



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



BY REGD POST  
Phone: 0674-2352463  
Tele Fax: 0674-2352490  
E-mail ro bhuvaneshwar@ibm.gov.in  
Plot No.149, Pokhariput  
BHUBANESWAR-751020

No. MS/FM/27-ORI/BHU/2018-19

Date: 12.10.2018

सेवामे

श्री चित्त रंजन राय, मनोनीत मालिक  
मैसर्स इंडियन मेटल्स एंड फेरो अलॉयज  
लिमिटेड, इम्फा बिल्डिंग, रसूल गढ़ .  
भुवनेश्वर -751010

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

विषय : खनिज रियायत नियम 2016 के नियम 17 के अंतर्गत ओडिशा प्रदेश के जाजपुर जिले में स्थित, मैसर्स इंडियन मेटल्स एंड फेरो अलॉयज लिमिटेड का सुकिन्दा क्रोमाइट खान (116.76 हेक्टेयर ) की खनन योजना का पुनर्विलोकन सह उत्तरोत्तर खान बंद करने की योजना की प्रस्तुति ।

Sub: Approval of Review of Mining Plan of Sukinda 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 17 of MCDR. 2017.

संदर्भ: i) Your letter No. IMFA/MPC/18/112 dated 24.09.2018.  
ii) This office letter of even no. dated 27.09.2018.  
iii) This office letter of even no. dated 27.09.2018 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

महोदय,

यह उपरोक्त पत्रों का विषय के संदर्भ में है। इस संबंध में, खनन योजना का पुनर्विलोकन सह उत्तरोत्तर खान बंद करने की योजना मसौदा का जांच इस कार्यालय में श्री रामकिशन आर, वरिष्ठ सहायक खान नियंत्रक के द्वारा तारीख 28.08.2018 का क्षेत्र परिदर्शन के आधार पर किया गया है। देखे गए कमियां अनुलग्नक - I के रूप में इसके साथ संलग्न हैं ।

अनुलग्नक -I के अनुसार खनन योजना का पुनर्विलोकन सह उत्तरोत्तर खान बंद करने की योजना मसौदा में आवश्यक संशोधन करने के लिए आपको सलाह दी जाती है । दस्तावेज की तीन (3) फार्म बाउंड प्रतियां और सीडी में दस्तावेज की दो (2) सॉफ्ट प्रतियां (एमएस वर्ड फाइल में टेक्स्ट और ड्राइंग / प्लेट्स को ऑटो काड संगत प्रारूप या जेपीजी प्रारूप में 100x100 पिक्सेल में जमा करना चाहिए), इस पत्र जारी करने की तारीख से 15 (पंद्रह) दिनों के भीतर खनन योजना का पुनर्विलोकन खनिज रियायत नियम 2017 के नियम 27 के तहत वित्तीय आश्वासन के साथ, आगे की आवश्यक कार्रवाई के लिए जमा करें । यदि अनुबंध का कुल पृष्ठ 50 (पचास) से

अधिक है तो इसे अलग खंड के रूप में प्रस्तुत किया जाना चाहिए। लेकिन इन अनुबंधों का संदर्भ खनन योजना का पुनर्विलोकन में अवश्य होना चाहिए। प्लेट को अलग खंड में भी जमा करना है।

खनन योजना का पुनर्विलोकन की संशोधित प्रतियां अग्रेषित करते समय जिस तरीके से कमियों को पूरा किया गया है, उन्हें दिया जाना चाहिए। यह ध्यान दिया जा सकता है कि कोई भी समय विस्तारित नहीं किया जाएगा और यदि उपर्युक्त नियत तारीख में दस्तावेज नहीं जमा किया गया तो उसे खारिज किया जा सकता है। यह भी ध्यान दिया जा सकता है कि यदि कमियां पूरी तरह से अनुपालन नहीं होता है, तो बिना किसी अन्य पत्राचार खनन योजना का पुनर्विलोकन मसौदा खारिज कर दिया जा सकता है।

This has reference to the letter cited above on the subject. The draft 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 28.08.2018 by Shri Ramkishan R. 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 1 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 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 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 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

प्रतिलिपि सादर सूचनार्थ और आवश्यक कार्रवाई हेतु Shri A K Samantaray, Shri M J Raju and Shri P Behera M/s Indian Metals & Ferro Alloys Ltd, IMFA Building, Rasulgarh, Bhubaneswar - 751010.

