



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 E-MAIL

Phone: 0674-2352463

Tele Fax: 0674-2352490

E-mail:

ro.bhubaneswar@ibm.gov.in

Plot No.149, Pokhariput

BHUBANESWAR-751020

No. MRMP/A/40-ORI/BHU/2021-22

Date: 14.03.2022

To

M/s IMFA Ltd.,
IMFA Building,
Rasulgarh, Bhubaneswar
Odisha-751010
E-mail : mail@imfa.in

Sub: Approval of modification of Review of Mining Plan of Sukinda Chromite Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 116.760 ha in Jajpur district of Odisha State, submitted M/s IMFA Ltd. under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. IMFA/SMC/1936 dated 28.02.2022 received on 01.03.2022.
ii) This office letter of even no. dated 01.03.2022.

Sir,

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 Rajani Kanta Rautaray, Assistant Mining Engineer. The deficiencies observed are enclosed herewith.

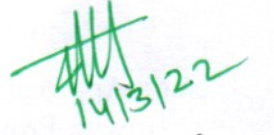
You are advised to carry out the necessary modifications in the draft modification of Review of Mining Plan in the light of the contents vide Annexure I and submit:-

- (i) Three (3) firm bound copies of text in A4 size printable paper, Annexure 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 and .dwg format. All the annexures shall be submitted in soft copy.
- (iii) Financial assurance under Rule 27 of Mineral Conservation and Development (Amendment) Rules, 2021.

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 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,

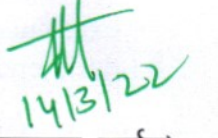

14/3/22

(बाबुलाल गुर्जर)
क्षेत्रीय खान नियंत्रक

Copy for kind information to:-

(i) The Controller of Mines (EZ), Indian Bureau of Mines, CP-13, Sector V, Salt Lake City, Kolkatta- 700 091.

(ii) Shri Suresh Prusty, Geologist, M/s IMFA Ltd., E-mail : sureshprusty@imfa.in.


14/3/22

(बाबुलाल गुर्जर)
क्षेत्रीय खान नियंत्रक

Scrutiny Comments in respect of Modification of Review of Mining Plan with Progressive Mine Closure Plan of Sukinda Chromite Mine of M/s IMFA Ltd. over an area 116.76 Hectares in District Jajpur, Odisha State submitted under rule 17(3) of MCR 2016.

General

1. Existing Review of Mining Plan period is from 2019-20 to 2023-24 along with proposed Modification of Review of Mining plan period 2022-23 to 2023-24 shall be mentioned on the cover page. The financial year 2021-22 is about to pass so that all proposals made in the document thereunder should be restricted from 2022-23 to 2023-24.
2. The final copies of the document shall be digitally signed by the Qualified Persons. Originally signed (Digitally) Certificate from the lessee/Consent letter and Undertaking from the Qualified Persons should be enclosed in the fair copy of the document.
3. The soft copy of document should preferably be submitted in excel(.xls) (soft copy) / word format. The plates/plans are to be submitted in .kml/.kmz/.shp format and .dwg file.
4. The final copies of the document to be submitted in 3 (three) hard bound copies in A4 size printable paper. Three hard bound copies of plates/plans shall be also submitted. The plates/plans are to be output of Auto CAD software.
5. List of plates and annexures should be properly indexed with page nos. and in case of plates the scale should also be mentioned.
6. Before general information Mining plan at a glance to be inserted as per format enclosed as Annexure-I. Before general information an introduction to be furnished incorporating the history of lease details.
7. 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/write up only if required.
8. 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.
9. As per Rule 34(A) of MCDR amendment Rule 2021; Every lessee shall carry out a drone survey of his leased area and upto hundred metres outside the lease boundary within six months before submission of any mining plan document or modification thereto to the Indian Bureau of Mines for approval and shall submit processed output [digital elevation model (DEM) and Orthomosaic] images obtained from such survey or any other format as may be specified by the Indian Bureau of Mines in this regard to the concerned Regional Controller of Mines and the Controller General along with the application for approval or modification of mining plan.

