



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. RMP/A/44-ORI/BHU/2020-21

Date: 11.01.2021

सेवामे

Shri Birat Chandra Dagara, Mine Owner,
At/Po- Rairangpur, Ward No.15,
Dist- Mayurbhanj, Odisha-757043

विषय: Approval of Review of Mining Plan of Bhitarmda Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 243.82 ha in Mayurbhanj district of Odisha State, submitted by Shri Birat Chandra Dagara under Rule 17 of MCR, 2016.

- संदर्भ: - i) Your letter No. Nil dated 22.12.2020 received on 24.12.2020.
ii) This office letter of even no. dated 24.12.2020.
iii) This office letter of even no. dated 24.12.2020 addressed to Director of Mines, Government of Odisha copy endorsed to you.

महोदय,

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 site inspection carried out on 29.12.2020 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 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 USB Pendrive/Flash drive 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 USB Pendrive/Flash drive)** 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.

भवदीय
(हरकेश मोना)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Sanjib Kumar Swain, M/s Techno Chamber, Plot No-16/5, Cuttack Road, Bhubaneswar-751006.

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(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Scrutiny comment of Review of Mining Plan including PMCP in respect of Bhitarmda Iron ore mine, Area 243.82 ha. of Shri Birat Chandra Dagara in Mayurbhanj district of Odisha State.

GENERAL:

1. On cover page, plan period and proposal period both should be furnished as the two year i.e 2018-19 and 2019-20 has been already lapsed. Out of total lease area 243.82 ha, FMCP has been approved for part surrender area 138.82 ha should be mentioned on cover page.
2. In introduction chapter brief history of the mines has not been described with present status of mining operation, i.e date of discontinuance and reason etc. with documentary evidence marked with annexure.
3. The lease was declares lapse by State Govt. vide G.P no. 7738, dated 17/08/2015 however the present status of lease and order passed by State Govt. if any have not been furnished.
4. Page-6, Latitude and longitude of all boundary pillars as furnished in the text are not supported with the certified copy of DGPS plan from authorized agency. Therefore certified copy of DGPS plan from authorized agency is to be submitted. Topo sheet no. as furnished should be re-checked.
5. Page-12, in the review of earlier approved proposal, para-3.5 has not been furnished in light of lapsing/suspension order issued by State Govt..
6. The experience of qualified person should be clearly stated in supervisory capacity in the field of mining as per provision of rule 15(b) of Minerals (Other than Atomic and Hydro Carbons of Energy Minerals) Concession Rules, 2016.
7. Sequence of paragraph and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text.
8. The annexures as marked in text are not indexed accordingly. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

GEOLOGY:

9. Page-16, the shape and size of ore body should be furnished in terms of average thickness and strike length of the ore body. Disposition of various litho units indicating structural features of lease area are not correctly furnished. The lithology shown in the borehole log should match with the lithology shown in geological plan and sections. The strike, dip, dip-direction should be shown in bold color in geological plan.
10. Page-18, Para(e), the details of exploration carried since inception of mining operation 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.
11. 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.
12. Page-19, Para-(iv), the expenditure incurred in various exploration activities carried out by lessee and name of exploration agencies have not been furnished.
13. Page-20, Para-(i), in future exploration program the details of existing bore holes as furnished should be omitted. The complete lease area should be proposed to cover under exploration under G1 level upto end of mineralization as per provision of rule 12(4) of MCDR2017. The year wise proposal for drilling to be shown in different contrasting color in both Geological Plan and Geological sections.
14. 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.

15. Page-24, the lease area explored under different category of UNFC norms as shown in table is incorrect and should be recalculated as per the provision of Minerals (Evidence of Mineral Contents) Rules, 2015. The justification for area considered for G1/G2/G3 etc. have not been furnished as per the provision of MEMC Rules'2015.
16. In the Geological plan, the boundary of UPL has not been marked correctly. In the Geological plan and sections, the UPL should be drawn properly considering the mineralization over the lease area. The UNFC boundary/code should be properly shown.
17. Page-24, Para-k, 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.
18. Page25-29, Para-l, the reserve and resources has not been furnished as per Minerals Evidence of Mineral Contents Rules 2015. In text at page no.-26, reserve has been furnished under 121 category and resources under 221 category while in summary table of reserve and resources its furnished under 122 & 222 category. In geological sections, the resources furnished under 222 and 333 category are not justifiable. The profile of geological plan and sections are also not matched each other. Therefore all the plan and sections should be revised and revised estimation of reserve and resources are to be furnished with proper UNFC codes. The justification of UNFC should be furnished accordingly.
19. 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. Page-35, existing method of mining has not been described in brief with date and reason of discontinuity of mining operation and present status of mining operation along with statutory clearances etc. Under para-2.0.1 it is mentioned that mines comes under category-A(Other than fully mechanized) while in in table it is mentioned, A-category (fully mechanized). It should be re-checked and corrected.
21. The reason of lapsing of plan period i.e 2018-19 and 2019-20 should be elaborated. The lease is declared lapse by State Govt. however the present status of lease and order passed by State Govt. if any have not been furnished.
22. The details of existing quarries as furnished in text with their length, width, top RL and bottom RL have not been matched with surface plan. It should be re-checked and corrected accordingly.
23. Page-35, proposed method of mining should be furnished in light of development plan i.e production capacity, nos. of pits proposed for production, site selection of waste/ mineral reject dump.
24. The calculation of insitu tentative excavation should be revised based on the revised pal and sections as suggested in geology chapter. Page-44, in insitu tentative excavation, the stripping ratio is not correctly furnished. The recovery factor and cut-off grade should be furnished with proper justification.
25. Page no.-50, 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.

