



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



REGD WITH A/D
Phone: 0674-2352463
Tele Fax: 0674-2352490
E-mail: ro.bhubaneswar@ibm.gov.in
Plot No.149, Pokhariput
BHUBANESWAR-751020

No. MRMP/A/33-ORI/BHU/2019-20

Date: 06.11.2019

To

✓ Shri Prasanna Kumar Panda, Constituted Attorney,
M/s Essel Mining & Industries Ltd,
HIG-51, Jaydev Vihar, Opp. Pal Heights,
Bhubaneswar-751013

Sub: Approval of modification of Review of Mining Plan of Kasia Iron & Dolomite Mine along with Progressive Mine Closure Plan (PMCP), over an area of 194.196 ha in Keonjhar district of Odisha State, submitted by M/s Essel Mining & Industries Ltd under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. EMIL/JLIM/628/2019-20 dated 21.10.2019.
ii) This office letter of even no. dated 23.10.2019.
iii) This office letter of even no. dated 23.10.2019 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

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 based on earlier site inspection carried out on 29.10.2019 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 modification of Review of Mining 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 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 Modification of 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 modification of 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 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.

Yours faithfully,

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Copy for kind information and further necessary action to Shri V Srikanth & Shri Khageswar Mahanta, M/s Essel Mining & Industries Ltd, At/P.o – Barbil, Dist – Keonjhar, Odisha – 758035.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Scrutiny comment of Modification of Review of Mining Plan including PMCP in respect of Kasia & Dolomite Iron and Dolomite mines, lease area-194.196 ha of M/s Essel Mining & Industries Ltd. in Keonjhar district of Odisha State.

GENERAL:

- I. On cover page the lease no., village, tehsil, district of ML and e-mail, phone & fax no. of Qualified persons should be furnished. The expiry of lease period is not correctly furnished under provision of section 8A(6) of Amendment MMDR Act 2015. Period of proposal as furnished should be prospective and it will be clearly mentioned that the proposal will be implemented from date of approval. Out of total lease area 194.196 ha it should also be mentioned that mining and allied activity is proposed in 134 ha area in light of Hon'ble Supreme Court order and as per demarcation by revenue, forest & mining department.
- II. Page-3&4, present status of lease, resumption of mining operation in light of Hon'ble Supreme Court order and demarcation over an area of 134 ha by revenue, forest & mining department etc should be discussed in introduction chapter and relevant document enclosed in annexure.
- III. As per IBM Manual on Appraisal of Mining Plan 2014, the first letter of submission of Draft Mining Plan to be signed by the Lessee/applicant in their letter head in case lessee is an Individual. In case of Partnership Firm by the Managing partner, in case of Company by the Nominated Owner. Certificates / Undertakings are also to be signed by them. However authorized signatory in case of Companies resolved by the Board of Directors specifically can be accepted provided the copy is certified.
- IV. It has been observed that, minerals dolomite & limestone included in supplementary lease deed alongwith iron ore. Therefore name of the mine revised accordingly and existence of limestone and dolomite in the lease area should be described in concerned chapter.
- V. Page-7, Para-(b), Forest area mentioned in acre, should be replaced with hectare. Sabik kissam forest area included in non-forest area should be replaced in column of forest area.
- VI. Page-12, Para-3.6, in reason of modification, order of Hon'ble Supreme Court and accordingly demarcation of an area of 134 ha out of ML area 194.196 ha by revenue, forest & mining department within which mining and allied activity is restricted should be furnished.
- VII. An undertakings should be furnished that proposed mining and allied activities will be carried out within 134.0 ha demarcated area in compliance of Hon'ble Supreme Court order. An undertaking should also be furnished that after approval of modification of review of mining plan the modification for approved FMCP will be submitted within one month from date of approval of modified RMP.
- VIII. Latest resolution of Board of Director, authorized signatory should be furnished. The CCOM circular no.2/2010 and its addendum should be implemented.
- IX. The experience certificate of qualified person should as per provision of rule 15(1)(b) of MCR 1960.
- X. Recent photographs of pits, dumps, afforestation and reclamation and rehabilitation carried out should be enclosed.
- XI. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

GEOLOGY:

