

भारत सरकार
खान मंत्रालय
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक का कार्यालय

No. MSM/FM/06-ORI/BHU/2016-17

Plot No. 149, Pokhariput
Bhubaneswar – 751 020
Date: 14.09.2016

To

Shri Chitta Ranjan Ray, Nominated Owner,
M/s Indian Metals & Ferro Alloys Ltd,
IMFA Building, Rasulgarh,
Bhubaneswar - 751010

Sub: Approval of modification of approved Scheme of Mining of Sukinda Mines (Chromite) Mine along with Progressive Mine Closure Plan (PMCP), over an area of 116.76 ha in Jajpur district of Odisha State, submitted by M/s Indian Metals & Ferro Alloys Ltd. under Rule 10 of MCDR, 1988.

Ref: - i) Your letter No. IMFA/MPC/16/72 dated 18.08.2016, received on 25.08.2016.
ii) This office letter of even no. dated 25.08.2016.

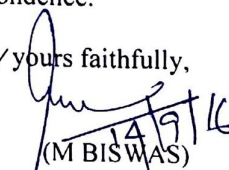
Sir,

This has reference to the letter cited above on the subject. The draft modification of approved Scheme of Mining has been examined in this office based on earlier site inspection carried out by Shri Prem Prakash, Deputy Controller of Mines on 17.03.2016. The deficiencies observed are enclosed herewith as Annexure I.

You are advised to carry out the necessary modifications in the draft modification of approved Scheme of Mining 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 23 F of MCDR 1988 of the Modification of Approved Scheme of Mining 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 approved Scheme of Mining 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 approved Scheme of Mining. It may be noted that no extension of time in this regard will be entertained and the modification of approved Scheme of Mining 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,


(M BISWAS)
क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Scrutiny comments on examination of Modification of Scheme of Mining (SOM) of Sukinda Mines (Chromite) over 116.76 ha. in Jaipur District of Odisha state of M/s IMFA Ltd.

Text: GENERAL

1. Certificates, undertakings, consent letter etc. to be signed by the nominated owner of the mine in new format as per the guideline of “IBM manual on appraisal of Mining Plan-2014”,
2. CCOM circular no.2/2010 and its addendum regarding geo-reference mining lease map and ML boundary pillars to be implemented.
3. Status of Forest clearance and other statutory Clearances should be given in introductory note along with documentary proof in annexures.
4. ML Boundary point/pillar no. H was not posted at the site. Photographs of this point/pillar as posted at the site to be enclosed. Else it should be clarified why it is not posted.

GEOLOGY AND RESERVE

5. Details of all exploratory works carried out so far should be corroborated with documentary evidence in respect of order for the work, cost involved, and payment details by the lessee etc. with copy of form J & K maintained as per rule 47 & 48 of MCDR.
6. Details of all boreholes carried out so far must be given in the form of standard borehole logs in annexure and should be certified by the authorized geologist of the mine.
7. Chemical Analysis Report of BHs samples should be enclosed from NABL Accredited laboratory or Govt. lab. as per guideline of “IBM manual on appraisal of Mining Plan-2014”. Entire mineralized area should be analyzed meter wise with 10% of check samples (At least for 10% of total samples may be analyzed in accordance to BIS and reports from NABL accredited/other government laboratory). NABL Accreditation certificate of laboratory from where Chemical Analysis of BH samples carried out, should also be enclosed.
8. Exploration proposal for the entire lease area should be given on a regular grid pattern (excluding the area already covered) to be completed during this proposed scheme period for assessing the total mineral reserve/ resources as per UNFC. To know the depth ward continuity of ore, Core-BHs should also cover the DTH exploration area. Check BHs should be proposed in non-potential resource area.
9. Reserve & resources are not estimated and categorized as per UNFC guideline. As example, Ref. Longitudinal Geological section of Band-I, UNFC code 111 has been considered below the depth of BHs. Even Sub-grade ore (10-30%Cr₂O₃) has been categorized as code-111. Substantial quantity of resource is calculated under code 331, 332 and 333 without proper basis/justification. Reserve & resource should be estimated/updated and categorized strictly as per UNFC guideline.
10. Ref. Page 26: In summary of exploration carried out so far in the lease area; entire lease area considered as G1, without carrying out exploration covering the entire lease area. No borehole found drilled in dump. Still considering total exploration as G1 be clarified.
11. Tonnage factor/ In situ bulk density considered for reserve/resource estimation as 2.7 to 4.2, based on testing of 17 samples more than one year ago, seems to be in higher side; as in adjacent/neighbouring mines leases of M/s Tata Steel & M/s Balasore Alloys, Tonnage factor/ bulk density being considered as 3.29 to 3.63 and 3 to 3.5 respectively. Hence, bulk density determination of more samples to be carried out by NABL accredited lab. or Govt. lab. covering entire mineralized zone of ML and latest test report of the same to be enclosed.
12. In the UNFC feasibility study : Economic evaluation of the project is not carried out properly like Cost of Production (CPT), Cost-Benefit analysis and also Financial appraisal are not carried out based on real time cost involved. Further, in UNFC feasibility study, following important parameters are not dealt with properly:-
 - a. IRR 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 estimated.