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

**Scrutiny comment on Review of Mining Plan including PMCP in respect of Sukinda Chromite Mines of M/s IMFA in Jajpur district of Odisha State.**

**General:**

1. On cover page Mining Lease Number/TC Number/Lease Number, IBM Mine code if any, along with registration number as allocated by IBM under rule 45 of MCDR, 2017 needs to be mentioned. Further, address, e-mail, phone number, fax number of the lessee should be furnished on cover page. Summary of proposal at a glance may be furnished before "Introduction" chapter covering Exploration, Excavation, Area Utilization, Stacking, Environmental Protective Measures etc." qualification of QPs should be furnished.
2. The reference of MCDR,1988 should be replaced with relevant rules of MCDR, 2017.

**1. Geology and Exploration:**

3. BH wise information of drilled BH to be given in tabulated form indicating Year, Collar coordinate, collar RL, type (Core/DTH/RC), section number, diameter, spacing, inclination, depth, whether mineralized or non-mineralized etc.
4. The reserves and resources were estimated in G1 and G2 level should be indicated up to what depth in mRL the level of exploration has considered with due justification. The reserves and resources should be estimated by cross section area method also at equal intervals of depth wise of ore body (in mRL) and the optimized results should be furnished. The reserves and resources should be assessed as per MEMC, Rules 2015 and a report on Reporting of Mineral Resources should be annexed in the format of part IV-A of MEMC, Rules 2015.
5. The exploration proposal should be given individual year wise (not as cumulative) with intended depth in mRL with level of exploration. The proposed exploration is not sufficient enough in depth wise configuration of ore bands, so review the same. The details of exploration to be given in accordance to the land schedule i.e. forest/non-forest/diverted forest/surface right area etc. The details of individual proposed BH to be given in following format:

Sl.No	Year	BH No	Northing	Easting	Collar RL	Core/RC/DTH	Meteage	Inclination	Forest/Non-Forest/ diverted Forest	Surface Right/ Non-Surface	Purpose of BH
1	2018-19	PBH 01									
2	2018-19	PBH02									
Total						Total BH	Total mts				

At the end of the table cumulative number of proposed BH in forest area, non-forest area, diverted forest area, Surface right area and non -surface right area to be given. Same to be depicted on the Geological plan.

6. As per guideline of "IBM manual on appraisal of Mining Plan 2014" at least 10% of total samples to be analyzed in accordance to BIS and reports form NABL accredited/Government Laboratory. Accordingly, the proposal should be given under future exploration programme.

**2. MINING:**

7. Grid location of existing and proposed workings should be furnished. Geological Section wise of proposed ROM excavation quantity for very year should be provided for conventional, grab mining and underground mining.
8. Drilling and blasting operation should be elaborated in detail with details of explosive magazine and type of explosive used, blasting pattern for shaft sinking and underground development headings.
9. In the last approved mining plan dated 14.02.2018 it is proposed during 2018-19, to carry out trial mining by special opencast mining (Grab) method at 78 mRL to establish the mining method to further implementation in other areas of the mine. But during the site inspection no such trial of the proposed method was carried out till the date. The special opencast mining (grab) method should be proposed for extraction of chrome ore deposit, only after the undertaking of the proposed trial mining method & on the basis of findings of the same. Accordingly production proposal should be modified.
10. It is proposed to do UG mining for band-I deposit from -250 mRL, i.e.188 m below the UPL of opencast mining (whether it is by grab or conventional should be mentioned) should be

properly justified by relevant geo-technical study report by scientific institute. Proposal should be given for putting efforts to mine out the left out ore deposit between UPL and UG workings with technological advancement in future.

