



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. FMCP/FM/19-ORI/BHU/2018-19

Date: 25.04.2018

To

✓ Shri Ashok Kumar Mohanty, Managing Partner,
M/s Kalinga Mining Corporation Ltd,
Samanta Niwas, Shaik Bazar,
Cuttack, Odisha-753 008

Sub: Approval of Final Mine Closure Plan of Jururi Iron Ore Mine over an area of 73.228 ha in Keonjhar district of Odisha State, submitted by M/s Kalinga Mining Corporation Ltd under Rule 24 of MCDR, 2017.

Ref: - i) Your letter No. KMC/JM/17-18/797 dated 27.03.2018.
ii) This office letter of even no. dated 03.04.2018.
iii) This office letter of even no. dated 03.04.2018 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 of Final Mine Closure Plan (FMCP) has been examined in this office based on site inspection carried out on 18.04.2018 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 Final Mine Closure 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 in Auto CAD compatible format or JPG format in resolution of 100x100 pixels on same CD)** of the Final Mine Closure 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 Final Mine Closure 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 Final Mine Closure Plan. It may be noted that no extension of time in this regard will be entertained and the Final Mine Closure 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

SCRUTINY COMMENTS ON FMCP IN RESPECT OF JURURI IRON ORE MINES OF M/S KALINGA MINING CORPORATION OVER AN AREA OF 73.228 HA IN KEONJHAR DISTRICT OF ODISHA STATE SUBMITTED UNDER RULE 24 OF MCDR, 2017.

(For the Lease expiring on 31/03/2020)

1. **General:** All the information for cover page mentioned in the guideline of “ IBM Manual for appraisal of Final Mine Closure plan, 2018” (hereinafter referred as format) to be mentioned like lease number/TC number, lease period, category of mine, phone, fax and registered e-mail and address of lessee, qualification of QP etc. Hence, necessary information to be provided on cover page as specified in format. Total lease to be mentioned. Rule position under which the document has been submitted to be revised as per MCDR, 2017.
2. It is observed at many places that the information has not been given as per guideline/format. Tables as specified in the format have been altered. Hence, all the tables should be as per the format and if any, additional table is required may be given with proper reference. Further, linked information of MP/RMP to be submitted as per lasted approved document.
3. The registered copy of partnership deed along with resolution in favor of Sri Ashok Kumar Mohanty (partner and Authorized signatory) to be enclosed. The details like name, phone number, address, email id etc. of all partners to be submitted.
4. At many places “ Not applicable” is mentioned, however, the reason for same is not mentioned.
5. **Summary of proposal at a Glance:** The summery of all proposed feature to be given as per prescribed format. If any additional proposal has been given in the FMCP that should also be reflected in the summery of proposal with remark.
6. The balance reserve/resources as on 01/04/2018 to be furnished separately for forest and non-forest area as per guidelines. The quantity shown as clean ore is actually salable ore, thus, in remark “salable ore should be mentioned”. Para 2.8: Qualification in respect of QP to be mentioned.
7. Para 3.7: Para 3.13: All the boundary pillars should also be given in UTM for better referencing. UTM grid may also be depicted on the plan and sections. Para 4.2: Information has not been furnished as per the guideline.
8. Para 5: Review has been carried out for the period from 2017-18 to 2019-20. However, as per guideline, review of earlier proposals should be carried out for last 3 years period of the approved MP/RMP etc. i.e. for the period from 2015-16 to 2017-18. Hence, entire chapter to be recast as per the guideline. The information in respect of the achievement to be furnished along with documentary evidence. The updated information upto 31/03/2018 to be furnished for the year 2017-18.
9. Para 5.24 to 5.27: The information on environment monitoring data to be furnished along with location of monitoring station, frequency, prescribed limits of the parameter and actual analysis of the data. Para 5.28: The information of the document like RMP/MP etc along with the date of approval to be furnished on the basis of which information of land use has been furnished.
10. **Geology and Exploration:** As per rule 12 of MCDR, 2017 entire lease area to be explored by 31/03/2019. Hence, all the updated information of exploration carried out in lease area upto 31/03/2018 to be submitted along with adequate/additional proposal of exploration to explore entire lease area as per rule. A bar chart indicating timeline for implementation of proposed exploration activities should be enclosed. Further, it is observed that few drilled BH have been terminated in the Ore Zone. As per Rule 12(4A) of MMDR Amendment Rule 2018 the BH to be drilled up to the end of mineralization or 300 meters. Accordingly proposal of exploration to be revised.
11. The level of exploration i.e. G1, G2 etc. has not been depicted on the geological plan. Same to depicted as per MEMC rule 2015 and if any chane, the area mentioned for different level of exploration in para 6.5.5 to be revised. Accordingly, Geological plan and section to be revised.
12. Para 6.5.2: The details of exploration like area covered and scale of exploration to be submitted as per prescribed format. Para 6.5.3: As per format at least 10% of total samples to be analyzed in accordance to BIS and reports form NABL accredited/Government Laboratory. Accordingly, BH

