



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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Date: 27.10.2017

No. MS/FM/24-ORI/BHU/2017-18

To

✓ Shri Sudhansu Kumar Das,
Addl. General Manager (Geo),
Power of Attorney Holder
Odisha Mining Corporation Ltd.
OMC House, Bhubaneswar- 751001

Sub: Approval of Review of Mining Plan of Khandabandh Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 366.311 ha in Keonjhar district of Odisha State, submitted by M/s Odisha Mining Corporation Ltd under Rule 17 of MCR, 2016.

Ref: - i) Your letter No. 14142/OMC/17 dated 27.10.2017.
ii) This office letter of even no. dated 04.10.2017.
iii) This office letter of even no. dated 04.10.2017 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 Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection dated 09.10.2017 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 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 final 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.

Yours faithfully,

(HARKESH MEENA)

Regional controller of Mines

SCRUTINY COMMENTS ON EXAMINATION OF REVIEW OF MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR KHANDABANDH IRON ORE MINE OF M/S ODISHA MINING CORPORATION LTD., OVER AN EXTENT OF 366.311 HECTARES, LOCATED IN KHANDABANDH, JAROLI, JALAHARI, JAJANG & GURUDA VILLAGES, UNDER BARBIL TAHASIL OF KEONJHAR DISTRICT OF ODISHA STATE, SUBMITTED UNDER RULE 17(1) OF MCR, 2016 AND RULE 23 OF MCDR, 2017.

(1) On examination of the front cover, it is found that, originally, the lease was granted and executed for 30 years from 30.11.1963 to 29.11.1993 and since then, the lease was not renewed by the State Govt. even after the 1st & 2nd renewal filed by M/s OMC Ltd. When the validity status of 1st & 2nd renewal lease period is not authenticated by the State Govt., how it is so clearly indicated in the front cover, not understandable. Moreover, copy of the lease extension letter from the state authorities has not been enclosed, which should be submitted and the lease status given in the front cover should be revised accordingly.

(2) The consent order, dated 24.09.2012 from State Pollution Control Board, Odisha has been enclosed as annexure-16 but the same has already expired on 31.03.2013, thereby a valid consent for the same should be submitted.

(3) The copy of the surface right letter, enclosed as annexure-17 is not clearly legible, thereby a fresh and legible copy of the same should be submitted replacing the enclosed one for more informative.

(4) On examination of the enclosed annexure-17B, it is found that, the analysis report of iron ore samples from many analytical laboratories are enclosed and the reports are very old analysed during 2004 to 2010 but it is not known, whether the reports pertains to litho logs of bore hole analysis or for anything else should be explained. As per the contents for list of annexure, the NABL certificates & reports are enclosed but no such NABL Accreditation certificate for none of the analytical laboratory has been enclosed.

(5) The copy of the bank guarantee enclosed as annexure-18 was valid upto 31.03.2013 and the review of mining plan has been submitted for the period from 2018-19 to 2022-23, thereby a valid bank guarantee matching to the proposed plan period for the area put to use in different counts should be submitted replacing the enclosed one for ease in monitoring.

(6) The copy of the environmental monitoring report has been enclosed as annexure-19 but on examination of the same it is found that, the data furnished in the annexure pertains to the year 2005-06, which is very old and not acceptable for this review of mining plan. Therefore, a fresh report for the same should be submitted obtained either from a NABL Accredited laboratory or from a Govt. Laboratory incorporating the latest environmental data for its authenticity/validity.

(7) The copies of qualification & experience in favour of both the qualified persons has been enclosed as annexure-20 but on examination of the same it is found that, (i) one Shri Sunil Kumar Kar, qualified person has not submitted the minimum supervisory experience of five years as required under the statute. Besides, the I.D proof in support of him also not submitted. (ii) The other qualified person Shri Ganga Ram Verma has submitted the experience certificate from M/s MECON Ltd., including four other names in the certificate indicating the experience in the field of mining for more than five years but the capacity in which Shri Verma has been worked & the field where he has been worked not mentioned, thereby specific field experience for minimum five year In support him has to be submitted as required in the statute. Moreover, I.D proof in support of Shri Verma also not enclosed.