Chapter 1: General Information:

1. Para 1.1.: Type of Lessee should be corrected. .
2. Para 1.1.2: The reason for modification of review of mining plan may be described item wise along with existing and proposed proposal and should be clearly described. Also, EC capacity should be mentioned there as per EC, December, 2020. Period of proposal should be corrected.
3. Para 1.3.4: Information on all the statutory clearances provided in the relevant chapter should be incorporated with Annexure Numbers also.
4. Para-1.3.7, Qualified Persons Details as furnished in table are incomplete. The same may be furnished as per the format.

Chapter 2: Geology & Exploration:

1. Para 2.1.1: In Topography, Drainage pattern has been mentioned both 'Radial & Dendritic', the same needs to be justified.
2. The detailed information in para 2.1.1; the highest level and lowest level from MSL as furnished is incorrect, the same rectified properly.
3. The information furnished under para 2.1.4.8 i.e. deposit type, needs to be reviewed and furnished properly as per MEMC Rule.
4. Chapter 2.2.1.9 Sampling : Bore hole Id No. has not been provided as sample Id for reference and the same needs to be corrected.
5. It is observed that the lithology of borehole SMC-IM/II/14 is not matched with geological cross section of BB' & CC' of the mineral. It should be rechecked and corrected accordingly.
6. Chapter 2.2.1.11 & 12 : Details of Petrology & Mineralogical Studies have been mentioned as Nil and the same needs to be clarified.
7. Chapter 2.2.1.14 : A write up regarding the mineral potential area and barren land along with the source report may be incorporated below the table to justify the figures of the table.
8. Chapter 2.2.2.9 Sampling : Bore hole Id No. has not been provided as sample Id for reference and the same needs to be corrected.
9. Chapter 2.2.4. : Reserve/Resource estimation method : The cross section wise area calculation should be reconciled and the total exact resource quantity should be mentioned along with the approximate quantity. The cross sections such as FF, GG & HH'... and the calculation for resource therein are not correct. Hence all the cross sectional area used for resource calculation should be revised accordingly and also match with the Geological cross section. For band -I, some where the resource is shown as 0, the same needs to be clarified.
10. Chapter- 2.2.4.7 : The cost of production and use of ROM mentioned in Feasibility Study report as submitted in annexure should be matched with the relevant chapter of the test part of the document. Also all the proposal period should be revised accordingly. The Pre-Feasibility Study report needs to be prepared conforming to Part V of the Schedule of MEMC Rule 2015.
11. Para- 2.2.4.1.13 : The total mineral reserve and resources should be reconciled and corrected after compilation of all the cross sections. Also the grade wise table should be incorporated and described for each Bands used for calculation of resources. There is variation in mineral reserve in UNFC table in reference with the earlier approved modified mining plan and the same needs to be clarified.
12. Para- 2.2.5 : Details of Geological Mapping may be furnished under future exploration proposal and Petrology & Mineralogical Studies have been mentioned as Nil and the same needs to be clarified in 2.2.5.8. Also the longitude and latitude should be provided in chapter 2.5.7 Sampling.
13. Para 2.2.5.5: In this para, a clarification should be made thereunder along with table for proposed boreholes i.e. how much area will be covered or has already been covered under G1/G2 level by this proposal of exploration.
14. Para 2.2.5.7, Number of Samples proposed meter wise has not been furnished. Total number of sample proposed to be analyzed are to be furnished.

CHAPTER-3: MINERAL PROCESSING

1. Documentary evidence in support of the details furnished under para 3.1 & 3.2 needs to be annexed.
2. Para-3.7, under Para overall product quality, the word concentrate is to be omitted as only dry processing is proposed. Material balance chart/ flow diagram of mineral processing as enclosed in annexure mines name should be specified.

