

Scrutiny comments on examination of Modification of Mining Plan of Nadidih Iron & Mn. Ore Mine over 121.405 ha. in Sundergarh District of Odisha state of M/s Feegrade & Co. (p) submitted under rule 17 of MCR 2016.

"General":

1. Modification of the approved Mining Plan submitted under rule 17(3) may be mentioned on cover page and also refer rule 17(3) in text parts as per Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rule 2016.
2. List of table as depicted in different chapter may be enclosed with annexure.
3. Consent letter/ Undertaking/Certificate as furnished by the Lessee may be included the para as "I do hereby undertake to complete exploration in time bound manner in accordance with Ministry of Mines letter no.-10/75/2008-MV, dated 23.12.2010".
4. The annexure as marked in text not matched with list of annexures as furnished in table. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person.
5. A latest list of board of directors duly certified by competent authority along with address/contact nos. to be enclosed. Also, Undertaking regarding working in other firms/company/organization from board of directors should be given.
6. Location of lease/lease range has not furnished in Location & accessibility chapter.

Chapter-0, "Introduction":

7. A brief review of status of Mining lease at present with documentary evidences may be given. The extension of the mining lease up to 31/03/2020 and date of execution of lease deed & supplementary lease deed may be marked with annexure.

Chapter-3, "Details of approved Mining Plan/Scheme of Mining":

8. Para 3.2, reason of modification has not been furnished. Para 3.3.1, The details bore holes drilled in 2016-17 may described with Form-J submitted to this office under rule 47 of MCDR'88. Para 3.4, Status of compliance of violation pointed out by IBM may be furnished with annexure. Para 3.6, reason of modification under rule 17(3) of MCR 2016 may be described properly. It is mentioned that Modification of mining plan is submitted under rule 22(6) of MCR, 1960 which may replace with rule 17(3) Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rule 2016. Review of last approved MP/SOM has not been furnished year wise for the 05 years period of approved proposal.

Part-A, Chapter-4, "Geology & Exploration":

9. Para-I, page-20, provision of rule 27(3) of MCR, 1960 may be omitted. Page-27, recovery of iron ore from 'D' pit is considered 40% wrt total excavation needs to be justified.
10. A comparative statement of reserves and resources estimated in existing modified mining plan may be depicted with depletion of reserves and estimated balance reserve as on date of proposed period.
11. Some no. of bore holes has not been projected in geological section. All the bore holes should be considered while estimation of reserves & resources. Data of bore hole logs has not been considered properly while estimation of reserves & resources.
12. The complete lease area should be proposed to cover under exploration to quantify reserves /resources with cut of grade corresponding to threshold value suggested by IBM in accordance with Ministry of Mines letter no.-10/75/2008-MV, dated 23.12.2010".
13. Under UNFC the area explored under G1, G2 to be delineated/ marked properly. A separate plan showing geology and UNFC may be submitted.

14. The UNFC feasibility study is not carried out properly. The Cost-Benefit analysis and financial appraisal to be carried out based on real time cost involved and also viability of the project up to the ultimate depth to be analyzed. IRR should be based on operating cost, reclamation/ rehabilitation cost, closure cost and other important parameters as per UNFC guidelines for the life of the project on the basis of ore body geometry, i.e., depth, width, length etc. as estimated and considered for reserve/ resource estimate. Sensitivity analysis on cash flow due to market changes, i.e., cost of operation, sale price etc. to be carried out.

Chapter-5, "Mining":

15. It has been proposed to enhance the ROM production of Iron ore from 2.88 million tonnes to 6.0 million tones. Keeping in the view of expansion site proposed for mineral stack and space for accommodation of waste may be modified.

16. There is no. of temporary ore stacks lies in the lease area, and covered large area. Therefore an undertaking may be furnished by lessee to remove the temporary stacks lies in the lease area in time bound manner to facilitate the enhancement of production and conservation of mineral.