(8) The details of resources/reserves established at 45% Fe cut-off has been furnished in the enclosed annexure-22 but on examination of the same, the following observations are made: (i) The resources have been estimated for average thickness of 6m in between the two mRLs but the same has not been linked with the borehole analysis report of the individual boreholes in the particular grids. (ii) The basis on which the recovery of iron ore percentage has been computed 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 the 5th column of the above referred annexure, which should be from the basis of the litho log analysis of the bore hole samples of individual bore holes. In view of the above, it is found that, the reserves 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.

(9) The calculations for ore, sub-grade & waste for the year 2018-19 has been enclosed as annexure-23 and on examination of the same, the following observations are made: (i) The cross sections considered and location co-ordinates for excavation planning has not been furnished. (ii) The recovery percentage of the iron ore, sub-grade & waste generation is missing. (iii) The grades of iron ore, sub-grade material and the waste may also be furnished supported by authenticated chemical analysis report along with the scope of accreditation of the NABL accredited analytical laboratory. In view of the above, the calculations for excavation planning furnished in the enclosed annexure-24, 25, 25A & 25B may also be revised. Accordingly, corresponding incorporations/modifications may also be made in connected paras in the text & relevant plates.

(10) Typical designed of retaining wall, garland drains & settling pit has been enclosed as annexure-28 but the same has not been linked with the relevant plates/drawings. Besides, no information regarding the existing/proposed dump(s)/stack(s) for which the design of such retaining wall, garland drains & settling pit has been proposed should be co-related.

(11) Form-J for drilling 210 nos. of diamond core drill holes has been enclosed as annexure-30 but permission from DFO, Keonjhar division for drilling 16 nos. of bore holes has been enclosed as annexure-29. It is found that, out of the entire lease out area of 366.311ha, an extent of 345.189ha is considered as forest land as indicated in the front cover of the document, thereby permission accorded by forest department for drilling rest of 194 bore holes should be submitted, otherwise suitable clarification in this regard may be submitted.

(12) The Form -K for a good number of drilled bore has been enclosed as annexure-31 but necessary certificate from M/s OMC Ltd., indicating number of bore holes for which the Form-K has been submitted has not been furnished, which should be submitted for its authenticity.

(11) The copy of the common boundary working permission in favour of M/s Kalinga Mining Corporation has been enclosed as annexure-36 but the copy of the relevant plan approved by DGMS has not been enclosed. Besides, how the M/s OMC Ltd., is affected/benefited by such common boundary permission may also be indicated. Besides, the permission accorded for such common boundary working permission in favour of M/s OMC Ltd., may also be submitted if any.

(12) Air, surface water, ground water, noise & vibration analysis report in respected of Khandabandh iron ore mine of M/s OMC Ltd., has not been enclosed as annexure to the document, which should be submitted for all four seasons of the year, either from NABL accredited laboratory or from a Govt. Laboratory for more informative.

(13) The copy of the explosive procurement license issued by the competent authority in favour of M/s Odisha Mining Corporation Ltd. in favour of Khandabandh iron ore mine 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.

(14) 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.

(15) No photographs in support of the existing dump, reclamation, rehabilitation & afforestation etc. have been enclosed along with the document, which should be submitted for more informative.

(16) On examination of contents for drawings, the same has been numbered in the manner like MEC/Q7DU/11/16//01, instead the plates should be either numbered like 1, 2, 3 etc. or I, II, III for ease in identification/monitoring. Besides, Shri S.K. Kar & Shri Ganga Ram Verma are supposed to sign the document in their individual capacity as the qualified persons and their connection to any other organization should not be reflected in the document except the desired professional experience if any issued by the concerned organizations. Moreover, neither M/s OMC Ltd., nor M/s MECON Ltd. is considered as the qualified persons. In view of the above, necessary corrections/modifications should be made in the document.