Chapter 4: Mining Operations (Open Cast):

1. Para-4.2.1.1: Area covered by pit and dimension of the pit should be reconciled.
2. Para 4.2.13 : The area for stabilized waste dump has been shown 15.039 Ha. in land status in chapter 6.1 but nil information has been furnished in this para, which is contradictory.
3. Para-4.2.2.1 & 2: In bench parameters, proposal for the year 2021-22 should be omitted. In year wise opencast development, bulk density should be specifically remarked below the table while considering the calculation of ROM. In the year 2023-24, mineral reject is given 20000 Tonne while recovery is 100%. This is contradictory and the same needs to be corrected. Exact location of advancement should be proposed along with grid. No Ore to OB ratio has been provided. Sequence of year wise proposal should be incorporated in all the chapter and table.
4. Para 4.3.2 : OB to Ore ratio should be corrected in Band I and mineral reject has been shown 20000 Tonnes in the year 2023-24 with a grade range from 10-52 which is contradictory while recovery has been considered 100% .
5. Para-4.4 : Machine calculation : The calculation as per the table should be reconciled and corrected as per the total handling provided in the earlier tables under this chapter. It should be re-checked and corrected.
6. Para-4.4: In Machine Calculation, the tonnage factor/bulk density as considered under para-4.4.2 & 4.4.3 are not correctly furnished. The parameters of total handling (Ore and OB), bucket capacity, fill factors, swell factor, idle time and standby etc are to be considered.
7. Para-4.6 Man power Deployment : It seems that total man power engaged per day is mismatched while calculating. It needs to be rechecked and corrected.
8. Para-4.7 : Waste management : location of the all the dumps and stacks should be specifically provided along with grid.
9. Para 4.9 : Use of mineral : specifically use of mineral in the plant as mentioned in the feasibility report should also be mentioned in this chapter.

Chapter 4: Mining Operations (Under Ground):

1. In the whole of under ground chapter, Review of Mining Plan should be replaced as Modification of Review of Mining Plan.
2. Para 4.2.2. : NIRM Report for Method of Mining should be numerically annexed. In page no. 115 of 163 of the draft document, it is mentioned that “from the year 2021-22, 2022-23 & 2023-24 an expected 60000 mt of Chrome Ore and about 1100 Cum of sideburden to be generated” This is contradictory and the same needs to be clarified.
3. Para 4.3.2: In-situ mining Underground : ROM in Tonne has been proposed in this modification period, but only two vertical shaft have been proposed during this period. The same needs to be corrected.
4. Para 4.4: Machine Calculation : All the sub chapters under this chapter has been mentioned as Not Applicable or Nil. The same needs to be clarified & corrected. In para 4.4.4 : Drill machine requirement chapter 4.2.3.2 drilling equipment are also contradictory.
5. Para 4.6 Man Power requirement: Total number of persons engaged per day and the calculation table thereunder should be reconciled with related information under different subchapter and necessary correction shall be made.

Chapter 5: Sustainable Mining:

1. Para 5.2.1: Details of work has been proposed under CSR Initiatives for 2021-22 should be omitted.

2. Chapter 6: Progressive Mine Closure Plan:

1. Para 6.1: Area under different heads as furnished under Land status should be reconciled and corrected and also matched in FA Plan.
2. Para 6.2.3.2 & 6.2.7 : Plantation proposal should be given year wise.
3. Para 6.2.3.2: The Proposed location of plantation should be matched with respective plates.
4. Para 6.2.11 : Land use of lease area in different heads at the conceptual is incorrect. The same should be corrected

Chapter 7: Financial Assurance/Performance Security:

1. The area put to use in different category year wise should be mentioned in its correct head and the same should be matched with the FA Plan.
2. Para 7.2 : The financial Assurance co-terminus to the plan period should be annexed as per MCDR Ammendment Rule.