17. The environmental clearance has been accorded by MOEF vide letter no. J-11015/136/2012-IA.II(M), dated 09.11.2015 for production of 7.451MTPA of iron ore (2.88 MTPA ROM iron ore + 4.571 MTPA of low grade iron ore from old dump). Now it has been proposed to enhance the production of 6.0 million tonnes of ROM iron ores and re-handling 1.451 million tonnes low grade iron ore from old dump, which is not matching with the EC. *is it*

18. Page-35, Table- 5.3, details stack of low grade iron ore has not been furnished correctly. Page-37 table 5.7, the grade of iron ore has not been furnished correctly.

19. Para 5.10.4, storage of explosive may be described properly.

20. In the development and production tables bench wise, year wise area of excavation and average thickness of the excavation or average area of cross section of bench and its average advance is to be given along with RL of bench with direction of advance at the end of the year. Ultimate pit limit should be depicted on all relevant plans & sections.

Chapter-6, Mine drainage:

21. This chapter is not dealt with properly. Mine is situated near to river Karo, and substantial quantity of rain water likely to be flow through lease area. Hence, adequate rainwater management plan or drainage plan along with engineering detail of arrangement for arresting solid wash off etc. should be prepared and incorporated in the document in view of environmental protection.

Chapter-7, "Stacking of mineral reject/ sub grade material and disposal of waste"

22. Details of existing quarry, Stocks/Dumps of Waste, Sub-grade/mineral rejects, processed ore-Lump, fines etc. should be given in text vis-à-vis that is actually available on the site.

23. Dumping of waste and re-handling of dump should be marked in different colors in plans. Dumping proposal should be in such a manner that low grade ore dump should not be mixed with waste.

24. Keeping in view of enhancement of production the proposal of dumping may be modified accordingly to accommodate the huge amount of waste. Yearwise re-handling low grade ore dump with particular dump no. should also be shown in relevant plans and sections.

25. Storage/Stacking of Sub-grade material/ Mineral reject in earmarked area to be described with m. RL and area on year to year basis with description of the manner of its disposal. Retaining wall and garland drains may be proposed around stack yard and along the dump slopes.

Chapter-8, Use of Mineral and Mineral Reject:

26. This chapter is not dealt with properly. Requirement of end-use industry to be given in terms of physical & chemical composition matching with proposed production of mine. Hence, production of Lumps & fines to be specified with quantity and grade along with its proposed sell to end-use industries.

27. Requirement of intermediate industries involved in up-gradation of mineral should be assessed and disposal of Mineral reject/low grade fines/screened fines etc. should be proposed accordingly.

Chapter-10, "Other":

28. Existing manpower both direct and contractual has to be mentioned in the text. An organizational chart has to be provided for risk assessment study to whom communication to be made in case of any accident.

Chapter-11 "Progressive Mine Closure Plan":

29. It was observed during inspection of the mine that the old worked out Mn pit-9 has already been naturally vegetated. Therefore, back-filling proposal of the Mn. Pit no. 9 is not acceptable.

30. Environmental Base line information & EIA : It should be clarified that base line data collected & assessment done by which agency, period of data collection & assessment and whether it is conforming to the norms of MoEF. 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.

31. In summary of PMCP table, Cumulative actual achievement as on date and specific proposal should be given year-wise in absolute quantified term. Under heading 'others', protective works to be carried out year wise around waste and sub grade Dumps also to be given.

32. In Para "Disaster Management & Risk Assessment", safety management plan and risk analysis of different mining operations needs to be elaborated in scientific manner.

Plates:

33. The plans and sections submitted do not bear the certificate that --the plans and sections are prepared based on the lease map authenticated by the state government. All the plan & sections prepared bear the signature of certified surveyor.

34. Wind direction may show through wind rose diagram in key plan and environmental plan. All plans & Sections should bear dated signature. Magnetic north and date of observation of Magnetic Meridian should be given on all plans except Khasra Plan.

35. DGPS plan has not been submitted.

36. Key Plan:

Location of lease in key plan not matched according to co-ordinate of boundary pillar given in document. Direction of north has not been shown.