b. Cash flow statement for the period considered for assessment of IRR & NPV.

d. Sensitivity analysis on cash flow due to market changes, i.e., cost of operation, sale price etc.

MINING

13. Salient description with sequence of different mining operations of present and proposed mining method should be described.
14. As per guideline of “IBM manual on appraisal of Mining Plan-2014”, a NOTE to be added below the proposed year wise excavation Table before arriving the year wise tentative tonnage of production.
15. Top RL of the O/C mine (Pit) is 136mRL (H/W) & 160 mRL(F/W). As on 30.06.2016, its depth has gone up to about 46 mRL; even at this level, stability of benches are difficult to maintain. However, further deepening of pit up to 38mRL is proposed. Thus, total depth of pit proposed to about 122 m. Hence, be supported with appropriate document of DGMS.
16. U/G Mining : Shaft sinking method and safety precaution measures to be taken during sinking to be described.

HANDLING OF MINERALS REJECT/ SUB-GRADE AND DISPOSAL OF WASTE

17. Details of existing Dumps of Waste, Stocks of Sub-grade/mineral rejects such as area covered, size with height, no. of terraces etc. should be given in text vis-à-vis that is actually available on the site.
18. Proposal is made for dumping of waste at common boundary with M/s Balasore Alloys Ltd. MOU and Necessary approval/permission in this regard from competent authorities should be enclosed.
19. Buildup of dumps, designed capacity & precaution envisaged has not been explained properly. Buildup of dumps from year to year to be mentioned in text (with ref. to RL of individual terrace) and total height of the dumps year wise with description of the method & manner of disposal of waste should be mentioned.
20. Existing proposed environmental protective works carried out and to be carried out around waste dumps & sub grade dumps (precautions envisaged for confinement of the dumps) should be given in quantified terms with design details and materials to be used for its construction.

PROGRESSIVE MINE CLOSURE PLAN

21. Environmental Base line information & EIA : It should be in-accordance with the EC.
22. Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are not given. The same to be elaborated.
23. In summary of PMCP table, under heading ‘others’, Env't. protective works to be carried out year wise around waste and sub grade Dumps and env't. monitoring mechanism to be given.

Plans/Plates

24. All plans to be prepared based on recent and accurate survey. All Stocks/Dumps of Waste, Sub-grade, fines, mineral rejects, processed ore etc. should be shown over the Surface plan and given in text vis-à-vis that is actually available on the site. Such plans should be prepared and certified by the certified Surveyor.

Enclosure:-

25. All the annexure to be properly numbered/paged and signed by the QPs.
26. The ‘Modification of Scheme of Mining’ document should be prepared by qualified person as per rule 15 of MCR, 2016, not by RQP. Self-attested copy of qualification & experience certificates as required for qualified person to prepare mining plan/scheme under MCR’2016 should be enclosed.