



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;

Tele Fax: 0674-2352490;

eMail:

ro.bhubaneshwar@ibm.gov.in

Plot No.149, Pokhariput

BHUBANESWAR-751020

No. RMP/A/50-ORI/BHU/2020-21

दिनांक / Date: 04.02.2021

To

Shri Anil Sharma,  
Power of Attorney Holder of  
Shri Chandi Prasad Sharma,  
At-Amlatola, Post-Chaibasa,  
Dist-Singhbhum West,  
Jharkhand-833201

Sub: Review of Mining Plan of Raikela-Bahama-Tensa Iron & Manganese Mine over an area of 69.606 ha in Sundargarh district of Odisha of Shri Chandi Prasad Sharma submitted under Rule-17 of MCR, 2016.

Ref:- i) Your letter no. nil dated 27.01.2021 received on 29.01.2021.  
ii) This office letter of even no. dated 29.01.2021.  
iii) This office letter of even no. dated 29.01.2021 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 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 USB Pendrive/Flashdrive)** 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,

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Copy for kind information and necessary action to:

1. Shri Chandrabhanu Dash, Qualified Person, Geo Consultants Private Limited, Plot No-853, Gobind Prasad (Medical Lane), Mahavir Nagar (Infront of Radhika Complex/Reliance Fresh), Laxmisagar, Bhubaneswar-751006, Odisha.

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

**Scrutiny comment on Review Mining Plan including PMCP in respect of Raikela Bahamba-Tensa Iron & manganese Mine, Area 69.606 ha. of Shri Chandi Prasad Sharma in Sundargarh district of Odisha State.**

**GENERAL:**

1. On cover page, Review of Mining Plan under rule 17(2) of Minerals (Other than Atomic & Hydrocarbons Energy Minerals) Concession Rules,2016 along with Progressive Mine Closure Plan under rule 23 of MCDR 2017 is to be furnished. It should also be corrected in text, certificate and undertaking furnished by qualified person and lessee.
2. E-mail, phone & fax no. of lessee may furnish on cover page. Name of legal heir of Late Shri Chandi Prasad Sharma should be furnished on cover page and in other part of text and supporting document should be enclosed. Date of lease expiry may be furnished with remarks under section 8(A)(6) of MMDR Amendment Act 2015.
3. References made in introduction chapter and in letters like lapsing order, set aside order, further correspondence, final order of state Govt. to survival of mining lease etc are to be enclosed in annexure and details to be furnished in introduction chapter.
4. Page-8, the latitude and longitude alongwith easting & northing of all boundary pillars as furnished in text are not matched with DGPS plan ( Plate no-IIA).
5. In Para 3.1, the date of approved mining plan/review of mining plan/ modified mining plan etc. should be furnished in tabulated format given below.

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

6. The lease deed as enclosed in annexure was valid upto 16/04/2006. Further the status of Supplementary lease deed for the extended period has not been furnished and not enclosed.
7. Sequence of paragraph and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

**GEOLOGY:**

8. Page-14, the area exhibits undulating hilly terrain, however topography of the area has not been furnished with the lowest and highest altitudes. 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 and also depicted in geological plan..
9. In page 19, Para (iii), the details of the sample analysis indicating type of sample should be given in tabulated format and nos. of sample analysis from NABL/Govt. lab out of total sample should be furnished along with annexure.
10. The expenditure incurred in various prospecting and exploration activities has not been furnished.
11. Page 22, the year of exploration proposal as furnished in text are differed from geological plan. It should be re-checked and corrected.
12. The complete lease area is to be cover under exploration under G1 level upto end of mineralization as per provision of rule 12(4) of MCDR2017. The proposal of exploration to be given in following format:

Sl.No	Year	BH No	Northing	Easting	Collar RL	Core/RC/DTH	Metage	Inclination	Forest/Non-Forest/ diverted Forest	Surface Right/ Non-Surface	Purpose of BH
1											
2											

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.

13. All the drilled and proposed BH to be depicted on the Geological section along with RL and its proposed depth for better referencing.
14. The area explored under G1/G2...have not been marked as per as per Minerals Evidence of Mineral Contents Rules 2015. Page-20, the area explored under G1/G2 level of exploration as furnished in table are not correct. The non-mineralized area should be clearly depicted on geological plan.
15. Page-28, the method of reserve estimation may be further elaborated and justified w.r.t recovery factor, Bulk density, Length of influence, nos. cross sections and bore holes considered in reserve and resource estimation. Necessary supporting documents to be furnished with respect to bulk density and recovery factor.
16. The reserve and resources as furnished in tabular form are not in chronicle order. The Geological reserve should be converted into mineable reserve after depletion of blocked mineral resources then mineable reserve should be derived with saleable and sub grade mineral.
17. Page-32, the reserve and resources is not furnished as per Minerals Evidence of Mineral Contents Rules 2015. The blocked resources under 222 category, (refer geological section GG' ) has not been justified with UPL. The calculation of blocked resources has not been furnished..
18. The grade of the reserve and resources and UNFC codes have not been mentioned in table depicted at page-34(a) and 34(b). The lengths of influence of cross-sections are not correctly furnished.
19. The nos. of samples analyzed from NABL accredited laboratory or Government laboratory have not furnished with documentary evidence. 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 form NABL accredited/Government Laboratory.

