



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/24-ORI/BHU/2021-22

Date: 28.10.2021

To

Shri Sauvick Mazumdar, Director & Nominated Owner,
M/s Ferro Alloys Corporation Ltd,
D.P Nagar, Po-Randia,
Dist- Bhadrak, Odisha-756135

Sub: Approval of Review of Mining Plan of Katasahi Manganese Mine along with Progressive Mine Closure Plan (PMCP), over an area of 13.674 ha in Keonjhar district of Odisha State, submitted by M/s Ferro Alloys Corporation Ltd under Rule 17 of MCR, 2016.

Ref: - i) Your letter No. Nil dated Nil received on 12.10.2021.
ii) This office letter of even no. dated 12.10.2021.
iii) This office letter of even no. dated 12.10.2021 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 site inspection carried out on 21.10.2021 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 Review of Mining Plan in the light of the contents vide Annexure I and submit:-

- (i) Three (3) firm bound copies of text in A4 size printable paper and plate/plan in hard copy. The consents and certificates by the Lease holders/Qualified Person and copy of bank Guarantee shall be attached in hard copy of document.
- (ii) Two (2) soft copies of the document in USB Pendrive. The soft copies of the document shall be digitally signed by the Qualified Person and Nominated owner. The text of document should be in excel(.xls) and word format. The plates/plans are to be submitted in .kml/.kmz/.shp format. A few sections may be submitted in .pdf format as indicated in the CCOM Circular 1/2021. All the annexures shall be submitted in soft copy.
- (iii) Financial assurance under Rule 27 of MCDR 2017.

The aforesaid final copies of document will be submitted within **15 (Fifteen)** days from the date of issue of this letter, for further necessary action.

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 मीना

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri S C Nayak, Qualified Person.

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Scrutiny comments of Review of Mining Plan of Katasahi Manganese Mine, Area-13.674ha, Dist-Keonjhar of M/s Ferro Alloys Corporation Ltd submitted under Rule 17(2) of MCR, 2016

General

1. On cover page, email address of the lessee, phone no. fax no. etc are to be furnished. The mine code, IBM registration no., period of lease, Forest and diversified forest area are also to be furnished on cover page.
2. The lease was declares lapse by State Govt. vide G.P no. 7730/SM, dated 17/08/2015 however the present status of lease and order passed by State Govt. if any have not been furnished with documentary evidence.
3. The document should be prepared as per the mining plan template format provided in CCOM circular No.01/2021 dated 07.06.2021. No alteration/deletion/change in format of the mining plan template is allowed. Any additional information may be submitted as annexure only if required.
4. All the information in the various table columns of different chapters as per the prescribed format in the template should be furnished. No column/rows should be left blank. If not applicable, it was written as not applicable.
5. The final soft copies of the document shall be digitally signed by the Qualified Person and Nominated owner.
6. The document should preferably be submitted in excel(.xls)/word format. The plates/plans are to be submitted in .kml/.kmz/.shp format. A few sections may be submitted in .pdf format as indicated in the CCOM Circular 1/2021. All the annexures shall be submitted in soft copy.
7. The final copies of the text document to be submitted in 3 (three) hard bound copies in A4 size printable paper. The consents and certificates by the Lease holders/Qualified Person and shall be attached in hard copy of document. Three hard bound copies of plates/plans are also to be submitted. The plates/plans are to be output of AutoCAD software.
8. List of plates and annexures should be properly indexed with page nos. and in case of plates the scale should also be mentioned.

CHAPTER-1: GENERAL INFORMATION

9. Para-1.1, the lease code is not furnished. The nature of use is furnished captive while on cover page it is furnished non captive. It is to be re-checked as per term and condition furnished in lease deed.
10. Para-1.1.1, the lease period is not correctly furnished. Para-1.2, land ownership details is not correctly furnished.
11. Para-1.3.4, under statutory clearances, the environmental clearance, forest clearance etc are not furnished. Para-1.3.4.4, in land acquisition details the amount paid (INR) is not furnished.
12. Para-1.3.5.1, location of boundary pillars as furnished in terms of latitude and longitude should be re-checked from DGPS plan authenticated by State Govt. An undertaking is to be furnished regarding correctness of location of boundary pillars.
13. Para-1.3.7, 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.

CHAPTER-2: GEOLOGY AND EXPLORATION:

14. Para 2.1.1: the details of drainage pattern, Order of Stream and Minimum Distance of Stream from Lease Area (m) are to be furnished under different column in prescribed format/table.
15. Para 2.1.2: details of Physiographic features and Infrastructures available in and around the lease/ block area to be furnished correctly in prescribed table.
16. Para 2.1.4.1, under local geological set up, the formation of iron ore in the lease area is furnished. It is to be re-checked and corrected accordingly.
17. Para -2.1.4.2, the structure of the area is to be described with reference to the lease area. The strike of the formation is to be furnished correctly.