(17) Under the heading **status of the lease**, it is mentioned that, the lease is deemed to be valid till 29.11.2033 but the copy of the lease extension letter from State Govt. of Odisha has not been submitted & the para may be revised accordingly.

(18) Under the heading **status of consents from State Pollution Control Board**, the validity status of consent to establish & consent to operate enclosed as refer annexure-16 has already lapsed but fresh and valid consent to establish & consent to operate has not been submitted.

(19) Under the heading **common boundary working permission**, it is mentioned that, the lessee has been granted common boundary working permission but on examination of the same it is found that, the common boundary working permission has been granted to M/s Kalinga Mining Corporation and no to M/s OMC Ltd., thereby the para may be revised accordingly. If the common boundary working permission with M/s KMC has been granted to M/s OMC, the copy of the same along with relevant plans is required to be submitted. Accordingly, the position of common

boundary working should be marked in relevant plans & sections submitted along with the document.

(20) Under the heading **status of approvals under MCDR**, the approval status of five number of mining plan/modification of mining plan/scheme of mining has been furnished but only the copy of the approval letter of modification to approved mining plan, dated 14.09.2016 has been enclosed as annexure-10, instead the copies of the approval letter of all the document referred in the para should be submitted. Besides, it is mentioned that, the geo-referenced lease map has been prepared by the State Govt. and handled over to M/s OMC but the copy of such geo-reference map has been submitted along with the document.

(21) The designation of both the qualified persons are mentioned as mining engineers and Deputy Manager (Mining) /Manager (Mining) in the para under reference, which is not proper, thereby necessary corrections may be made suitably. [Para 1.0(f)]

(22) The proposed & actual achievement status of afforestation has been furnished; under the item 3.3(iv) instead the same should be furnished in appropriate place for ease in monitoring. [Para 3.3(iii)]

(23) The proposed and actual reclamation & rehabilitation status for the last approved mining plan/modification of the mining plan should be furnished and the para may be revised accordingly. [Para 3.3(iv)]

(24) On examination, it is found that, the lease area covers 366.311ha, whereas, an extent of 250.62ha of area has been mapped geologically with different scales but why the geological mapping for the entire leased out area has not done so far even if this is a very old mine, which should be explained and the para may be revised accordingly. [Para 1.0(e)(i)]

(25) During the period from 2004-05 to 2012-13, there are 372 nos. of bore holes were drilled & till March 2004 to 2006-07, 202 nos. of DTH drill holes were drilled and the borehole logs for the same has been enclosed as annexure-31 but 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. **The balance un-explored area should be proposed under exploration in the form of coring boreholes with 100m x 100m grid interval during the ensuing review of mining plan period.** Accordingly, necessary modifications/incorporations may also be made in connected paras in the text with proper plate reference. [Para 1.0(e)(ii)]

(26) In the 1st table given in the page under reference, it is mentioned that, the bore holes were drilled with **less than** 100m x 100m grid, instead the actual grid pattern of the drilled holes should be furnished for accuracy of the information. Moreover, the grid pattern of the bore holes should also be marked in the surface plan and geological plan for ease in monitoring. (Page No. 28)

(27) Below the 1st table given in the page under reference, it is mentioned that, the forest permission for drilling bore holes are enclosed as annexure-29 but in the referred annexure, the DFO, Keonjhar division has accorded permission for drilling only 16 nos. of bore holes but it is not known how 781 nos. of boreholes were drilled in the lease area should be mentioned. It is suspected that, the bore hole logs enclosed as annexure-31 pertains to Khandabandh lease of M/s OMC or for any other lease of the aforesaid company has no clarity. Accordingly, the entire reserves estimated based on the G1 level of exploration should be checked & revised. Otherwise, the reserves/resources of the lease should be estimated based on the 16 nos. of bore holes for which permission was accorded by the DFO. (Page No. 28)

(29) In the 2nd table given in the page under reference, it is seems that, the entire lease area of 366.311ha has been explored under UNFC norms, which appears to be not correct; thereby the table may be revised by furnishing the actual data/information. (Page No. 28)