37. Surface Plan:

- i) Latitude, longitude of all corner pillars may be indicated on the plan. Acquired area may be marked clearly.
- ii) Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes.
- iii) Forest & Non forest area, Surface right acquired area etc. should be marked clearly over a separate Lease Plan & Surface plan.

38. Geological Plan & Section:

- i) Geological features like strike, dip, dip direction etc to be marked. mRL of bore holes has not been furnished in plan & section. The colour code as depicted in plan not matched with section.
- ii) The reserve under G1 & G2 category and limits of reserves/resources 111 and 211 marked on geological plan and sections in different colour codes. Some part of the lease area not justified with G-1/G-2 level of exploration therefore exploration program may be revised accordingly.
- iii) Some bore holes are missing in geological sections. has not been matched with the actual bore hole log. In section S-400 bore hole no. 159 has not been shown. All the sections should be re-checked as per bore hole data and modified accordingly.
- iv) The direction along which geological section has been prepared to be depicted on geological section.

39. Year wise development plan & Section:

- i) Development sections have not been prepared correctly. Section S-400 as depicted in plan not shown in section. In Section S-800 the existing 'D' pit bottom has not been correctly marked. mRL of all the sections not matched with actual field position.
- ii) In development plan, existing mineral stock has not been shown properly with field position.
- iii) Excavation in ore and OB is not clear hence on year wise plans and sections ore and OB may be marked. Show position of faces and bench Rls at the beginning and end of the year distinctly with direction of advance and individual year workings with colour code. Spot levels at sufficient no of places on original surface, in the pit, and at the toe of benches may be shown so as to ascertain the average depth of excavation in a particular bench.

40. Environment plan:

- i) Contours have not been marked properly in buffer zone.
- ii) Environmental monitoring stations have not been clearly shown.
- iii) The Environment Plan as prepared should be satisfied the provision as laid down rule 28(5)(b) of MCDR'88. In the Environment plan Environment monitoring stations to be shown.

41. Reclamation Plan:

Year wise progress of dumping, dump re-handling, backfilling, afforestation using different colour codes for easy understanding may be shown. In western part Karo river passing near to the lease boundary therefore protective measures may be proposed.

42. Conceptual plan:

This may be prepared considering mineralization as revealed from the borehole logs. One longitudinal section may also be submitted. Direction of run off from the area based on surface contours may be shown on the plan and the sections.

43. Financial Assurance Area Plan:

Area as depicted in text for FA not matched with area given in plan. In the Financial Assurance plan area of each individual land i.e land degradation due to mining activity and processing unit etc at the end of plan period may be shown separately on this plan with highlighted boundaries and different colour codes for FA calculation.

भारत सरकार
खान निरीक्षण
भारतीय खान सुरक्षा
क्षेत्रीय खान निरीक्षण का कार्यालय
No. MPM/FM/24-ORI/BHU/2016-17

Plot No. 149, Pokhariput
Bhubaneswar – 751 020
Date: 15.12.2016

To
Shri M. D Rustagi, Director & Nominated Owner,
M's Feegrade & Co. (P) Ltd,
Rungta Office, Main Road,
Barbil, Dist – Keonjhar, Odisha-758035.

Subj: Approval of Modification of Mining Plan along with Progressive Mine Closure Plan under Rule 17 of MCR, 2016 of Nadidih Iron & Mn Mine of M/s Feegrade & Co. (P) Ltd over an area of 121.405 ha in Sundargarh district of Odisha.

Ref: - i) Your letter No. FEE/ED/GEO/2016-17/407 dated 28.11.2016.
ii) This office letter of even no. dated 30.11.2016.

iii) This office letter of even no dated 30.11.2016 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 Modification of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 08.12.2016 by Shri Dayanand Upadhyay, 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 Mining Plan along with Progressive 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)** with financial assurance under Rule 23 F of MCDR 1988 of the Modification 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 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 Mining Plan along with Progressive Mine Closure Plan. It may be noted that no extension of time in this regard will be entertained and the Modification of Mining Plan along with Progressive 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