wise sample details to be given and 10% of total samples to be analyzed from NABL accredited/Government Laboratory. Further, in para 6.5.3, the details of BH wise sample collected and analyzed to be furnished. Para 6.5.4: Documentary evidence for expenditure occurs in exploration to be submitted. Para 6.5.5: Area explored under different category to be furnished as per format for forest and non-forest separately.

13. Para 6.6. Information furnished i.r.f. width of the ore body seems to be incorrect. Para 6.6.4: Backup estimation calculation of mineral blocked to be enclosed. Para 6.6.5: Justification for economic axis to be given as MEMC rule 2015. Para 6.7: The position of reserve and resource to be given as per latest approved document. Para 6.8: Updated position reserve and resource as 01/04/2018 on the basis of exploration carried out till 31/03/2018 to be furnished for forest and non-forest area as per stipulated table. Para 6.10: It is observed that proposal of exploration has not been given adequately, hence compliance of rule 12(4) & 12(4A) of MCDR, 2017 to be ensure and accordingly proposal of exploration to be revised.
14. Para 6.10: Details of proposed exploration to be given in accordance to the land schedule i.e. forest/non-forest/diverted forest/surface right area etc. The details of individual proposed BH to be given in following format. Further, 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 indicated.

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									

15. Para 6.11: It is to propose that all the cores/samples etc will be stored properly for future use and will not be destroyed prior approval of the competent authority. Brief details regarding preservation of cores should be given. The cores should be stored serially with suitable indexing and cataloguing and shall insure the submission of cores to GSI. The proposal of storage location of core/samples to be given and mentioned in text along with showing on the plan.
16. **Mining:** The details should be in concurrence with the latest approved Mining Plan/RMP/MMP or approved Modified mining Plan. Para 7.5: The details of all the machineries as furnished in approved RMP to be given in the para. Extent of mechanization to be given separately for contractual and lessee with capacity, make and other information as per format.
17. **Mine Drainage:** Para 8.1.1-Minimum and maximum depth of water table in the form of mRL based on observations from nearby wells and water bodies to be indicate. Further, natural surface mRL to be indicated. A mine drainage plan to be submitted showing catchment area, flow direction of the water, location of final discharge, arrangement for arresting of solid waste etc. showing retaining wall, garland drain, settling tank, check dam etc. Further, all the surface runoff should be allow through setting tank and only after that final discharge to be allow. Accordingly proposal to be revised.
18. **Stacking of top soil, MR, Fines, Tailing/slime and disposal of waste:** Para-9.1: The details of all existing Waste dump, Mineral reject dumps, Stacks with quantity, soil dumps, fines, etc. to be given as per specified table of format as on 31/03/2018 along with documentary evidence.
19. The details of top soil and waste/OB disposal management during the closure period of two years should be furnished as per table below:

Year	Top soil (cu.m)		OB/Waste (cu.m)	
	Top soil reuse	Top soil storage	Backfilling	Dumped
I				
II				
Total				

20. Para-9.2: Briefly describe the proposed dumping ground within lease area be proved for presence or absence of mineral with reference of bore holes data.
21. **Mineral beneficiation:** The chapter has not been made as per the prescribed guideline. Material balance chart for beneficiation plant to be furnished indicating the yield at each stage, grade at each stage etc. The details of total water requirement, source of water, its extent of recycling,

water balance chart, use of water for domestic and industrial purpose to be described. All other information as per guideline to be furnished.