18. Para- 2.1.4.3, thickness of various litho units as encountered in the bore holes/ lease area is to be furnished i.e minimum and maximum thickness. Para- 2.1.4.4, mode of occurrence and control of mineralisation is not described properly. Para- 2.1.4.5, nature/form of mineral in respect of manganese ore should be re-checked and corrected.
19. Para- 2.1.4.7, under extent of mineralisation the average width and depth of the ore body is not correctly furnished. It is to be justified with exploratory drilling/pits carried out in the lease area.
20. Para- 2.1.4.8, the strike/trend of the ore body is to be furnished correctly. Some of the item is left blank should be filled with desired information.
21. Para-2.2, under exploration, there are number of items as per format are left blank. It should be re-checked and corrected. Para- 2.2.1.1, year of geological mapping is not furnished correctly. Para- 2.2.1.4, 2.2.1.5&2.2.1.9, the information have not been furnished correctly.
22. Para- 2.2.1.10, details of total sample collected from bore holes as analyzed from NABL accredited/Government Laboratory should be attached in separate annexure as per table prescribed along with all radicals.
23. Para- 2.2.1.13, the bulk density as furnished in table should be justified with documentary proof with their method.
24. Para- 2.2.1.14 &2.2.2.14, the area cover under various level of exploration is to be furnished correctly as per provision of MEMC rule 2016 at all relevant places of document.
25. Para- 2.2.2.9, the details of sample are to be furnished correctly. Para- 2.2.2.10, in chemical analysis of various radicals has not been furnished.
26. Para- 2.2.3, in ore body geometry and grade, general strike trend and dip of the mineral, average depth and all radical analysed have not been furnished correctly.
27. Para-2.2.4.1, the cut- off grade of the mine should be clearly mentioned. Similarly the number of cross sections considered with their interval and other parameters are to be mentioned as considered in reserve/resource estimation. Same is to be corrected at all relevant places of the document.
28. Para-2.2.4.2, the resource estimation is not carried out as per prescribed format. No any alteration or deletion in prescribed table is acceptable. Accordingly re- estimation of the resource should be carried out in prescribed table. Recovery factor should be justified with documentary evidence.
29. Para-2.2.5.1 to 2.2.5.9, all the parameters are to be elaborated in details as per Minerals Evidence of Mineral Contents Rules 2015.
30. Para-2.2.5.9 to 2.2.5.10, the calculation of blocked resources and reserve are not carried out as per prescribed format. No any alteration or deletion in prescribed table is acceptable. Accordingly re- estimation of the blocked resources and reserve should be carried out in prescribed table.
31. Para-2.2.5.11, the reserve and resources as furnished in table under forest and non-forest area is not supported with geological plan and sections. The forest and non-forest area are to be clearly marked and also it is to be corrected in text part at relevant places. The reserve and resources as furnished should be justified in terms of width, depth and grade of the ore body.
32. Para-2.2.6.5.1, the proposed Bore Holes should be furnished in light of provision of Rule 12(4) of MCDR, 2017 to prove the lease area in G1 level. Para-2.2.6.7, sampling of the bore holes is not furnished correctly. No any item should be left blank.

Chapter-3: Mineral Beneficiation:

33. Para-3.1 & 3.2, Complete Chemical Analysis of the ROM Ore/Mineral is to be furnished only based on the mineralogical study/mineral beneficiation/processing report. Copy of report is to be enclosed with document as an annexure.
34. Para-3.6 to 3.10 should be revised in light of above scrutiny point. Para-3.9 is not attended and heading is also not mentioned in instant document.

Chapter-4: Mining Operation:

35. It is observed that under various para, the items in different prescribed table are not mentioned. All figures should be furnished in prescribed table with their nomenclature as per format.
36. Para-4.1.1: Existing features of Method of Mining should be described in brief as in prescribed table.
Para-4.1.2: Proposed features of Method of Mining should be described in brief in prescribed table.
37. Para-4.2.1.1: The details of block wise existing pits and their dimension are not correctly furnished and also not updated in surface plan. Para-4.2.1.2.2: in stack details, the total quantity of different stacks should be matched with the returns submitted to this office.
38. Para-4.2.1.3: All the column/row should be furnished with desired information.
39. Para-4.2.2.1 & 4.2.2.2: Bench Parameters and Year wise Opencast Development as furnished in prescribed table are not matched with development plan and sections. It should be re-checked and corrected. Pit nomenclature should be furnished correctly. The information in table on development direction, top soil and co-ordinates of location are to be rechecked. The generation of top soil is to be furnished if applicable. Recovery as furnished should be justified with documentary evidence.
40. Para-4.2.2.3, Transportation & Hauling Equipment are not correctly furnished. Proposed Transportation & Hauling Equipments are to be furnished.
41. Para-4.3: In Material Handling Summary, the annexures are enclosed and marked with annexure number and reason of not applicable should be furnished.
42. Para-4.4: In Machine Calculation, the parameters of total handling (Ore and OB), bucket capacity, fill factors, swell factor, idle time and standby etc are to be considered. Para-4.4.2, effective shift timing is to be furnished in table.
43. Para-4.5, Blasting requirement is not attended. All the sub para under these headings should be attended.
44. Para-4.7: In Waste Management, the information asked in different tables are to be furnished and location should be marked with co-ordinates.

