



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



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No. MPM/FM/07-ORI/BHU/2018-19

Date: 25.04.2018

To

✓ Shri V Srikanth, Jt. President(Operation)  
M/s Essel Mining & Industries Ltd,  
At/P.o – Barbil, Dist – Keonjhar,  
Odisha – 758035

Sub: Approval of Modification of Mining Plan of Jilling Langalata Iron & Mn Mine along with Progressive Mine Closure Plan (PMCP), over an area of 456.100 ha in Keonjhar district of Odisha State, submitted by M/s Essel Mining & Industries Ltd under Rule 17 of MCR, 2016.

Ref: - i) Your letter No. EMIL/GOEL/22/2018-19 dated 08.04.2018.  
ii) This office letter of even no. dated 10.04.2018.  
iii) This office letter of even no. dated 10.04.2018 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 11.04.2018 by Shri G C Sethi, Deputy 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 27 of MCDR 2017 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

**SCRUTINY COMMENTS ON EXAMINATION OF MODIFICATION OF SCHEME OF MINING AND REVIEW OF MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR JILLING LANGALOTA IRON & MANGANESE MINE OF M/S ESSEL MINING & INDUSTRIES LTD., OVER AN EXTENT OF 456.100 HECTARES, LOCATED IN VILLAGES JALAHURI JURUDI, BANSPANI, KHUNTPANI BHOLEBEDA & JAJANG AND BAITARANI RESERVED FOREST, UNDER BARBIL TAHASIL OF KEONJHAR DISTRICT OF ODISHA STATE, SUBMITTED UNDER RULE 17(3) OF MCR, 2016 & 23 OF MCDR, 2017.**

(1) (i) On examination of the front cover, it is found that, the document has been submitted for modification of scheme of mining & review of mining plan, under Rule 17(3) of MCR, 2016 but there is no provisions for submission of modification of scheme of mining. (ii) Even if you have submitted the modification of scheme of mining, the period for which such modification has been submitted is not indicated. (iii) The review of mining plan has also been submitted along with the modification of the scheme of mining but the period for such review is not known. (iv) On verification, it is found that, the last scheme of mining was approved on 13.06.2014, which is valid upto 31.03.2019 and the validity of the lease has been extended upto 31.03.2020 but there is no clarity in the front cover, about the modification period & the review of mining plan period, which should be indicated specifying the modification period for 2018-19 & the review period for 2019-20. In view of the above, the document for modification & review of mining plan should be submitted under Rule 17(1) of MCR, 2016 instead of rule 17(3). (v) Full postal address of the company & the registration number allotted by IBM, under Rule 45 of MCDR, 1988 also missing. Accordingly, necessary modifications / incorporations may also be made at other places in the document.

(2) In the consent letter /undertaking /certificate from the applicant, the signature of constituted attorney cum unit head is missing, thereby the consent given by him for preparation /modification of the document has no authenticity. The village name Jurudi has been indicated to be as Juruli, which should be corrected. Besides, the consent has been given for preparation /modification of review of mining plan but the document has been submitted for modification & review of mining plan, thereby necessary corrections/modifications should be made in the consent letter for its correctness. Moreover, the consent letter has been signed by Shri Prasanna Kumar Panda in his capacity as Constituted Attorney cum Unit head but in the power of attorney enclosed as annexure-19A & 19B, there is no mention about the signing of the mining plan/IBM related document, thereby the enclosed power of attorney is not acceptable in its present form for submission of the document.

(3) In the certificate from the qualified persons, the reference for preparation of review of mining plan has been given, whereas the document has been submitted for modification and review of mining plan, thereby necessary corrections may be made in the certificate accordingly.

(4) In the consent letter /undertaking /certificate from the applicant, the name of the three persons has been mentioned as the qualified persons but in the enclosed annexure only two persons has been signed, which should be checked and signed by all qualified persons.

(5) As per the contents for the list of annexures, the enclose annexures are not numbered, which should be done for ease in monitoring.

(6) The consent order, dated 26.02.2018 is stated to be enclosed as annexure-07 but in the enclosure side, such numbered annexure is missing, thereby the same should be submitted.

(7) The environmental monitoring report for January 2018 to March 2018 has been enclosed as annexure-14; instead the same for last four seasons should be submitted for more informative.

