



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. MP/FM/13-ORI/BHU/2017-18 / 1537

Date: 22.09.2017

To

✓ Shri P K Mishra, Vice President,
M/s Bhushan Power & Steel Ltd,
N-3/28, Nayapalli, I R C Village,
Bhubaneswar-751015, Odisha

Sub: Approval of Mining Plan of Netrabandh Pahar Iron Ore Block Mine along with Progressive Mine Closure Plan (PMCP), over an area of ~~139.23~~ ha in Keonjhar & Sundargarh district of Odisha State, submitted by M/s Bhushan Power & Steel Ltd under Rule 13 of MCR, 2016.

Ref: - i) Your letter No. Nil dated 13.09.2017.
ii) This office letter of even no. dated 13.09.2017.
iii) This office letter of even no. dated 13.09.2017 addressed to Director of Mines, Government of Odisha copy endorsed to you.

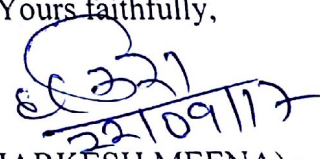
Sir,

This has reference to the letter cited above on the subject. The draft of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 18.09.2017 by Shri G C Sethi, Deputy Controller of Mines & Shri Dilip Jain, Junior Mining Geologist. The deficiencies observed are enclosed herewith as Annexure I.

You are advised to carry out the necessary modifications in the draft 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)** of the 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 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 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 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.

Yours faithfully,


(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

SCRUTINY COMMENTS ON EXAMINATION OF NETRABANDH PAHAR IRON ORE BLOCK OF M/S BHUSHAN POWER & STEEL LTD., OVER AN EXTENT OF 139.223 HECTARES, LOCATED IN BALADIHI VILLAGE, UNDER KOIRA TAHASIL OF SUNDARGARH DISTRICT OF ODISHA STATE, SUBMITTED UNDER RULE 13(1) OF MCR, 2016.

(1) On examination of the contents & chapters of the mining plan, it is found that, the document has not been prepared as per the universal format for mining plan including progressive mine closure plan. The chapter 4.0 has been mentioned to be for Stacking of mineral rejects and disposal of waste instead the same should be mentioned as **Stacking of Mineral Rejects/Sub-grade Material and Disposal of Waste**. Besides, the chapter 9.0 has been mentioned for List of annexures, instead Certificates /undertaking/certificate from the applicant/certificate from qualified persons should be given. Moreover, the certificate from the applicant has been replaced by an Authorisation certificate instead the same should be renamed as the **certificate from the applicant**. Besides, the authorisation certificate enclosed along with the document has not been dated with. Accordingly, necessary modification/corrections should be made.

(2) The applicant has authorised three qualified persons to prepare the document, whereas in the certificate from the qualified persons, only two persons have been signed, which is not proper, thereby all the three persons should sign the document and the certificate from the qualified persons should be revised accordingly.

(3) As per the contents for list of annexures, the copy of the precise area map of the granted area issued by the competent authority has been enclosed as annexure-III but in the enclosure side, the **bore hole influence block map** of the area has been enclosed. Therefore, the precise area map of the area issued by the competent authority of State Govt. should be submitted.

(4) The copy of the Geo- referenced cadastral map from Odisha Space Applications Centre has been enclosed as annexure-IV but the same has not been signed by the competent authority for its authenticity.

(5) The copy of the list of Board of Directors has been enclosed as annexure-VI but full postal address/phone/fax/e-mail ID for none of the directors has been given and the same should be furnished.

(6) The copies of the academic qualification & experience certificates in support of the all the three qualified persons has been enclosed as annexure-X-A, X-B & X-C but the ID proof for none of the qualified person has been furnished, which should be enclosed for more informative.

(7) The copy of the Geological report is enclosed as annexure-XI but the same has not been authenticated by the competent authority for its acceptance.

(8) An introductory note to be added in the document before the **Chapter General** as per the requirements of the universal format for preparation of mining plan/review of mining plan/modification of mining plan.

