



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. MRMP/A/33-ORI/BHU/2020-21

Date: 21.10.2020

सेवामे

Shri Sauvick Mazumdar, Nominated Owner,
M/s Ferro Alloys Corporation Ltd,
Laxmi Bhawan, Kuans ,
Dist-Bhadrak, Odisha-756100

विषय: Approval of modification of Review of Mining Plan of Ostpal Chromite Mine along with Progressive Mine Closure Plan (PMCP), over an area of 72.843 ha in **Jajpur** district of Odisha State, submitted by M/s Ferro Alloys Corporation Ltd under Rule 17(3) of MCR, 2016.

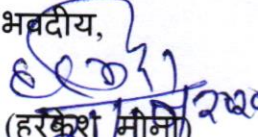
संदर्भ: - i) Your letter No. BHF/AC/3A/437/2020 dated 10.10.2020 received on 15.10.2020.
ii) This office letter of even no. dated 15.10.2020.
iii) This office letter of even no. dated 15.10.2020 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

महोदय,

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 by Shri Dayanand Upadhyay, Senior Asst. 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 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 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.

भवदीय,

(हरकृश मिश्रा)

क्षेत्रीय खान नियंत्रक

प्रतिलिपि सादर सूचनार्थ और आवश्यक कार्रवाई हेतु Shri A K Patra & Shri I Rama, M/s Ferro Alloys Corporation Ltd, Laxmi Bhawan, Kuans, Dist-Bhadrak, Odisha-756100.

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Scrutiny comments on examination of Modification in Modified Review of Mining Plan of Ostapal Chromite Mine over an area of 72.843 Ha in Jajpur District of Odisha State of M/s FACOR

GENERAL:

1. On cover page, Modification in Modified Review of Mining Plan under rule 17(3) 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. The diversified forest area is also to be furnished on cover page.
2. In introduction chapter, history of Mining lease along with change of ownership has not been described in details. It is mentioned that the lease has been acquired by M/s Vedanta Ltd however change in the name of lessee has not been clarified. Page-2, in reason of justification of modification rule 11 of MCDR should be omitted. Notice of change of ownership/nominated owner under rule 50 of MCDR 2017 may be submitted.
3. Para-3.3.3 & 3.3.4, Page 11, the review of earlier approved proposal, the ROM production and excavation of waste have not been updated till September 2020. All the updated figures should be furnished accordingly.
4. Page-15, Para-3.6, reason of modification of the modified review of mining plan submitted under rule 17(3) of MCR 2016 has not been described with specific reason and justification.
5. Lessee is a company. Hence, all certificates, undertakings, consent letter etc. should be signed by the nominated owner only. Extract from the minutes of the Board of director meeting with list of Board of Directors, their phone no. address and declaration of nominated Owner to be furnished. Name of the nominated owner should be furnished under name of the applicant.
6. The experience certificate of all qualified person should be as per provision of rule 15(1)(b) of MCR 1960. Qualified person address, e-mail, Phone number, Mobile number, PIN code and Fax no. should be furnished on cover page.
7. Sequence of para and its numbering as per IBM Manual appraisal MP 2014 should be covered in text. All the headings as mentioned in the IBM Manual appraisal MP 2014 should be furnished in all chapters in the text. All the annexure and text to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates/annexures should bear dated signature.

GEOLOGY:

8. Page-24, disposition of all lithological units with clear nomenclature and their descriptions, contacts of litho units/rock types, attitudes like strike and dip and structural features are to be furnished.
9. In page 24, para (e), the details of already drilled bore holes indicating drilling type (Core/RC/DTH), Coordinates, Bore Hole numbers, Borehole diameter, spacing, inclination, collar RL, bore hole closing depth etc. should be given in tabulated format. The borehole logs of all the previous drilled boreholes should be enclosed with document as annexure.
10. Page-29, 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.
11. The area explored under G1/G2...have not been marked as per as per Minerals Evidence of Mineral Contents Rules 2015. The proposed bore holes should be depicted in geological section with their depth and RL for better referencing.
12. In page no. 33, Para-J, 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.