(8) The qualification, supervisory experience & ID proof in favour of Shri Rajendra Kumar Sahoo, who has been signed in the text part of the document is missing, which should be submitted.

(9) A copy of the valid Bank Guarantee matching to the proposed period from 2018-19 to 2019-20 has not been enclosed and the same should be submitted replacing the enclosed one as annexure-23.

(10) The copy of the explosive procurement license issued by the competent authority in favour of M/s Essel Mining & Industries Ltd., has not been enclosed. Besides, a copy of the blasters license issued by the competent authority for carrying out blasting operations may also be submitted.

(11) The chemical analysis report of iron ore samples has not been enclosed and the same should be obtained either from a NABL accredited laboratory or from a Govt. laboratory & enclose along with the document.

(12) It is found that, a good number of boreholes are already drilled in the lease area but the litho logs for such holes has not been enclosed as annexure to the document, which should be submitted indicating coring & non-coring status of such boreholes. Besides, the borehole analysis report may also be submitted.

(13) The DGPS surveyed map/plan in compliance to CCOMs circular No.2/2010 and its addendum dated 21.09.2011 & 11.06.2014 regarding geo-reference cadastral map has not been submitted.

(14) The number of years for which professional experience claimed by all the three qualified persons are not supported by documentary evidences, thereby the same may be submitted. [Para 1.0(f)]

(15) The actual achievements of plantation for the period from 2014-15 to 2017-18 has been furnished in 3<sup>rd</sup> column of the 2<sup>nd</sup> table given in the para under reference but the location co-ordinates of such plantation is missing, which should be furnished by adding one more column right to the table with proper plate reference for ease in monitoring. [Para 3.3(iii)]

(16) During the years 1998, 2001-05, 2009-11 & 2013-14, there are 278 nos. of boreholes were drilled but the borehole logs & analysis report in support of such holes has not been enclosed, which should be submitted. Besides, the extent of lease area already explored by putting the boreholes may also be indicated. Accordingly, necessary modifications /incorporations may also be made in connected paras in the text with proper plate reference. [Para 1.0(e)(ii)]

(17) All the samples from the boreholes were mentioned to be analysed with different NABL accredited laboratories but no such analysis report has been enclosed along with the document and the same should be submitted. [Para 1.0(e)(iii)]

(18) The entire potentially mineralized zone to be explored upto G1 level of exploration, It is observed that the proposed exploration programme is inadequate to explore entire area under G1 level of the exploration. Hence, proposal of the exploration to be given in accordance to the Minerals (Evidence of Mineral Contents) Rules, 2015 to explore entire mineralized zone under G1 level of exploration. Further, details of exploration to be furnished in the following format:

Sl.No	Year	BH No	Northing	Easting	Collar RL	Core/RC/DTH	Metage	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. The same may also be depicted on the plate submitted for Geological plan. [Para 1.0(h)(i)]

(19) The tonnage conversion factor for different materials has been furnished in tabular form but the bulk density test report for none of the material has been enclosed, thereby the bulk density

study report for all type of materials should be obtained either from Govt. laboratory or from NABL accredited laboratory and enclose along with the document for ease in monitoring. (Page No. 26)

(20) Grade wise reserves & resources as on 01.04.2018 has been furnished in tabular form but the calculation in support of such reserves/resources has not been furnished, which should be computed considering the following:- (i) Up to what depth, the resources have been estimated is not known & the same has not been linked with the borehole analysis report of the individual boreholes in the particular grids. (ii) The recovery of iron ore percentage from ROM is not explained, which should be supported by an authenticated recovery test report from NABL accredited laboratory with valid scope of accreditation for iron ore. (iii) No authenticated analysis report for the grades of the resources/reserves indicated in 1<sup>st</sup> table given in the page under reference. (iv) Bulk density study report from NABL/Govt. laboratory also not taken into account for the reserves/resources estimation. In view of the above, it is found that, the reserves/resources estimated are not as per the UNFC guidelines. For reserves estimation, the following procedure is to be followed:-