26. Conceptual mine planning is to be discussed up to the end of lease period taking into consideration the available reserves/resources, describing the excavation, recovery of ROM, disposal of waste, backfilling of voids, reclamation and rehabilitation.
27. 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

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

28. It should be ensured that the area proposed for dumping should be proved non mineralized. Therefore exploration proposal priorities accordingly.
29. The proposed location of mineral reject should be furnished with terraces to minimize the land degradation. The existing dumps are to be furnished in tabulated form comprising dump number, capacity, bottom RL and top RL. The dumps should be proposed outside the UPL.
30. Details Existing and proposed retaining wall, garland drain, settling tank etc. to be given year wise with their location. Location of sub-grade storage along with year to year development of the SG dumps to be given.
31. 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	Individual terrace height	Slope of the terrace

PROCESSING OF ROM AND MINERAL REJECTS

32. Page-67, it is mentioned that recovery of ROM is 60% while in mining chapter it is mentioned 70%. It should be re-checked and corrected. Para-(g), quantity of water requirement for mining and other purposes and source of supply water, disposal of water, recycling of water etc have not been furnished with water balance chart.
33. The material balance chart is to be furnished. The ROM feed grade and tonnage with recovery%, grade and tonnage of product at each stage of processing may be shown in the flow sheet along with block diagram.

PROGRESSIVE MINE CLOSURE PLAN:

34. Page-74, Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
35. Monitoring station of air, noise and water should be described in text and their locations furnished in tabular form. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity to be enclosed.
36. Human settlement has not been furnished with population distribution pattern around mines area, male female ratio, literacy etc.
37. 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.
38. Page-89-91, protective measures for reclamation and rehabilitation year wise as furnished in table have not been described with area to be covered with nos. of plantation proposed alongwith proposed retaining wall and garland drain.

39. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished. Matured area of backfilling and dump slope should be stabilized with plantation.

PRE FEASIBILITY REPORT:

40. 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:

41. All the plan and sections should be signed with date by certified surveyor, qualified person, mines manager and mining geologist. The plans and sections submitted bear the certificate that --the plans and sections are prepared based on the lease map authenticated by the state government.
42. 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.
43. Wind direction may show through wind rose diagram in key plan and environmental plan. The CCOM circular no.2/2010 and its addendum should be implemented.
44. Magnetic Meridian and date of observation of should be given on all relevant plans. The ML boundary should be shown in standard symbol in red color
45. 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.
46. **Surface Plan:** Existing quarries and dumps have not been marked with their ID. Existing bore holes have not updated. Few pillars may be correlated with some permanent ground features giving distance and direction. Forest & Non forest area, Surface right acquired area etc. should be marked clearly.
47. **Geological Plan & Section:** Data related to strike, dip, dip-direction etc. shown clearly. UNFC boundaries of G1, G2.. explored area should be as per MEMC Rule 2015. In geological plan surface lithology is not marked correctly. Geological plan and sections are not matched each other. UNFC codes have not been marked correctly in sections. The resources furnished under UNFC codes 222 and 333 category are not as per MEMC Rule 2015. The UPL should be shown in red color in all relevant plans and sections.
48. **Development plan & Section:** Existing and proposed RL of benches/dumps should be mention clearly in development plan and section. The proposed development of benches is not marked correctly in development plan. Development plan and sections are not matched. Retaining wall and garland should be marked clearly year wise with color codes. UPL should be shown in red color.
49. **Environment plan:** The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017.
50. **Conceptual plan:** Conceptual plan and section may be prepared considering mineralization as revealed from the exploration data. Direction of run off from the area based on surface contours may be shown on the plan and the sections.