11. The proposed development by UG mining should be clearly mentioned whether it is in the HW/FW side of ore deposit. NIRM has proposed sub level or blast hole stoping method and the justification for adopting blast hole stoping method should be furnished.
12. It is proposed to be utilize the waste material generated from sukinda mines lease area to backfill the voids created by underground mine workings of mahagiri mines lease area, which is not allowed as per Hon'ble Supreme Court judgment dated 21.04.2014 in writ petition (Civil) No. 435 of 2012 filed by Goa foundation Vs Union of India and others all activities like waste dumping, stacking of ore, sub grade, mineral rejects, disposal of tailings slime are with in the lease area only. In view of the said judgment proposal should be changed in relevant sections of the document.

### **3. Stacking of Mineral Reject/Sub-grade and Disposal of Waste:**

13. Build-up of dumps from year to year to be given in tabulated manner considering designed capacity of dumps, bottom and top mRL of individual terrace, dump slope, individual terrace height and slope. The quantities of OB dump details with common boundary and individual should be dealt in detail. Grid location of existing and proposed dumps should be given.
14. The tailings generated from the COB plant should be stacked separately and not to be mixed with waste dump, so accordingly proposal should be modified.

### **4. Processing of ROM and Mineral Reject:**

15. The feed size of the material and end product (Concentrate) should be furnished in the material balance chart.

### **5. Others:**

16. The details contractual and departmental manpower to be given separately for opencast and underground workings.

### **6. Plates:**

17. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist as per provisions of MCDR, 2017 and MMR, 1961. All plans & sections prepared should follow the conventions mentioned under MMR 1961.
18. Key Plan: The approach road to lease area has not shown. Plan should be prepared as per rule 32 (5) (a) of MCDR, 2017.
19. **Surface Plan:** Forest/non-forest/diverted forest/private land/SR area to be shown. Surface plan should be prepared as per rule 32 (1) (a) of MCDR, 2017. Common boundary if any should be shown.
20. **Geological Plan & Section:** plan and section should be prepared as per 32 (1),(b),(c), (d) of MCDR, 2017.
21. Geological sections should be prepared as per the revised estimated method i.e. cross section area method.

#### **Development plan & Section:**

22. The benches and configuration of existing and proposed quarries should be shown in different legends and litho units should also be shown in development sections.
23. **Environment plan:** All feature as mentioned under rule 32(5) (b) of MCDR,2017 to be depicted. Surface features and contour of adjacent mine has not been shown in core and buffer zone. Wind rose diagram to be depicted.

#### **UG Plan and section:**

24. All feature as mentioned under rule 32(1) (e) of MCDR,2017 to be depicted
25. **Reclamation plan:** reclamation plan showing the proposed reclamation and rehabilitation measures should be submitted.

**11. Enclosures:**

- 26. All the annexure to be properly numbered/paged and relevant annexure to be signed by Geologist/surveyor/RQP etc.
- 27. Copy of previous approved mine plan & scheme of mining letter should be enclosed.
- 28. Copy of bank guarantee should be enclosed. Photographs of boundary pillars should be enclosed.
- 29. Certificate from the lessee should also include: The information furnished in the Review of mining plan and Progressive Mine Closure Plan is true and correct to the best of my knowledge and records. It is to undertake that all the measures proposed in this Progressive/Final Mine Closure Plan will be implemented in a time bound manner as proposed.
- 30. Copy of form I and J (year wise) as per MCDR, 2017 to be enclosed for all the drilled BH for ready and future reference as per Rule 47 and 48 of MCDR, 2017. The same should be signed by the Geologist appointed under MCDR, 2017. The section should be correlated with available information i.e BH data, surface geology etc.
- 31. Detailed/full report on Geotechnical study report by scientific institution regarding the method adopted for UG mining and also for Grab mining should be enclosed.

In view of above, wherever necessary correction required to be made.

-----x-----x-----x-----