- I. In Chapter Geology and Exploration the sequence of paragraph and its numbering should be covered in chronicle order as per IBM Manual Appraisal MP 2014.
- II. Page-14, the structural information like strike, dip, dip-direction etc to be furnished in text and all these information should be reflected on geological plan and section. Further, the lithology shown in the borehole log should match with the lithology shown in geological plan and sections.
- III. Page-17-19, the financial years of exploration carried are not correctly furnished. Summarized information of form-K as enclosed in annexure should be yearwise in chronicle order as per details furnished in text. The bore holes ID as furnished in approved document are not matched present. The relevant forms of intimation of bore holes should also be submitted with borehole logs as annexures.

- IV. Page-20, para-e(iii), total bore holes wise samples generated with their analysis report to be furnished. Accreditation certificate and scope of work of NABL accredited Laboratory should be enclosed in annexure.
- V. Page-21, the exploration proposal may be revised to explore the lease area at least G2 level as per rule 12(4A) of amendment MCDR 2018 as the lease is going to expire on 31/03/2020. The depth of exploration to be proposed shall be upto 300m or discontinuance of ore body whichever is earlier. All the proposed bore holes should be shown in sections and all the sections should be marked with vertical grid at 100 m interval. An undertaking should be furnished that all the proposed holes will be completed within 03 month from date of approval and accordingly geological report will be submitted to concerned authority under the provision of rule 12(4A) of amendment MCDR 2018.
- VI. The Geological boundaries of exploration limit i.e. G1/G2/G3 etc. are not marked as per Minerals Evidence of Mineral Contents Rules 2015. It should be demarcated clearly by taking influence of bore holes in sequences as per rule over the Geological Plan and Sections as discussed during field visit.
- VII. In the Geological plan and sections, the UPL should be drawn properly considering the mineralization over the lease area. The UNFC boundary/code should be properly shown.
- VIII. Page-39, the area of exploration furnished under table at is not as per MEMC rule 2015. G2 and G3 level of exploration have been considered without adequate exploration details. Accordingly table presented on mentioned page needs to be modified and remarks column should be furnished in light of proposed bore holes. Table should also be re-arranged as per guideline.
- IX. Page23, Para-j, updated figures of reserve and resources to be given as per last approved document. It has been observed from geological sections that a fresh estimation of reserve and resources is required in view of MEMC rule 2015 with due justification.
- X. In Page-24, the reserves/resources shown in the table has to be revised as per the revised justification of UNFC and revised UNFC boundaries. Also, the date has to be mentioned as on "Resources/reserves calculated. Necessary correction has to be made in reserve and resource estimation as per UNFC.
- XI. Page-25-30, the justification of UNFC has to be revised considering the present statutory clearance and level of exploration over the lease area. Also, taking into consideration the revised UNFC limit of G1, G2 and G3 and resources /reserves estimated accordingly as per the provision of MEMC Rules, 2015. Since the resumption of mining operation has been established the UNFC codes 121 to be replaced with 111 and only those parts of reserve comes under 121 which beyond the boundary of 134.0 ha area and within the lease boundary.
- XII. Pag-31, Para-k, the method of reserve estimation may be further elaborated and justified with supporting documents w.r.t recovery factor, Bulk density, Length of influence, nos. cross sections and bore holes considered in reserve and resource estimation. Necessary supporting documents to be furnished with respect to bulk density and recovery factor considered for iron ore.
- XIII. Since the resumption of mining operation has been established, the pre-feasibility report should be replaced with feasibility report and all the data should be modified as suggested above.

MINING:

- I. Page-42, para-(a), the existing method of mining has not been described properly with bench height and width, overall pit slope etc. Status mining operation and their resumption should also be described in light of order of Hon'ble Supreme Court. The dimension of existing pit/block should be furnished in following table:

Name of pit/Block	Location	Length	Breadth	Depth	Top mRL	Bottom mRL	No. of benches in ore/No. of benches in OB	Pit slope	Area backfilled	Area reclaimed & rehabilitated