Annexures:

1. Revised Bench wise/ RL wise calculation of proposed production during the next five years should be enclosed in annexure as per discussion during field visit.
2. Revised Feasibility report should be enclosed as briefed earlier and it should be prepared as per MEMC Rules 2015.
3. Singed copy of form-I & J to be submitted.
4. All the lithologs with chemical analysis of all the exploration work carried out till date should be submitted. The bulk density test report, recovery report etc. are to be enclosed.
5. Copy of lease deed executed, Copy of MDPA, Copy of Performance Surety, Mineral processing flowsheet with stage wise recovery, Copy of EC and Forest Clearance, Consent to Establish, Consent to operate are to be enclosed with a sequential manner as per the text of the document.
6. A CD covering the entire document, annexures (in pdf format) and plates as per guidelines at the time of final submission. An undertaking in this regards by the qualified persons that CD contains same documents, annexures & plates as submitted by hard copy of document should be given.

PLANS AND SECTIONS

1. 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. All plans and sections shall show a scale of the plan at least twenty five centimetres long and suitably subdivided.
2. 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. Same color code should be used in KML file of each plan as per submitted hard copy. A sky blue line shown along through the mines in KML format of surface geological plan which is not available in hard copy as well as in DWG File.
3. Surface Plan : Neither Proposed nor existing ETP has been indexed in the surface plan. Also Overburden dump has not been indexed.
4. Geological Plan & Section: All the geological information to be furnished on geological plan and section strictly based on the exploration. The Geological Plan should be prepared as per the extant provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017. A sky blue line shown along through the mines in KML format of surface geological plan which is not available in hard copy as well as in DWG File.
5. Development plans& Section: Mineral storage has not been shown in the year wise development plan. All features proposed year wise should be indexed properly along with the boundary wall. Proposed shaft should also be shown in the relevant plan and section as per the document.
6. Progressive Mine Closure plan and sections: All revised year wise proposals are to be depicted on the plan and sections. Year wise proposed plantation should also be marked on plan.
7. Conceptual plan and sections: Conceptual plan may be prepared considering mineralization as revealed from the borehole logs considering the life of mine as guidelines.
8. Financial Assurance Area Plan: The area degraded due to mining and allied activity to be considered in FA table are not matched with the plan.

Annexure-I

<i>AT A GLANCE INFORMATION</i>	
1	<i>Name of the Applicant /lessee</i>
2	<i>IBM Registration no</i>
3	<i>Address of Applicant</i>
4	<i>Name of Mine</i>
5	<i>Minecode</i>
6	<i>Lease area in hecets.</i>
7	<i>Forest area</i>
8	<i>Name of Mineral</i>
9	<i>Lease period from to</i>
10	<i>Plan proposal period-</i>
11	<i>Mineral Reserve (111& 112) in tonnes</i>
12	<i>Mineral Resources (211, 221,222, 331, 332, 333&334) in tonnes</i>
13	<i>Production proposal (1st yr) in tonnes 2022-23 (Mineral Name)</i>
14	<i>Production proposal (2nd yr) in tonnes2023-24 (include only saleble/ usable & sub grade mineral)</i>
15	<i>OB/Waste handling proposal 1st yr CUM</i>
16	<i>OB/Waste handling proposal 2nd yr CUM</i>
17	<i>Present EC permission in tonnes(Mineral or ROM)</i>
18	<i>Plantation proposal in two years in numbers</i>
19	<i>Plantation area proposal in two year(ha).</i>
20	<i>Back filling proposal in hecets in two years</i>
21	<i>Check Dams numbers in two year</i>
22	<i>Garland drain in meters two years</i>
23	<i>Settling ponds (Numbers)</i>
24	<i>Area put to use at end of five year in ha</i>
25	<i>Bank Guarantee Amount Rs</i>
26	<i>Validity of BG upto</i>
27	<i>Any other important information</i>