



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. MS/FM/07-ORI/BHU/2018-19

Date: 12.04.2018

To

Shri B C Dagara, Mining Lessee,
At/P.o- Rairangpur, Dist- Mayurbhanj,
Odisha-757043

Sub: Approval of Review of Mining Plan of Sulaipat Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 618.00 ha in Mayurbhanj district of Odisha State, submitted by Shri B C Dagara under Rule 17 of MCR, 2016.

- Ref: - i) Your letter No. BCD/BBS/4378/2018 dated 23.03.2018.
ii) This office letter of even no. dated 02.04.2018.
iii) This office letter of even no. dated 02.04.2018 addressed to Director of Mines, Government of Odisha copy endorsed to you.

Sir,

This has reference to the letter cited above on the subject. The draft Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on earlier site inspection dated 30.10.2017 by Shri Dilip Jain, Junior Mining Geologist. 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 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 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 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 final 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.

Yours faithfully,

(HARKESH MEENA)

Regional controller of Mines

Scrutiny comment on Review of Mining Plan including PMCP in respect of Sulaipat Iron Ore Mine of Sri B.C. Dagara in Mayurbhanj district of Odisha State.

1. **General:** On cover page following additional information to be furnished: Mining Lease number/TC number/ Lease number, if any, Name of the villages, taluka, where the deposit is located, qualification details and email address of the qualified person.
2. As the ML was expired on 24/10/2005 and renewal of mining lease or supplementary lease deed yet to execute. On page 3 it is mentioned that "lease has been extend up to fifty years", hence, proper justification along with documentary evidence from statutory authority for extension of lease period up to 24/10/2025 to be submitted.
3. On verification of figures mention on page 15 and 16 for OB and Sub-grade, it is observed that, it is not matching with annual return for the year 2014-15 and 2015-16. Check and rectify.
4. Page 20: It is mentioned that mine is in operation, however, during inspection it is observed that mine is under suspension since Oct 2015. Verify and rectify.
5. **Geology and Exploration:** Documentary evidence in respect of the expenditure occurs for the exploration to be enclosed.
6. On verification of the resource estimation calculation submitted on page 31 and 32, it is observed that the X-sectional area submitted does not match with area of ore zone furnished in geological sections. Check and rectify. Further, the level of exploration depicted on geological plan and section is not as per the MEMC, rule 2015. It is observed that float area has been considered under G2 level of exploration without any exploration. Justification to be given. Accordingly, the estimation of resource to be revised.
7. The area mentioned in table presented on page 35 for different level of exploration i.e. area under G1, G2 etc. is not cauterized as per the MEMC rule 2015. Check and rectify as per MEMC rule, 2015.
8. The Justification to be given to kept reserve under 111 category, even after the mine is under suspension for want of statutory clearances. Check and rectify. Further, justification of different UNFC categories to be given in line with MEMC rule 2015. The date of resource estimation may be revised.
9. From enclosed data of the exploratory BH, it is observed the geological section have not been prepared considering the same. All the BH data and exposed pit to be considered in preparation of geological plan and section. All the data of drilled BH to be depicted on Geological section and accordingly correlation of Ore zone to be made.
10. The recovery of salable Ore and Sub-grade consider to be justified with documentary evidence or time series data. Accordingly, all the necessary documentary evidence to be enclosed and accordingly resource estimation calculation and mineral excavation calculation to be revised.
11. Para I: As per rule 12(4) of the MCDR, 2017 entire potentially mineralized zone to be explored under G1 level of exploration, however, it is observed that the proposed exploration programme is inadequate to explore entire potentially mineralized zone under G1 level of the exploration. Hence, proposal of the exploration to be given in accordance to the Minerals (Evidence of Mineral Contents) Rules, 2015 to explore entire mineralized zone under G1 level of exploration. Further, details of proposed exploration to be given in accordance to the following table.

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	2018-19	PBH 01									
2	2018-19	PBH02									

From geological sections and bore hole log it is observed that few BH have been closed in the mineralized zone, hence proposal of exploration upto the end of mineralization to be given. Incline BH to be proposed to intersect Ore Zone at depth.

12. The depth of the proposed BH should be in such a manner that the lateral and depth extension of the Ore Zone to be proved upto the depth of the mineralization considering the geology and

nature of the deposit. Hence, all the proposed BH to be shown on the Geological Section along with its depth and inclination.