(30) In the 3rd table given in the page under reference, an extent of 198.9175ha is stated to have been explored up G1 level but not nothing has been given about the level of exploration for G2, G3, G4 & unexplored area, which should be furnished and the table may be revised accordingly. (Page No. 28)

(31) The bore holes are stated to be analysed in the NABL Accredited laboratory but no NABL accredited certificate with scope of accreditation for iron ore has been submitted. Besides, out of the total analysis, atleast 10% of the analysis should be done by third party NABL/Govt. Laboratory but the same has also not been done. (Page No.29)

(32) In the 1st table given in the page under reference, year wise exploration proposal for the ensuing five year period has been furnished but the extent of area proposed to be explored in each year has not been furnished, which should be furnished by adding one more column right to the table for more informative. (Page No.30)

(33) The reserves/resources are estimated as on 01.04.2015, instead updated reserves/resources as on date should be calculated and furnished. Accordingly, corresponding changes may also be in connected paras in the text of the document. (Table 3.6)

(34) (i) In the 1st table furnished, under the heading **Insitu Tentative Excavation**, the following observations are made: (i) During the years 2020-21 & 2021-22, there are three nos. of quarries are proposed under excavation planning, which is not proper instead only one or two quarries can be planned to achieve the proposed yearly production. Accordingly, corresponding modifications may also be made in the drawings submitted for development plans & sections. (ii) The recovery percentage of the iron ore, sub-grade & waste generation is missing. (iii) The grades of iron ore, sub-grade material and the 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)]

(35) The name of the quarry(s)/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 dumps both for waste & sub-grade materials & 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(f) may also be revised. [Para 2.0(e)]

(36) Pit/quarry wise extent of area proposed to be degraded in each year of the ensuing five year period should be furnished. Besides, pit 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)

(37) The name & contact number 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)

(38) The financial assurance calculations furnished below the table furnished in the para under reference is appears to be not correct, which should be checked & corrected. (Para 8.6)

(39) All the plan & sections submitted along with the 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.**


(40) Drawing No. MEC/Q7DU/11/16/01(Key Plan): The details of the deficiencies found on the plate are as follows: (i) Population of the villages falling within 5km radius of the lease area has not been given in the plan portion of the plate and the index reference for the same also not furnished. (ii) Direction of flow of River/nala is missing, which should also be furnished.

(41) Geo-referenced mining lease Map: (i) The name of the plate furnished in the contents for the drawing is different, thereby the same should be corrected. Besides, the plate has not been numbered as indicated in the contents. (ii) The plate is considered as the geo-referenced map but it is a DGPS map, thereby the plate for geo-referenced map should be submitted. (iii) The mining lease was granted & executed over an extent of 366.311 ha but the so called geo-referenced map has been prepared, over an extent of 194.196ha.

(42) Lease Plan: The plate has not been numbered as per the contents for the drawings. In the contents, the plate is named as original lease plan, which is not correct. Moreover, the lease area marked on this plate is not clearly legible; thereby the same should be replaced by a fresh & legible copy.

(43) Drawing No. MEC/Q7DU/11/16/03A (Geological Part Plan): (i) The geological part plan has been prepared in 1:2000 scale and submitted in 7 numbers of plates, even though IBM has permitted to prepare the surface plan and surface geological plan in scale 4000:1 but the same has not been done, thereby the geological plan should be prepared in the approved scale of 4000:1 depicting all the existing & proposed geological features. Accordingly, the drawings submitted for geological sections may also be revised. (ii) Besides, 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. Accordingly, necessary modifications/incorporations may also be made in Geology and Exploration chapter in the text.

(44) Drawing No. MEC/Q7DU/11/16/05 (Surface Plan): There are three number plates for surface plan has been submitted, instead a single plate drawn in 1:4000 scale is required to be submitted.


27.10.2018
(G. C. SETHI)

Deputy Controller of Mines