Chapter 5: SUSTAINABLE MINING:

45. Para-5.2: In year wise CSR initiatives, the specific year wise proposal should be furnished. At the places where proposal is not furnished should be marked nil in place of left blank.

Chapter 6: PROGRESSIVE MINE CLOSURE PLAN

46. All the prescribed tables are to be furnished with desired information otherwise it is clearly mentioned as not applicable.
47. Para-6.1, status of land is not attended. Total area degraded and area reclaimed and rehabilitated are to be furnished. All the land use features should be properly furnished. Para-6.2: Under heading Progressive Reclamation and Rehabilitation Plan, number of items is left blank.
48. Para 6.2.2.2 & 6.2.2.3: Retaining wall and garland drains proposals are to be revised considering the existing and proposed dumps..
49. Para-6.2.11, Land use of lease area at the expiry of lease period (CONCEPTUAL STAGE) are not correctly furnished. It should be furnished 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".

Chapter 7: FINANCIAL ASSURANCE/ PERFORMANCE SURETY

50. Para-7.1: in year wise table of land use pattern, the area furnished under different heads are also not matched with FA plan. It is to be re-checked and corrected.
51. Para-7.2, the details of financial assurance in respect of total area proposed to be put to use with bank guarantee details has not been correctly furnished.

CHAPTER-8: REVIEW OF PREVIOUS PROPOSALS

52. In review of previous proposals, the item wise information are to be in view of last five year approved proposal. The status of the lease is to be furnished in remarks column as the mine is not in operation.

CHAPTER-9: IMPACT ASSESSMENT (for fresh grant)

53. The information as furnished in this chapter is not applicable as the instant document is not for fresh grant.

Annexure

1. Singed copy of form-I & J to be submitted.
2. Environmental monitoring reports should be submitted.
3. Copy of surface right granted letter. Surveyor certificate should be enclosed.
4. Any other annexures as referred in the text should be submitted.
5. Calculation of insitu tentative excavation year wise considering the cross-sections, Bench RL etc should be furnished.
6. Experience & Qualification Details of Qualified Person and Certificate from qualified person regarding authenticity of information submitted is to be attached.
7. The content of pre-feasibility report and analysis of economic viability of the project is to be described in detailed as per rule 16 and Part-V of MEMC Rule 2015 and enclosed in annexure. The economic viability of the project should be supported with NPV, IRR, Payback period by cash flow chart with total investment, operational cost etc.
8. Copy of lease deed executed, Bank Guarantee, Mineral processing flowsheet with stage wise recovery, Copy of Environment and Forest Clearance, Consent to Establish, Consent to Operate are to be enclosed.

Plates

9. Date of survey should be given on all plans and sections and signature should bear date of signature. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Geologist. All plans and sections shall show a scale a scale of the plan at least twenty five centimeters long and suitably subdivided.
10. All plans and sections should be prepared on UTM grid. 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.
11. All the plans should be submitted as hard copies and also soft copy of all plans and sections in KML/KMZ/SHP should also be submitted which were geo-referenced.
12. Lease Cadastral Plan and Geo referenced Cadastral Plan authenticated by State govt. should be submitted.
13. Key Plan: The key plan should incorporate all features as mentioned Rule 32(5) (a) of MCDR 2017. The prominent wind direction to be shown by rose diagram in key plan and other relevant plans. The approach road to the lease area should be shown with Co-ordinates of extremity of lease area.
14. Surface Plan: The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017. The existing pits and surface features have not been updated. All the boundary pillar coordinates to be given in UTM . Surface right area to be shown on the plan. All the features have not been shown in the index.
15. Geological Plan & Section: Geo structural information has not been furnished properly. Area under G1/G2.. should be demarcated and UNFC codes are to be depicted in geological sections correctly as per MEMC rule 2015. Future exploration proposal should be furnished in plan and sections under G1 level of exploration. Lithology is not correctly furnished as per bore hole logs. Geological sections are not matched with geological plan.
16. Development plan & Section: The proposed and existing bench mRL to be shown clearly over year wise development plan and sections. Retaining wall and garland should be marked clearly year wise with colour codes. UPL should be shown in red colour. Year wise mining

plan proposals should be submitted in softy copy in the format of .kml or .shp file along with document.

17. Progressive Mine Closure plan and sections: All revised year wise proposals are to be depicted on the plan and sections.
18. Conceptual plan and sections: Conceptual plan and sections may be prepared considering mineralization as revealed from the borehole logs considering the life of mine as guidelines.
19. Environment plan: The Environment Plan as prepared should be satisfy the provision as laid down rule 32 (5) (b) of MCDR'2017. Wind rose diagram should be depicted.
20. Financial Assurance Area Plan: The existing and additional area requirement year wise as furnished in text should be separately hatched on the plan with FA table.