13. **Mining:** Page 36-Existing method of mining to be described. Further, the location (UTM coordinates) of the Quarry, Waste Dump and Sub-grade dump may also be mentioned in the tables.
14. Page 37: It is mentioned that in float quarry the height and width of benches will be 6m and 10 m respectively. However, as per geological sections, the occurrence of the float ore is upto around 4m only. Hence, the height of the proposed benches in float quarry should be revised considering occurrence of the float ore.
15. From development section and plan the position of benches at the end of each year is not clear. As discussed during field visit the orientation and color code of the benches in plan and section to be revised. Ultimate pit limit to be drawn on the sections.
16. It is observed that two separate quarries have been proposed in the float area. In the interest of scientific mining and protection of the environment a single quarry to be proposed for required quantum of ore and concurrent back filling proposal to be given in same area. Accordingly proposal of excavation and dumping of waste to be revised.
17. On verification of few x-sectional area mentioned in table presented on page from 42 to 45, it is observed that same is not matching with x-sectional area of development sections. Check and rectify.
18. The existing fleet of machineries may also be mentioned in table presented on page 51.
19. **Conceptual Mine plan:** The area put under mining at the end of life of the mine is 319.632 ha (page 55). It seems that some calculation error has been occurred as this much of the area would not be required in the conceptual period. Check and rectify.
20. In Conceptual Mine plan following to be discussed in detail: The quantum total excavation, Total waste generation and its disposal, total quantity Sub-grade generation and its beneficiation/utilization, ultimate extent of the pits and its dimensions, availability of waste material for back filling, the depth/level of backfilling, depth of the back filling, environment protective measures required, area (pit, waste dump, waste land etc.) available of reclamation & rehabilitation, method of reclamation and rehabilitation, manpower and equipment requirement, Proposal of any expansion, etc. Post mining land use to be described suitably.
21. **Mine Drainage:** Minimum and maximum depth of water table in the form of mRL based on observations from nearby wells and water bodies to be given.
22. The details of Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged needs to be given/describe.
23. A drainage plan may be submitted showing the drainage pattern of the lease area. Accordingly, environment protective measures like retaining wall, garland drain, settling tank etc. may be proposed/revised.
24. **Stacking of Mineral Reject/Sub-grade and Disposal of Waste:** The details of waste generation, mineral reject and its utilization to be given as per the prescribed format as indicated in the format of IBM manual Appraisal of Mining plan -2014. Further, the unit of SG generation mentioned on page number 65 to be checked and rectified.
25. The quantity of waste dumping mentioned on page number 37 and 61 is not matching with each other, particularly for the year 2022-23. Further, the quantity of waste dump mentioned on subsequent pages also not matching with the quantity mention on page 37. Check and rectify.
26. The proposal of construction of retaining wall, garland drain, check dam etc. to be given in the first year of the proposal. Dumping shall be carried out only after the construction of same. Accordingly proposal of environment protective measures to be revised.