22. **Final Mine Closure Plan:** Para-11- Baseline information of the lease area should be described on the basis of information incorporated in first approved mining plan at the time of grant of ML. Baseline information to be furnished separately for Noise, Air, flora and fauna and climatic condition. Existing base line information to be furnished on the basis of environment monitoring parameter carried out. The environment monitoring data of last one year to be enclosed for ready reference. Further, base line information to be furnished for surrounding 500 meter form lease boundary.
23. Para 11.2.1: Mine out pit is proposed to be backfilled, hence, the grid value of proposed backfilling area, level of backfilling, area proposed for backfilling, etc. to be indicated in text and reclamation plan. Sequence of filing should be same as per original sequence of the litho units occurring in the lease area. Plantation proposal over matured area to be given. Therefore detailed reclamation and rehabilitation program of backfilled area should be proposed. The proposals may be supported with yearly plans and sections depicting yearly progress in the activities for land restoration/reclamation/rehabilitation, afforestation etc called "Reclamation Plan".
24. Para11.2.2: The proposal of fencing should be given for entire Excavations/ pits endangering fall of persons/cattle etc. in terms of rule 26 of MCDR 2017. Accordingly proposal to be revised. Further, arrangements proposed during the mine abandonment and upto the site being opened for general public may be described.
25. Para 11.2.3: As discussed during site visit, proposals should be given separately for existing plantation, proposed and cumulative plantation on Virgin area, Backfilled area, Dump plantation indicating area and number of saplings. The proposal of plantation to be given along with coir matting for matured dump slops. All proposal to be furnished in tabulated form. Grid reference to be mentioned. Gap filling plantation proposal to be given in the existing plantation area. Coir matting proposal over mineral reject dumps to be given in the interest of protection of environment.
26. Para 11.2.6: The mitigative measures to be taken for prevention of pollution of air to be described. The location of air monitoring station and its monitoring frequency to be described. Similar information for other environment monitoring parameter to be given.
27. Para 11.2.7: The details of existing dumps to be given in tabulated form along with grid reference. The manner in which the waste material will be stabilized to be described. Further, as discussed during the field visit adequate proposal of retaining wall, garland drain, coir matting and settling tank to be given all along the waste dumps and mineral reject dump. Proposal for proper terracing and stabilization of slope to be given. The dead/matured dumps/dump slopes should be proposed for fully rehabilitation by plantation or with gap plantation.
28. Mineral reject is lying in the lease area. A firm proposal of evacuation of Mineral reject to be given and same should be evacuated before 31.03.2020. Hence, information of all the available mineral reject dumps and generation of mineral reject during proposed period and its evacuation form lease to be given.
29. Para-11.2.11: The details of all existing infrastructure available in the lease area should be furnished in tabular form and their present value and value at the end of 31/03/2020 after depreciation. Further their future utilisation should be evaluated. The decommissioning cost and final value of the decommissioned infrastructural facilities if any may be furnished. Furtehr, it is to indicate to retain the area in the auction by lessee.
30. Infrastructure details of essential commodity/related to basic need to be given and in no case, any infrastructural facility which is an essential commodity/related to basic need or which absence may cause any degradation of environment or any damage to flora and fauna in and around the ML area or any danger to public safety or public infrastructure like rail, road etc. shall be decommissioned (dismantling water supply, water treatment plant, power lines etc.) without prior intimation/approval of appropriate authority.

