



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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Plot No.149, Pokhariput
BHUBANESWAR-751020

No. MRMP/A/08-ORI/BHU/2021-22

Date: 30.06.2021

To

Smt. Indrani Patnaik, Mine Owner,
Village- Unchabali, PO-Bamebari,
Barbil, Dist- Keonjhar,
Odisha-758034

Sub: Approval of modification of Review of Mining Plan of Unchabali Iron & Mn Mine along with Progressive Mine Closure Plan (PMCP), over an area of 106.1127 ha in Keonjhar district of Odisha State, submitted by Smt. Indrani Patnaik under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. UIMM/2021-22/024 dated Nil received on 17.06.2021.
ii) This office letter of even no. dated 17.06.2021.
iii) This office letter of even no. dated 17.06.2021 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.


Sir,

This has reference to the letter cited above on the subject. The draft of modification of Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 24.06.2021 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 modification of 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 or JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR 2017 of the Modification of 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 modification of 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 modification of Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the modification of 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)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Copy for kind information and further necessary action to Shri A. Gurubalasubramanium, Qualified Person, Unchabali Iron & Mn Mine, Village- Unchabali, PO-Bamebari, Barbil, Dist- Keonjhar, Odisha-758034.



(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Scrutiny comment of Modification of Review of Mining Plan including PMCP in respect of Unchabali Iron & Manganese mine, Lease area 106.1127ha. of Smt Indrani Patnaik in Keonjhar district of Odisha State.

GENERAL:

1. On cover page and other parts of the text in place of modification of approved mining plan, modification of Review of Mining Plan should be furnished. IBM registration number and mine code should be furnished on cover page.
2. In introduction chapter the reason of modification of review of plan is to be furnished in brief. The history of the mines should be described along with execution of supplementary lease deed in light of MMDR (Amendment) Act and 2015 and documentary evidences are to be marked with annexure.
3. Para-3.3, Page 9-10, the review of earlier approved proposal for the year 2021-22 an updated figure should be furnished along with proper justification of shortcoming in remarks column.
4. 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.
5. 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:

6. It has been observed during field inspection that the intimation of the bore holes drilled during 2020-21 and 2021-22 has not been submitted to this office under rule 47 of MCDR 2017. The intimation of all the drilled bore holes should be submitted in form-I and it should be enclosed with annexure. Bore hole logs should also be submitted in form-J as per 48(1) of MCDR 2017. The existing earlier drilled bore holes as depicted in geological plan have not been furnished with their complete bore hole logs.
7. The lithology shown in the borehole log should match with the lithology shown in geological plan and sections. The structural information like strike, dip, dip-direction etc are to be shown in geological plan.
8. In page 25, 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.
9. Page 28, 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. Further where the bore holes end in mineralized zone should be proposed to prove the end of mineralization.
10. The proposed bore holes should be depicted in geological section with their depth and RL for better referencing. The area explored under G1/G2....should be furnished as per as per Minerals Evidence of Mineral Contents Rules 2015.
11. The profile of geological sections as furnished are not matched with geological plan. All the geological sections should be re-checked and corrected. Refer sections EE', mineralization is not shown in eastern part where proposal excavation has been furnished. It is to be corrected.
12. The bulk density and recovery factor considered for calculation of reserve/ resources is not matched with the analysis report of bulk density and recovery factor as submitted in annexure.
13. The reserve and resources has not been furnished as per Minerals Evidence of Mineral Contents Rules 2015. In calculation of reserve and resources enclosed at annexure-XIII, different grades of ores as furnished in calculation are not clearly shown in geological sections.

MINING:

14. Page-46, it has been observed that the details of pit as furnished in in text in terms of their length, breadth, depth, top RL and bottom RL are not updated and not matched with surface plan. All the parameters should be updated based on recent survey.
15. It has been observed that the development proposed for the year 2021-22 and 2022-23 as extended in eastern part where occurrence of mineralization is not shown in development sections. It may be justified with bore holes data and corrected accordingly.
16. Page-40, In year wise tentative excavation for the year 2021-22, the production already carried out for the month April, May and June 2021 should be furnished in bullet notes to synchronize the yearly production proposal.
17. Different types of ores and others geological information encountered through bore holes to be depicted clearly in development sections. The year wise calculation of ROM production referring sections and RL are not matched with the proposal of insitu tentative excavation. It should be re-checked and corrected.
18. Back filling proposal as furnished in development plan has not been explained text. Exhausted area to be backfilled by OB/Waste to be specified with RL and area on year to year basis with description of the method & manner of disposal of waste.
19. Before backfilling of the quarry as proposed, it should be ensured the exhaustion of ore body in terms of their depth & extension in the interest of mineral conservation. It should also be ensured that during backfilling original sequence of lithology of the lease area to be maintained.
20. 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.
21. 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:

22. The existing mineral reject dumps should be furnished below alongwith analysis report.

Name of Dump	Location (Grid)	Length(m)	Width(m)	Area Occupied	Total volume (cu.m)	Total quantity(T)	Grade

23. The extent/location of the proposed dumps to be given also mentioned whether within UPL or not. Also give the details of the existing dumps (top soil, waste dump, mineral reject dump) within the lease area in tabulated form comprising dump number, designed capacity, present quantity, remaining quantity, bottom RL and top RL.
24. The proposed location of mineral reject should be furnished with terraces to minimize the land degradation. The details of mineral reject dumps and their analysis report should be submitted and discussed for their future use on the basis of their physical and chemical properties.
25. 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

PROGRESSIVE MINE CLOSURE PLAN:

26. Page-81, Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
27. 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.
28. 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.
29. 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.
30. 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.

PLATES:

31. 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.
32. 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.
33. Wind direction may show through wind rose diagram in key plan and environmental plan. Approach road to the ML to be shown.
34. 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.
35. The CCOM circular no.2/2010 and its addendum should be implemented. KML file of existing quarry/waste dump/land use are to be submitted.
36. The key plan should incorporate all features as mentioned under rule 32 (5) (a) of MCDR 2017 and all features should be shown in index as well.
37. **Surface Plan:** Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes. Virgin area is to be shown by contours and spot RL in surface plan. Forest & Non forest area, Surface right acquired area etc. should be marked clearly. All the mineral reject dumps, mineral stacks, OB dumps should clearly notified with nos. and their RL.
38. **Geological Plan & Section:** Data related to strike, dip, dip-direction etc. shown on the geological plan clearly. In the Geological Plan UNFC boundaries of G1, G2 .. area are to be demarcated as per MEMC Rules 2015. The Proposed bore holes with their depth should be marked in sections. Some of the indexes are missing, it should be re-checked.
39. **Development plan & Section:** The year wise development proposal should be furnished in distinct color. Existing and proposed RL of benches/dumps should be mention clearly in development plan and section.

Retaining wall and garland should be marked clearly year wise with color codes. UPL should be shown in red color. Backfilling area depicted year wise in different color with their RL.

40. **Environment plan:** The Environment Plan as prepared should be satisfy the provision as laid down under rule 32(5) (b) of MCDR2017. The proposed and existing environment protective measures to be shown in environment plan. The drainage pattern of the lease area to be shown on the plan. Contours should be shown in core zone.
41. **Conceptual plan:** Conceptual plan and section 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.