- II. Page-43, proposed method of mining should be described under distinct headings with proposed nos. of benches, bottom RL and pit of slope at the end of year and nos. of pits considered for insitu excavation and manner of disposal of waste with their location.
- III. Status of mineral reject dumps furnished in light of declaration threshold value of iron ore. The existing ore stacks and processes low grade/mineral reject should be furnished in line of annual return submitted to this office with their location and it should be marked in surface plan and other relevant plan.
- IV. Page-45, in-situ tentative excavation should be furnished with total ROM production in horizontal and vertical column alongwith grade of saleable and mineral reject and bulk density considered should be furnished bullet notes.
- V. Page-47, Para-(d), salient features of proposed method should be described with location of development in UTM coordinates at the end of year, top bench RL at the end of each year, benches considered for development with RL, direction of advance, cross-section considered etc.
- VI. Page-52, Para-(e), layout of mine working & layout of faces with gradient of haul road, size of pits at the end of year, over all pit slope and location of mineral reject and backfilling with their top and bottom RL should be furnished.
- VII. The calculation of tentative excavation of OB and ROM as furnished in annexure is not matched with the tentative excavation of OB and ROM in text. It should be re-checked from development sections. Features of geological sections should be same in development sections.
- VIII. Before backfilling of the quarry as proposed it should be ensured the exhaustion of ore body in terms of their depth & extension in the interest of mineral conservation. The site of backfilling should be revised as discussed during field visit
- IX. Back filling proposal to be explained properly with mRL and area on year to year basis with description of the method & manner of disposal of waste and reclamation and rehabilitation of backfilled area.
- X. In conceptual mining, life of mine should be revised after estimation of mineable reserve as MEMC rule 2015 as suggested above. Cumulative waste generation and mineral reject, backfilling and protective measures should be furnished properly. Restoration of safety zone, dead dump and slope of the dump may describe properly.

Mine Drainage:

It has been observed that a substantial amount of rain water supposed to be passed from the lease area. Hence, a mine drainage plan to be submitted showing flow direction of the water, location of final discharge, arrangement of arresting of solid waste etc.

STACKING OF MINERAL REJECT/SUB GRADE AND DISPOSAL OF WASTE:

- I. Page-58, Para-(a), mine is going to expire in 2020 therefore blending of mineral reject should be envisaged to maximum utilization of ROM in the interest of mineral conservation.
- II. The location of dumping proposal of mineral reject/ waste should be with their RL, location and area proposed and it should be clearly marked in plan and sections.
- III. It has been observed during inspection that some of the dumps are lying within the UPL. Therefore a proposal should be furnished to re-handle the dumps lying within ultimate pit limit.
- IV. The details of the existing dumps (top soil, waste dump, mineral reject dump) within the lease area in tabulated form comprising dump number, designed capacity, present quantity, remaining quantity, bottom RL and top RL.
- V. The details of mineral reject dumps and their analysis report should be submitted and discussed for their future use on the basis of their physical and chemical properties.

- VI. It has been observed during inspection that mineral reject dumps are not completely covered with retaining wall, garland drain, settling tank etc. Therefore proposal should be furnished accordingly in tabular form.
- VII. All the mineral rejects dumps which are not proposed to re-handled should be proposed covered with coir mating.

PROGRESSIVE MINE CLOSURE PLAN:

- I. Page-67, Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
- II. Para-8.1, 8.1(i), 8.6, the existing land use pattern as furnished in tables are not matched with approved review of mining plan dated 05/09/2017 as the further area is not degrade due to suspension of mining operation. It should be clarified and amount of financial assurance is to be calculated accordingly as per rule 27(1) of MCDR-2017.
- III. The lease is expiring in 31st March 2020, therefore PMCP submitted in instant document should in line with the FMCP.
- IV. Page-70, human settlement should be furnished as below:
Population structure of villages

Srno.	Name of villages	Total no. of household	Population			Literacy %
			Total	Male	Female	

Category of population

Sr no.	Name of villages	Schedule cast		Schedule Tribe		Literacy %
		Male	Female	Male	Female	

- V. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity for last one year to be enclosed.
- VI. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished. Planation proposal on matured area may be given for their rehabilitation. Accordingly proposal of plantation, coir matting/geo textile of in-active dumps etc may be furnished and table furnished at page no.-79 should be revised.
- VII. Page-77, Para-8.3, Back filling proposal of exhausted dolomite quarry has not been explained properly. The proposed backfilling, reclamation and re-habilitation to be carried out should be furnished as below:

Year	Pits/ Quarries	Area beginning of year(ha)	Additional degraded during year(ha)	Area to be reclaimed by backfilling(ha)	Area rehabilitated by plantation (ha)	Balance area at the end of year

Year	Nature of dump	Area at the beginning of the year (ha)	Additional area degraded during year (ha)	Area to be rehabilitated during the year(ha)	Balance area at the end of year (ha)

- VIII. Describe the proposals to be implemented for securing the excavation/pits/mineralized dump or mineral rejects stacks/fine stacks by means of fencing etc. Explain the safety measures implemented to prevent access to surface openings, excavations etc.
- IX. All the active dumps should be proposed with extension of retaining wall and garland with settling tanks with proper terracing and stabilization of slope. The dead dumps should be proposed for fully rehabilitation by plantation and with gap plantation if necessary. The proposed and existing retaining wall, garland drain and settling tanks should be clearly marked yearwise on reclamation plan.

- X. Time scheduling for proposed activity and cost parameters to be furnished. The sequence of paragraph and its numbering should be covered in chronicle order as per IBM Manual Appraisal MP 2014.

Pre-Feasibility report:

Pre-feasibility report should be replaced with feasibility report. The details of existing infrastructure available in the lease area should be furnished in tabular form and their present value after depreciation. Further their future utilization should be evaluated on case to case basis. The decommissioning cost and final value of the decommissioned infrastructural facilities if any may be furnished. NPV and IRR should furnished including cost of infrastructure and closure and preventive measure to be taken.

PLATES (General):

- I. The plans and sections submitted, should 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 centimeters long and suitably subdivided. All plans & sections prepared shall follow the sign conventions under MMR 1961.
- II. Connecting road in Key plan to be highlighted. Wind direction may show through wind rose diagram in key plan and environmental plan.
- III. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist. Magnetic Meridian and its date of observation of should be furnished on all relevant plans. The UPL should be shown in red colour in all relevant plans and sections.
- IV. The demarcation plan of 134.0 ha out of total; lease area 194.196ha as submitted through plate no.-xii should follow the all relevant plans and sections of boundary of 134.0 ha area submitted in instant document.

Surface Plan:

Virgin area is to be shown by contours and spot RL in surface plan. Forest & Non forest area, Surface right acquired area etc. should be marked clearly. All the mineral reject dumps, mineral stacks, OB dumps should clearly notified with nos. and their RL. Avoid very dark color to show the surface features distinctly, hatching pattern for plantation to be changed. Some of the features are not symbolized in index.

Geological Plan & Section:

Data related to strike, dip, dip-direction etc. shown on the geological plan clearly. Geological Plan and Geological section not matched each other and geological section not synchronized with geological plan. In the Geological Plan UNFC boundaries of G1, G2 .. area has not been furnished as per MEMC Rules 2015. The Proposed bore holes with their depth should be marked in sections. Projected bore holes is to be denoted by (P) for better understanding. In sections UNFC codes have not been furnished in reference to UPL and influence of bore holes as per MEMC Rules 2015. Vertical grid to be drawn in Geological section & Development section. Section line 0-0 is not marked in the plan, section line number to be shown in outside the MLB. Dump to be shown clearly in sections. Section 8 & 9, UPL to be corrected and should be uniform in all plans & sections. In sections some of the benches are shown outside UPL, it may be corrected.

Development plan & Section:

Proposed Bench RL in Development section to be prominent. Section- 20 & 21, profile of section not matched with plan it is to be re-checked & corrected. Proposed location of backfilling to be redefines as suggested and it should be shown in development plan & section. Different types of ore encountered through bore holes and based on bore holes data ore profile and UPL to be shown in development plan & sections.

Environment plan:

The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017. The 60 m boundary with contour and 500 m boundary with surface features from ML boundary to be shown.

Reclamation Plan: Proposals of land restoration/reclamation/rehabilitation, afforestation, waste dump management, safety and security pits and dumps by fencing with their sketches and existing and proposed retaining & garland wall, settling pond etc should be furnished.