31. Para 11.2.10: A brief about surface features existing within a periphery of 500 m from the lease boundary as per the Rule 32(5)(b) of MCDR'2017 to be given showing on the Environment Plan in terms of the said rule.
32. Para-11.2.12: Decommissioning of mining machineries and their possibility of post mining utilization, if any may be described. Back-up calculation of decommissioning of mining machineries to be enclosed for ready reference.
33. Para-11.2.14: The details of contractual and on-role man power to be given. The economic repercussions due to closure of mine have not been explained properly. Envisaged repercussions on the expectation of the society due to closure of mine. Number of local residents employed in the mine, compensation, satellite occupations should be describe considering the impact of closure of mines.
34. Para11.2.15: Closure activity like waste dumps management (Garland drain, retaining wall, settling tanks, and coir matting with plantation), safety and security (fencing of pits, dumps etc), evacuation of mineral reject of proposal should be started form the year 2018-19. Accordingly bar chart to be revised.
35. Para11.2.16: Backup calculation of abandonment cost mentioned under the para to be enclosed. Abandonment cost as furnished in tabular form has not includes the cost of material required, safety measures implemented to prevent access to surface openings/excavations/dumps etc. The cost of maintenance, security and supervision has also been not included. Abandonment cost to be estimated based on the activities required for implementing the protective and rehabilitation measures including their maintenance and monitoring programme. Accordingly modify the cost of the abandonment.
36. **Financial Assurance:** Updated financial assurance as per latest approved document to be submitted/enclosed.
37. **Plates:** General: All updated plans and sections to be submitted (by the end of March 2018). Accordingly all relevant tables in text and plan to be modified. The date of survey to be mentioned in all the plans and sections.
38. **Key Plan:** The approach road to lease area has not shown. Many of the feature as prescribed under rule 32(5) of MCDR, 2017 has not been shown on the plan like village boundary with population, forest with tree density, sanctuary, waste land, agriculture land etc. The prominent wind direction to be shown with wind rose diagrammed in key plan and environment plan.
39. **Surface Plan:** The surface plan to be updated as discussed during the field. Further, outline of proposed excavation block, waste dumping block, mineral storage block etc. as per the approved document to be marked. At places coir matting has been shown, however, no coir matting has been observed. Check and rectify.
40. **Geological Plan & Section:** The table of proposed exploration to be depicted on the geological plan. Level of exploration as per MEMC, rule have not been depicted on the geological plan. A separate plan showing different level of exploration and relevant information to be submitted for more informative along with geological plan. All the proposed BH to be indicated on the section along with collar, proposed depth at the end.
41. **Development plan and section:** Updated development plan sections as per approved document to be submitted.
42. **Reclamation plan:** Proposal of plantation over matured dump terrace to be revised as discussed. Further, adequate retaining wall and garland drain to be given along the exiting dumps, mineral reject dump and area of mineral stack. All the proposed features in PMCP to be depicted year wise in the plan. The color code for existing and proposed feature should be different. Accordingly, reclamation plan to be revised. All the proposed features in tabulated manner may be depicted on the plan.
43. **Enclosures:** The enclosures are not arranged sequentially. Many of the annexures are not legible, legible copy of same to be enclosed. Check and rectify. The photo id proof submitted in respect of lessee is not legible. A legible copy of same to be enclosed.
44. Copy of the leases deeds executed till date since grant to enclosed. A valid SPCB clearance certificate to be enclosed.

45. Latest 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.
46. Para 5.29: Copy all of violation/ show-cause notice and its compliance to be enclosed. Copy of latest land schedule to be enclosed. Few word and sentence are found missing in certificate. Check and rectify. Para 6.6.4: Resource estimation for blocked ore to be enclosed and reference of same to be given in the text.
47. NABL Accreditation certificate of laboratory from where Chemical Analysis carried out should be enclosed. Some photographs covering ML Boundary pillars, mining activity, dumps, processing plant, core shed etc. to be enclosed.

In view of above comments and site inspection discussion, wherever necessary correction required to be made in plates, text and summery of proposal at a glance.