Initially cross section wise reserves/resources should be established for G1, G2, G3 and G4 categories of UNFC system based on the degree of exploration and prospecting carried out in the entire lease area as per criteria laid down in the guidelines. This should include the entire resources within the lease including the boundary barriers, mineral to be locked up in benches etc. After this, the geological reserves/resources should be upgraded to various categories of UNFC based on their feasibility and pre-feasibility studies with suitable justification for each category. Further, the reserves /resources which is not mineable due to statutory barriers, safe working of the mine, waste dumping, internal roads, forest area for which clearance is not there should be put under the (211), (221) & (222) resources category of UNFC. Reserves below the cut-off grade should also be put under the feasibility / pre-feasibility resources category and the same should be adequately discussed in the feasibility study report. Accordingly, corresponding changes may also be made in geology & exploration chapter. (Page No. 27)

(21) Existing method of mining has not been furnished in detail as per the heading of the para, which should be discussed, including the existing status of dump, reclamation, rehabilitation & afforestation etc. for more informative. Besides, nothing has been discussed about the proposed method of mining and the same should also be furnished by giving proposed bench formation status both in overburden & in ore zone, dumping, reclamation & rehabilitation etc. for clarity. If the existing quarries are proposed to be developed /extended, the same may also be furnished. In the light of the above; the entire para may be revised. [Para 2.0(A)(a)]

(22) In the table furnished, under the heading **Insitu Tentative Excavation**: The following observations are made: (i) The proposed generation status of OB/SB/IB, ROM & mineral reject has been furnished in tabular form but the bench/RL of the excavation planning has not been given, which should also be furnished. (ii) The recovery percentage of iron ore, mineral reject, sub-grade & waste/overburden generation is missing. (iii) The location co-ordinates of the excavation planning for each year also not furnished and the same may also be given by adding one more column in the table with proper plate reference. (iv) The grades of iron ore, mineral reject, sub-grade material and the OB/waste may also be furnished supported by authenticated chemical analysis report. Accordingly, corresponding incorporations /modifications may also be made in connected paras in the text & relevant plates. [Para 2.0(b)(I)]

(23) The location co-ordinates of the proposed workings should be furnished indicating the direction of advancement of quarry faces. Besides, the height, width & length of individual benches may also be furnished indicating the bench specifications/parameters for each year of the mine development. The status of dump for waste and sub-grade materials/mineral rejects & the location

co-ordinates proposed for the same with size/capacity and direction of advancement may also be discussed. Moreover, the requirements of reclamation & rehabilitation may also be furnished. In the light of the above, the information furnished in para 2.0(e) may also be revised. [Para 2.0(d)]

(24) The conceptual pit dimensions of the mining blocks has been furnished in tabular form but the depth of the blocks has not been furnished. Moreover, no clarity about the conceptual dimension of the blocks, whether it is upto 31.03.2020 or beyond to be specified. In any case, it should be upto the extended lease period. Therefore, necessary modification/incorporation should be made in relevant paras in the document. (Page No. 45)

(25) Under the heading **Sub-Grade Ore**, a table has been furnished for the existing sub-grade dumps but nothing has been given about the proposed generation of the same during each year of the ensuing modification period and also the manner of disposal of the same, which should be discussed and the para may be revised accordingly. [Para 4.0(a)]

(26) The proposed generation status of waste materials during the review of mining plan period has been furnished, instead the same for the modification & review period upto 2019-20 should be furnished. Besides, nothing has been given about the size /capacity /number of terraces /length & number of retaining wall /garland drains etc. for the dumps proposed during each year of the ensuing two years period and the same should be furnished with proper plate reference for ease in monitoring. [Para 4.0(b)]

(27) Manner of disposal of waste generated during the each year of the ensuing modification /review period should be furnished, instead of giving the proposed generation status of the waste materials. [Para 4.0(c)]

(28) The end use specification is given for the Fe grades 62 to 65%, whereas, the reserves have been estimated for the Fe grades varies from 45 to 54% Fe respectively. Thus, major quantities of production proposed from the mine are suspected to be non-salable. Therefore, the end use specification should be revised suitably. [Para 5.0(a)]

(29) It is found that both lumps and fines of iron ore is proposed to be produced from the mine but nothing has been mentioned about the percentage generation of lumps and fines, which should be mentioned and the para may be revised accordingly. [Para 5.0(c)]

(30) The flow sheet for the screening/crushing unit has not been given and the same should be furnished. [Para 5.0(e)]