27. The location and extent of the proposed dump to be indicated in text. The information of all the existing waste dumps, Mineral reject dump, retaining wall, Garland drain and check dam etc. to be given in tabulated form showing location and extent.
28. Page64: A proposal of the plantation and coir matting has been given over existing dump, however, same has not shown year wise on the relevant plans. Also year wise proposal of plantation and coir matting to be given over the proposed dump slopes.
29. **Processing of ROM and Mineral Reject:** Processing and beneficiation for different type of the ore to be described in detail. Further, the processing for float ore and insitu ore to be described separately. The details of all the existing crushing and screening unit may be finished. Material balance chart has not been given as indicated in format.
30. **Other:** The details of employment, contractual and company, requirement of labor etc. to be given with detail calculation.
31. Progressive Mine Closure Plan: Base line information in respect of water regime, quality of air, ambient noise level, flora, climatic conditions etc. to be given along with the analysis data of Air quality, noise, ground vibration, water quality, etc. at lest of last one year.
32. The table showing area underutilization due to mining and allied activity to be same at all the places of the document. The format of the table should also be same at all the places of the document.
33. The location and schedule of measurement of as proposed in table presented on page 87 to be given in text.
34. **Plates:** It is observed that many of the drawings are not prepared at prescribed scale (1:2000) as specified in rule 31 of MCDR, 2017. Hence, letter of competent authority for scale reduction to be enclosed as per rule 31 of MCDR, 2017.
35. Relevant plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist as per provisions of Rule 34 of MCDR, 2017 and Rule 66 of MMR, 1961.
36. Wind direction may be shown in wind rose diagram at the top right corner of the relevant plans. Further, color code given for different features in plans and sections to be same. Further, contour value to be shown in all the plans invariably.
37. **Key Plan:** The approach road to lease area has not shown. Few of the feature as prescribed under rule 32(5) of MCDR, 2017 has not been shown on the plan like village boundary, forest with tree density, sanctuary, waste land, agriculture land etc. The prominent wind direction to be shown with wind rose diagrammed.
38. **Surface Plan:** The stack yard south of BP 10, Stack yard north of road near weigh bridge and existing road at places has been depicted/shown. The area, west of broken boundary pillar 41 and 42 and few mine roads have been not depicted properly. As per rule 32 of MCDR, 2017 all the existing BH, trial pits and trenches etc. to be shown along with forest/non-forest/diverted forest/private land to be shown clearly. The bench mRL mentioned are not legible. HAP has not depicted at right place. Existing Sub-grade dump to be shown. It is observed that waste material has been dumped along the proposed quarry 01, which has not depicted. In view of above, detail re-survey of area to be carried out, showing all the existing features.
39. **Geological Plan & Section:** Geological section to be drawn for entire lease area form boundary to boundary. Geological plan submitted in instant document is differ from the earlier plan. Justification to be given for such changes in plan. All the proposed BH to be shown on Geo-section along with proposed depth at the end. The index in geological plan and section should be same. Further, geological features like strike, dip and dip direction etc. have not shown adequately on geological plan. Existing bench mRL to be indicated on sections. Direction of the sections along which the sections have been created to be mentioned on sections. UPL has not been shown in the Index of plan and UPL to be shown in geological sections. UPL to be shown in red color. Drilled BH shown on the sections are found to be not on the profile. Same to be justified. area

40. **Development plan & Section:** The location of the proposed development could not be assessed from the plan, hence, entire lease area to be shown in index, showing enlarged area of proposed development. All Geological information to be reflected in development plan and sections. The development sections to be prepared along the line of geological section.
41. A composite development plan for proposed quarry 1 to be submitted. The layout of the existing and proposed haul road to be depicted with different color. Proposed and existing bench mRL to be mentioned invariably in all the sections.
42. **Conceptual plan and section:** All details as mentioned in conceptual plan chapter and post mining land use table to be furnished on conceptual plan with few relevant conceptual sections. Accordingly conceptual plan and section along with text to be revised.
43. **Dump Plan and section:** Individual year wise terrace mRL to be depicted. Lease plan may be given in the index showing the proposed area dumping. The existing and proposed retaining wall, garland drain, checks to be shown with different color code.
44. **Reclamation Plan:** Year wise plantation and dumping proposal has been shown with same color at places. The location of all the proposed environment study at page 87 to be reflected in Key plan, environment plan and environment management plan.
45. **Environment plan:** Boundary of 60 meter and features in 60 meter to be shown. Few features as mentioned in rule 32 (5)(b) of MCDR, 2017 has not been shown. Verify and rectify. Wind rose diagram along with prominent wind direction to be shown. All the proposed environment monitoring station to be shown as indicated on page 87.
46. **Enclosures:** In submitted transfer deed the name of the lessee is not clear. A fresh copy of the deed to be submitted. Similarly, fresh copy of the Surface right letter, Photo identity and address proof of the lessee, Mining officer letter dated 27/10/2009 to be submitted. Further, copy of forest clearance of Stage-I to be enclosed.
47. Copy of qualification and experience certificate in the field of mining as indicated in rule 15 of MCR, 2016 to be enclosed i.r.o. Qualified person.
48. It is mentioned that RML has been applied over an area of 430.99 Ha, however, copy of form J and receipt under form D as per MCR, 1960 has not been enclosed. Further, the copy of letters as mentioned on page number 9 to be enclosed.
49. Copy of approval letter of Modification of Mining Plan approved vide letter dated 14/09/2007 to be enclosed.
50. A legible copy of Photo id and signature proof in respect of the lessee to be submitted. Further, it is to inform you the signature of the lessee in certificate does not match with the signature in submitted id.
51. Few photographs of float ore area and existing quarry in float area to be enclosed.

In view of above comments, wherever necessary correction required to be made in plates and text.

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Prakash
10/7/2018