



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. MS/OTFM/29-ORI/BHU/2017-18

दिनांक / Date: 02.11.2017

To

Shri Sudhansu Kumar Das,
Add. General Manager (Geo),
Power of Attorney Holder,
M/s Odisha Mining Corporation Limited,
OMC House, Bhubaneswar-751001, Odisha.

Sub: Approval of Review of Mining Plan along with Progressive Mine Closure Plan of Banspani Iron Ore Mines over an area of 380.40 ha in Keonjhar district of Odisha of M/s Odisha Mining Corporation Limited submitted under Rule-17 of MCR, 2016.

Ref: - i) Your letter no. 15006/OMC/17 dated 18.10.2017.
ii) This office letter of even no. dated 24.10.2017.
iii) This office letter of even no. dated 24.10.2017 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

Sir,

This has reference to the letters cited above on the subject. The draft Review of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 09.07.2017 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-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 and JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR' 2017 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 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 / yours faithfully,


(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

SCRUTINY COMMENTS ON EXAMINATION OF REVIEW OF MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR BANSPANI IRON ORE MINE OF M/S ODISHA MINING CORPORATION LTD., OVER AN EXTENT OF 380.40 HECTARES, LOCATED IN BANSPANI, KHUNTAPANI & JALAHARI VILLAGES AND BAITARANI R.F, UNDER CHAMPUA SUB-DIVISION OF KEONJHAR DISTRICT, ODISHA STATE, SUBMITTED UNDER RULE 17(1) OF MCR, 2016 AND RULE 23 OF MCDR, 2017.

(1) In the front cover, the review of mining plan has been submitted in respect of Banspani iron ore mine lease, instead the document should be submitted for Banspani iron ore mine or for Banspani iron ore lease. Accordingly, corresponding modifications may also be made in connected paras in the text.

(2) In the consent letter/undertaking/certificate from the applicant, the consent has been given for preparation of review of mining plan to the Qualified Persons of M/s OMC Ltd. & M/s MECON Ltd., but the aforesaid companies are not considered as qualified persons, thereby necessary corrections may be made accordingly. Besides, the consent letter has not been dated with.

(3) There are two certificates from the qualified persons are submitted, out of one is signed by Shri Sunil Kumar Kar and the other is signed jointly by Shri Sunil Kumar Kar and Shri S. Hareesh Babu, instead only one certificate signed by both the persons only need be submitted.

(4) On examination of the list of annexures, it is found that, most of the annexures are signed by one Shri Chandrabhanu Das, Consulting geologist, which is not acceptable; instead all the enclosed annexures invariably signed by the qualified persons only, thereby the papers signed by Shri C.B. Das should be replaced by fresh copies.

(5) The copy of the list of leases enclosed as annexure-II is not clearly legible; thereby the same should be replaced by a fresh & legible copy for more informative.

(6) A copy of the letter addressed to Additional Secretary to Govt., Steel & Mines Department for extension of tenure of lease has been enclosed as annexure-IV but in the list enclosed along with the annexure, the name of Banspani lease is missing, thereby the very purpose of submission of the annexure is defeated.

(7) The copy of the base line environmental data has been enclosed as annexure-XIV 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 either from a NABL Accredited laboratory or from a Govt. Laboratory incorporating the latest environmental data for its authenticity/validity.

(8) The consent order, dated 23.08.2011 from State Pollution Control Board, Odisha has been enclosed as annexure-XV but the same has already expired on 31.03.2012, thereby a valid consent for the same should be submitted.

(9) There are two sets of land schedule for different extent of lease area has been enclosed as annexure-XVII & XVII, which is not required; thereby an authenticated land schedule matching the area for which the lease was granted and executed in the last occasion should be submitted.

(10) The copy of the registration number stated to be enclosed as annexure-XVIII but the same is not to be seen in the enclosure side.

(11) The copies of qualification & experience in favour of both the qualified persons has been enclosed as annexure-22 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 S. Hareesh Babu 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 Hareesh Babu 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 Hareesh Babu also not enclosed.