13. Page no.-36, summary of reserve and resources as furnished in table as on 31/08/2020 is not matched after total depletion of ROM production carried out from 2018-19 to 202-21(till 31/08/2020). It should be re-checked and corrected.
14. Reserve and resources are not prepared as per Minerals Evidence of Mineral Contents Rules 2015. The summary of detailed calculation of reserve and resources enclosed at annexure-12 is not furnished the calculation of section wise resources under 331 category. After deriving the total resources under 331 category, mineable reserve under 111 and resources under 211 category should be furnished.
15. Page-40-42, The justification of UNFC coding should be furnished as per Minerals (Evidence of Mineral Contents) Rules, 2015.

MINING:

16. Page-35, existing quarry has not been updated in terms of length, width, top RL and bottom RL. Existing method of mining should be described in brief. 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.
17. Page-46, the development proposals should be furnished with Location of development in UTM coordinates at the end of year, top bench RL at the end of each year, benches considered for development with RL, direction of development of benches in Pit and Dimension of the Pit at the end of the year (Length x Breadth x Depth).
18. Page-62 & 63, in year wise insitu tentative excavation the average grade of ore and mineral reject are to be furnished. The stripping ratio has not been depicted with their unit. In bullet notes bulk density and recovery factors considered should also be furnished.
19. Page-64, Para-(e), describe briefly 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.
20. In conceptual mining plan, cumulative waste generation and protective measures should be furnished properly. Restoration of safety zone and slope of the dump may describe 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

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

21. The details of existing waste dumps, mineral reject dumps have not been described with their location, area covered, bottom RL and top RL and their designated capacity. It should be ensured that the area proposed for dumping should be proved non mineralized. Therefore exploration proposal priorities accordingly.
22. The proposal for dumping may be given in tabulated format as shown below. Further, Build-up of dumps from year to year to be mentioned in text w.r.t. designed capacity of dumps, bottom and top mRL of individual terrace, dump slope, individual terrace height and slope with description of method & manner of disposal of waste.

Year	Total waste to be dumped (in m3)	Location of disposal	Average height of the dump (in m)	Area to be dumped (in m2)	RL up to which dumping to be done	No of terrace	Terrace height	Slope of the terrace

23. Details proposed retaining wall, garland drain, settling tank etc. to be given year wise with their location. Location of mineral reject storage along with year to year development to be furnished.

PROGRESSIVE MINE CLOSURE PLAN:

24. Page-117, Para-8.1, Baseline information of the lease area has not been described as per guidelines. Further, base line information to be furnished for surrounding 500 meter form lease boundary.
25. 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.
26. 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.
27. 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. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished.

PLATES (General):

28. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist. The date of observation of magnetic meridian and its declination is to be shown in relevant plans.
29. The plans and sections submitted should bear the certificate that --the plans and sections are prepared based on the lease map authenticated by the state government. All plans and sections shall show a scale of the plan at least twenty five centimeters long and suitably subdivided.
30. Key plan as submitted is be demarcated with the boundaries of all villages and towns with their population, forests with tree density, approach road to lease area.. Existing and proposed bench mRL to be mentioned in the all plans and sections. The UPL should be shown in red colour in all relevant plans and sections.
31. **Surface Plan:** Few pillars may be correlated with some permanent ground features giving distance and direction. 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.
32. **Geological Plan & Section:** Data related to strike, dip, dip-direction etc. shown clearly on the geological plan. In the Geological Plan UNFC boundaries G1, G2.., explored area, unexplored area, drilled boreholes and year wise proposed boreholes to be shown in relevant colors. In sections UNFC codes have not been furnished as per Minerals Evidence of Mineral Contents Rules 2015 and not clear. The proposed bore holes are to be marked in sections and litho units should be matched with bore hole logs. Geological sections not matched with the calculation table of reserve & resources.
33. **Development plan & Section:** The existing benches are not shown distinctly with their RL. The sequence of development of benches of previous year should be followed in next year development plan. The color codes of Development Plan and Section should be same. Different types of ore encountered through bore holes and based on bore holes data, ore profile and their nomenclature to be corrected accordingly.
34. **Environment plan:** The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017. The drainage pattern of the lease area, contours in core zone and surface structure in buffer zone should be shown.
35. **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.



(Dayanand Upadhyay)

Sr. Assistant Controller of Mines