(31) In second column of the table furnished in the para under reference, the land use by end of the plan period has been furnished, instead the same by end of each year of the modification/review period should be furnished for ease in monitoring. (Para 8.2)

(32) Block wise/quarry wise extent of area proposed to be degraded in each year of the ensuing modification/review period should be furnished. Besides, block wise/ quarry wise extent of area utilized for dumping, reclamation, rehabilitation & afforestation for each year of the aforesaid period may also be furnished. All should be furnished in tabular form and rest of the things should be erased. (Para 8.3.1)

(33) In 1<sup>st</sup> row of the table, the items for afforestation in relation to dump management has not been properly addressed for the period from 2018-19 to 2019-20 and the proposal given in the tables may be revised suitably. (Page No. 76 to 77)

(34) The names of the person responsible during the emergency should be furnished. Besides, nearest fire stations, hospitals and police station is required to be mentioned for more informative. (Para 8.4)

(35) The financial assurance in the form of Bank Guarantee @ Rs. 300000/ha for the extent of area put to use in different counts has not been submitted, instead an old bank guarantee has been enclosed as annexure-23, which is not acceptable in its present form. (Para 8.6)

(36) In volume-III, the contents for list of plates/drawings have not been mentioned, which should be furnished. Moreover, the contents for list of plates furnished in volume-I is not matching with that of the plates submitted along with the volume-III of documents, thereby necessary incorporations /corrections may be made accordingly.

(37) All the plan & sections submitted along with the modification/review of mining plan should be certified by the Qualified Persons indicating that, **the plans and sections are prepared based on the lease map authenticated by the State Govt. of Odisha and found to be correct.**

(38) Drawing No. I (Key Plan): The details of the deficiencies found on the plate are as follows: (i) Single index reference is given for mettaled /un-mettaled roads, instead two separate indexes for the same should be furnished. Accordingly, the feature for different types of road may also be depicted on the plan portion of the plate. (ii) Direction of flow of River/nala is missing on the plan portion of the plate. (iii) The index reference given for reserved forest is not matching with that of the plan. (iv) Population of the villages falling within 5km radius of the lease area also not furnished in the plan portion of the plate. (v) 25cm long scale has not been marked on the plate.

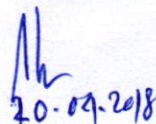
(39) Drawing No. II (Lease Plan): The lease plan submitted along with the document has not been authenticated by the State authorities, therefore, not acceptable in this form.

(40) Plate-II(A): Joint surveyed present land use map has been submitted but the same has not been signed by the different Govt. officials involved for its authenticity.

(41) Drawing No. III (A)(Surface Plan of Jajang & Langalota Block): (i) A single plate for lease plan has been submitted along with the document as per the requirements of the lease plan, whereas three part plans for the same has been submitted, instead the a composite surface plan showing all the existing features in the entire lease area need to be submitted. (ii) The index reference given for reclaimed area to be checked with the field positions and ground reality to be depicted. (iii) The pillar co-ordinates of all the lease boundary pillars have not been mentioned, which should be furnished. (iv) Atleast three permanent ground control points beyond the lease area has not been selected, which should be done. Besides latitude and longitude of those ground control points should be furnished and the ground control points need to be linked with boundary pillars.

(42) Drawing No. IV(A) (Geological Plan of Jajang & Langalota Block): (i) There are three part plans for geological plan has been submitted instead the a composite geological plan showing all the geological features of the entire lease area need to be submitted. (ii) As per the new Minerals (Evidence of Mineral Contents) Rule,2015, the level of exploration at different stages (G1,G2,G3,G4) and unexplored area should be properly defined in tabular format and the same should be marked on the geological plan. (iii) The exploration proposal covering the entire lease area to the G2 level of exploration should be proposed and the same should be completed during 2018-19. Accordingly, necessary modifications/incorporations may also be made in Geology and Exploration chapter.

(43) Drawing No. V(A-1) (Geological Sections of Jajang & Langalota Block ): The geological index given in the geological sections are not matching with that of the geological plan, thereby the indexing as well as the lithology for sections should be revised in such a way that, the same will match with the geological plan.

  
20.09.2018

(G. C. SETHI)

Deputy Controller of Mines