(13) The copy of the explosive procurement license enclosed as annexure-XXIII is not legible, thereby a fresh & legible copy of the same should be submitted in favour of Banspani iron ore mine of M/s Odisha Mining Corporation Ltd. Besides, a copy of the blasters license issued by the competent authority for carrying out blasting operations may also be submitted.

(14) The details of resources/reserves established at 45% Fe cut-off has been furnished in the enclosed annexure-25 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. It is also found that, the reserves/reserves have been estimated for the grades of iron ore above +48 Fe, instead the same should be estimated above 45 Fe grades of iron ore. 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.

(15) The calculations for year wise production planning for the ensuing five year period has been enclosed as annexure-26 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/mineral rejects & waste generation is missing. (iii) The grades of iron ore, sub-grade material/mineral reject 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, corresponding incorporations/ modifications may also be made in connected paras in the text & relevant plates.

(16) The Form –K for a good number of drilled bore has been enclosed as annexure-28 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 given for its authenticity. Moreover, no Form-J for the status of litho logs furnished in the above referred annexure has been submitted.

(17) The chemical analysis report of borehole samples from different laboratories has been enclosed but valid NABL accreditation certificate for none of the analytical laboratory has been enclosed, which should be submitted for more informative.

(18) Air, surface water, ground water, noise & vibration analysis report in respected of Banspani 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 ease in monitoring.

(19) A copy of the valid Bank Guarantee matching to the proposed period has not been enclosed and the same should be submitted.

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

(20) On examination of contents for drawings, the same has been numbered in the manner like MEC/11/16/Q7DU/BNP/01, instead the plates should be either numbered like 1, 2, 3 etc. or I, II, III for ease in identification/monitoring. Besides, on the plates, the qualified persons are signed but their names are missing, thereby they should sign the plates against their named for more informative.

(21) Under the heading **forest diversion proposal**, it is mentioned that, the forest diversion proposal is stated to be enclosed as annexure-XVII but in the enclosure side no such proposal is found enclosed. (Page No. 8)

(22) The notice in Form-J for sinking of 182 nos. of bore holes are stated to be enclosed as annexure-X but no such notice has been enclosed as the above referred annexure. [Para 1.0(e)(ii)]

(23) The exploration proposal for the year 2018-19 has been furnished in tabular form but it is not known whether proposed holes are coring or non-coring type. Besides, the extent of area proposed to be explored & the grid pattern of such holes may also be furnished. Moreover, the entire un-explored area should be proposed during the 1st year of the ensuing five year period. Accordingly, necessary incorporations/modifications may also be made in connected paras in the document. [Para 1.0(i)]

(24) Deposit wise, the resources/reserves are furnished in tabular form but there is no link with the annexure-25 in which the calculations for reserves/ resources for the entire mine has been furnished, thereby necessary incorporations /modifications may be made in the tables. (Page No. 33 to 35)

(25) 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 benches in overburden /ore zone in the quarries/pits, dumps with size/capacity, reclamation indicating extent of area in ha., rehabilitation & afforestation with extent of area in ha. etc. for more informative. In the light of the above, the proposed method of mining may also be revised. If the existing quarries/pits 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)]

(26) (i) In the 1st table furnished, under the heading **Insitu Tentative Excavation**, the following observations are made: (i) Bench/RL of the excavation planning for each year has not been given, which should also be furnished by adding one more column in the table. (ii) The location co-ordinates of the excavation planning for each year also not furnished and the same may also be

given with proper plate reference. (iii) During the years 2018-19 & 2022-23, the generation status of mineral reject & sub-grade is indicated to be NIL, which indicates that, the recovery percentage of the iron ore is considered as 100% but an authenticated recovery test report from a NABL accredited laboratory or from a Govt. Laboratory has not been submitted. It is a peculiar case where no generation of sub-grade/mineral reject has been proposed. If it is true, a commitment should be made that, in case generation of sub-grade & mineral reject is reported during the mine excavation, a modification to the review of mining plan will be submitted. (iv) The grade waste proposed to be generated 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(A)(b)(I)]

