineral reject generation as proposed has not been furnished alongwith retaining wall and garland drain.
- iv) All existing Sub-grade dumps and waste dumps may describe with its location alongwith mRL in text. The top mRL of all above to be depicted clearly on plans.
- v) 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.
- vi) Details Existing and proposed retaining wall, garland drain, settling tank etc. to be given with their location.
- vii) The proposal for construction of retaining wall, garland drain may furnish yearwise in different colour codes in terms of their length width and height.

6.0 PROGRESSIVE MINE CLOSURE PLAN

- i) The lease is going to expiring on 31.03.2020, therefore PMCP as submitted in instant document should in line with FMCP.
- ii) The environmental monitoring data of last one year to be enclosed for ready reference. Further base line information to be furnished for surrounding 500 m from lease boundary.
- iii) The proposal of fencing should be given for entire excavation/pits endangering fall of persons/cattle etc. Proposal of geo-textile/coir matting with plantation to be given for matured slope of proposed dump.
- iv) If the sub-grade material is not utilized fully by the of 31/03/2020 therefore proposal of garland drain and retaining wall to be proposed in the interest of protection of environment.
- v) Time schedule for proposed activity like waste dump management (garland drain, retaining wall, settling tanks, plantation), safety and security (fencing of pits, dumps etc), disposal of machineries. Reclamation & rehabilitation, infrastructure protective measures of environment should be supplemented by PERT or Bar chart and these activites should be clearly shown on reclamation plan.
- vi) Provision of sump to be given and as far as possible all the rain water of catchment area to be diverted to the sump. The location and schedule of environment protective measures to be given in text.
- vii) Amount of financial assurance should be calculated as per rule 27(1) of MCDR-2017 and submitted accordingly.
- viii) 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.

7.0 FEASIBILITY STUDY REPORT:

The details of all infrastructures available in lease area to be given with present cost after dipreciation. Proposed and actual capital expenditure to be given. Detail calculation of cost of production/operating cost, NPV & IRR to be given.

PLATES(General):

8.0 Surface Plan:

- i) Information of boundary pillars in UTM coordinates as well as in Latitude and longitude of all boundary pillars should be depicted in tabulated form on surface plan.
- ii) Contour value near pillar P, Q, Q1 to be be shown.
- iii) Forest & Non forest area, Surface right acquired area etc. should be marked clearly.
- iv) Forest area as demarcated in surface plan not shown in index.

9.0 Geological Plan & Section:

- i) Data related to strike, dip, dip-direction etc. to be shown on the geological plan.
- ii) The exploration proposal may be revised at least G-2 level of exploration of entire lease area and all proposed drilling restricted to the year 2018-19 only.

- iii) G-1/G-2 line as shown in geological plan is not as per MEMC Rule 2015. Area marked under G1/G2 under different level of exploration should be re-defined on the basis of influence of bore holes as per guidelines..
- iv) The proposed boreholes to be plotted in dotted lines in Geological sections along with Collar Id, RL and proposed closing depth at the bottom of the borehole.
- v) The index of Geological features should be same in both Geological Plan and Geological sections. Some of the index is missing. It is to be checked.

10.0 Development plan & Section:

- i) Re-handling of DumpD1 shown yearwise in different colour codes.
- ii) The proposed bench mRL and existing bench mRL have not shown clearly. The benches marked under UPL are not depicted with correct mRL
- iii) The index should be same in both development Plan and sections. Some of the index is missing. It is to be checked.
- iv) Existing position of waste dump and proposed dump height is to be marked with mRL.
- v) Yearwise wise progress of waste dump may show clearly with different colour.

11.0 Environment plan:

- i) The Environment Plan as prepared should be satisfied 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) Contouring 60m outside lease area near pillar A,B,C,Q and Q1 should be shown

12.0 ReclamationPlan: Proposals of land restoration/reclamation/rehabilitation, afforestation, waste dump management, safety and security etc should be depicted in Reclamation Plan yearwise with different colour codes. The engineering drawing of proposed fencing wall with measurement and sketches of retaining & garland wall, settling pond should be furnished.

13.0 Financial Assurance Area Plan:

In the Financial Assurance plan area of each individual land i.e land degradation due to mining activity and processing unit etc at the end of plan period may be shown separately on this plan with highlighted boundaries and different colour codes for FA calculation.

14.0 Conceptual plan:

Conceptual plan may be prepared considering mineralization as revealed from the borehole logs. One longitudinal section may also be submitted. Direction of run off from the area based on surface contours may be shown on the plan and the sections.