**MINING:**

20. The lease was declares lapse by State Govt. vide letter no. 5948/III(B)-06/2010/S&M, dated 26.06.2013 however the present status of lease, order passed by State Govt. etc are to be furnished.
21. Page-36, the details of existing quarry as furnished in table has not been updated. The size of the quarry in terms length, width, top RL and bottom RL not matched with the surface plan. Similarly the top and bottom RL of the existing dumps are also not correctly furnished and not matched with surface plan. It should be re-checked and corrected.
22. 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.
23. In tentative excavation plan the grade of mineral reject is furnished 55% Fe while in geology chapter the cut off grade is considered +58% Fe. It may be justified and corrected accordingly. In bullet notes bulk density and recovery factor considered should be furnished and documentary evidence should be enclosed in annexure.
24. Page-38 &39, Table-A2.1, the quantity of ore and mineral as furnished in cu.m and in tonnes are same. It should be rechecked and corrected. The year wise calculation of ROM production as furnished at page no. 44(a) are not matched with development plan and sections.
25. 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)	

Quarry Development	Individual bench slope angle	
	Location (Quarry Name)	
	Extent of Development (coordinates)	
	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)		

26. Page no.-45, briefly describe 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.
27. In conceptual mining plan, cumulative waste generation and protective measures should be furnished properly. In pursuant to the order dated 14.01.2020 passed by MOM, GOI, consequent up on the order dated 08.01.2020 of the Hon'ble Apex Court passed in W.P.(C) No. 114/2014, the lessee shall carryout "re-grassing in mining area after closure of mines". Accordingly it should be discussed during conceptual period

**Mine Drainage:**

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

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

28. It should be ensured that the area proposed dumping should be proved non mineralised. Therefore before dumping the exploration proposal should be furnished in proposed dumping area.
29. The proposal of dumping may be given in tabulate format as shown below. The year wise build up of dump should be described in details .

year	Waste to be dumped	Dump No	Location of Dumping (Grid)	Proposed area	Proposed dumping RL	No of terrace proposed	Individu al terrace height	Slope of the terrace

30. 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 to be given.

**PROGRESSIVE MINE CLOSURE PLAN:**

31. Page-67, Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
32. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity to be enclosed.
33. 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.

34. 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.
35. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished.

**FEASIBILITY REPORT:**

36. The content of feasibility/pre-feasibility report and analysis of economic viability of the project is not described in detailed as per rule 16 and Part-V of MEMC Rule 2015. The economic viability of the project should be supported with NPV, IRR, Payback period by cash flow chart with cost involved in environmental and others protective measures and clearances, operational cost, administrative cost, infrastructure, royalty, NMET, DMF, closure cost etc.

**PLATES:**

37. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist.
38. DGPS plan as has submitted has not been signed. An authenticated DGPS plan sign from concerned authority should be submitted.
39. 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 mentioned under MMR 1961.
40. Wind direction may show through wind rose diagram in key plan and environmental plan. Approach road to the ML to be shown.
41. Existing and proposed bench RL to be mentioned in the all plans and sections. The UPL should be shown in red colour in all relevant plans and sections. Magnetic Meridian and date of observation of should be given on all relevant plans. Approach road to the ML to be shown.
42. **Key Plan:** The key plan has not been prepared as per the provision of rule 32 (5) (a) of MCDR 2017 particularly the boundaries of all villages and towns with their population, forests with tree density, approach road to lease area.
43. **Surface Plan:** DGPS co-ordinates of boundary pillars as furnished in surface plan are not matched with DGPS plan. 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.
44. **Geological Plan & Section:** Data related to strike, dip, dip-direction etc. shown clearly. Grid line should be marked at 100m grid interval. UNFC boundaries of G1, G2.. explored area should be shown clearly.
45. **Development plan & Section:** OB and mineral reject dump should be shown yearwise in distinct colour. Retaining wall and garland should be marked yearwise with colour codes. UPL should be shown in red colour. RL of proposed benches shown clearly.
46. **Environment plan:** The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017.
47. **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.