(27) (i) Two existing dumps located near the KMC quarry are proposed to be re-handled but the dumps have not been named /numbered for their identification. Moreover, the volume of the dumps proposed to be re-handled in each year of the ensuing five year period also not furnished. (ii) The location co-ordinates of such dumps proposed to be re-handled are not given. (iii) The Fe content in the dumps are also not known, which should be furnished supported by authenticated chemical analysis report. (iv) The percentage recovery of the dump also not given & the same may also be furnished supported by authenticated recovery test report. All should be presented in tabular form and the para may be revised accordingly. [Para 2.0(A)(b)(II)]

(28) 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. [Para 2.0(A)(e)]

(29) 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)

(30) 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)

(31) The financial assurance calculations for Rs. 4,43,46,240/- has been furnished but no commitment has been made for submission of bank guarantee in favour of Regional Controller of Mines, thereby the para may be revised accordingly. (Para 8.6)

(32) 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.**

(33) DRG. No. MEC/11/16/Q7DU/ BNP/01(Key Plan): The details of the deficiencies found on the plate are as follows: (i) The roads shown on the plan are for village road or for mine road or for public road should be specified. Besides, separate index reference of different types of road shown on the plan may also be furnished. (ii) Direction of flow of Baitarani River is missing, which should also be furnished.

(34) The plate for authenticated lease map has not been enclosed, which should be submitted, while submitting modified copies.

(35) 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 reconciled. 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 a separate plate for geo-referenced map should be submitted. (iii) The mining lease was granted & executed over an extent of 380.40 ha but the so called geo-referenced map has been prepared, over an extent of 381.417ha.

(36) Drg. No. MEC/11/16/ Q7DU /BNP/03 (Geological Plan): (i) The index reference given for existing pit/quarry has not been clearly marked on the plan portion of the plate. Besides, the pits/quarries are not named /numbered for their identification. (ii) The index reference given for top bench is not to be seen on the plan. (iv) The existing waste dumps are not named /numbered for their identification. (v) Similar index reference has been given for waste dump & shale and it is very difficult to differentiate on the plan portion of the plate, thereby the notations given for both the features should be changed for ease in monitoring. (vi) The index reference given for some of the geological features are not marked on the plan portion of the plate distinctly. (vii) Certain portion of the lease area has not been explored so far and even no exploration for the said portion has been proposed, thereby the entire un-explored area should be explored during the 1st year of the ensuing five year period. Accordingly, the same may also be incorporated in connected paras of the text & all the relevant plates submitted along with the document. (viii) 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.

(37) Drg. No. MEC/11/16/ Q7DU/BNP/04 (Geological Section, Banspani Top Deposit): (i) The index reference for none of the geological features depicted on the sections are furnished and it is impossible to know the features depicted on the sections, thereby separate index reference for each of the features should be furnished. Besides, certain boreholes are terminated within the ore zone & few bore holes to be proposed adjacent to those boreholes to prove the depth continuity of the ore body. Moreover, the geological index given in the geological plan are not matching with that of the geological sections, 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. Accordingly, the plates submitted for all the geological sections may also be revised.

(38) Drg. No. MEC/11/16/ Q7DU/BNP/05 (Surface Plan): (i) The index reference given for existing pit/quarry has not been clearly marked on the plan portion of the plate. Besides, the pits/quarries are not named /numbered for their identification. (ii) The existing waste dumps are not named /numbered for their identification. (iii) At least 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 these ground control points need to be linked with boundary pillars.

(39) Drg. No. MEC/11/16/ Q7DU/BNP/06 (First year development Plan, 2018-19): (i) The proposed status of development, dumping/dump re-handling is not to be seen on the plan portion of the plate. Besides, index reference for the same is missing. In the light of the above, the development plan submitted for the period from 2019-20 to 2022-23 may also be revised. Accordingly, the plates submitted for environment management plan, conceptual plan & financial assurance plan may also

be revised. Besides, the plate for conceptual sections and reclamation plan has not been submitted along with the document.

(40) Drg. No. MEC/11/16/ Q7DU/BNP/10 (Financial Assurance Plan): The extent of area put to use in different counts has not been marked with different colour codes neither on the plan portion of the plate nor index reference for the same has been given. In the light of the above, the entire plate may be revised.