(9) The professional experience claimed by the qualified persons Shri K.C. Jyotishi & Shri K. Naik should be checked with reference to the enclosed annexure X-B & X-C and necessary corrections should be made accordingly. [Para 1.0(f)]

(10) The precise area map is stated to be enclosed as annexure-III but no such map has been enclosed. Besides, the topo sheet No. 73G/5 referred in this para is missing on the Key plan (plate No.1) submitted along with the document. [Para 2.0(b)]

(11) On examination of the contents for plates, it is found that, the plate for Reclamation plan has not been submitted and the same may be submitted by depicting the proposed reclamation, rehabilitation & afforestation etc. for ease in monitoring.

(12) UTM or WGS84 grid as per DGPS map may also be super-imposed in relevant plans for better comprehension.

(13) From geological section and bore hole log it is observed that many of the BH have been closed in the mineralized zone only, hence proposal of exploration upto the end of mineralization to be given.

(14) All the proposed BH to be shown on the geological section along with the proposed depth. Further, length of all the drilled BH also to be mentioned on the section.

(15) Para E: The details of the drilled BH to be given in the tabulated form comprising of BH id, Core/non-core, diameter, inclination, Location (UTM), Collar level, depth, mineralized/non-mineralized etc. Further, the details of the of samples analysis indicating type of sample (surface/sub-surface from pits/trenches/borehole etc) to be given.

(16) Para E: The details like potentially mineralized area and its extent (coordinate in WGS 84), potentially mineralized area explored (in forest and non-forest area, Govt. land, Pvt. land etc.), remaining area, proposal of exploration to explore remaining potentially mineralized area to be given with justification of adequacy.

(17) Para E: A summary of lease area explored as per UNFC norms indicating G1, G2, etc. should be given in the following format.

Sl. No.	Name of the Mineral	Lease area (Ha)	Lease area explored as per UNFC norms (in Ha.)				Remarks/Comments including reasons for not carrying out the exploration as per UNFC norms.
			C-D+E+F+G				
			G1 Level	G2 Level	G3 Level	Other Lease area/Unexplored area	
A	B	C	D	E	F	G	H
1							

(18) Para H: The proposal of the exploration to be given in the first year for the area proposed for the waste dumping and excavation. Accordingly proposal of the exploration may be revised. Further, the details like BH id, location (UTM), depth, inclination, Grid interval, BH type (Core/non-core) to be given in tabulated form for the proposed exploratory BH.

(19) It is observed that the reserve have been estimated below the direct evidence of the mineralization, which is not as per the Minerals (Evidence of Mineral Contents) Rules, 2015 and led to enhancement of the total resource in comparison to the estimation by Director of geology. Hence, may be revised according to the MEMC Rule 2015.

(20) (Page 20) It is observed that various recovery factor and conversion factor have been assumed for resource estimation without any documentary evidence. All the factor considered to be as per

the GR or supporting documents needs to be submitted. Accordingly resource estimation may be revised.

(21) In the table-2.1 furnished, under the heading **Insitu Tentative Excavation**: The following observations are made: (i) In the proposed five years period, the bench/RL of the excavation planning for each year has not been given, which should be furnished by adding one more column in referred the table. (ii) 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. (iii) The grades of iron ore, sub-grade material and may also be furnished as per the authenticated geological report. Accordingly, corresponding incorporations /modifications may also be made in connected tables, paras in the text & relevant plates. [Para 2.0(b)(I)]

(22) Even if, this is a fresh area, production planning for two nos. of pits has been proposed & the proposed production can be achieved from a single pit but the reasons for proposing two nos. of pits has not been furnished, which should be discussed and the table may be revised accordingly if required. (Table-2.2)

(23) The name of the pit(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 proposed status of dumps for waste, sub-grade & mineral rejects along with their location co-ordinates with size/capacity and direction of advancement may also be discussed. In the light of the above, the para 2.0(e) may also be revised. [Para 2.0(d)]

(24) Under the heading **land degradation/reclamation/afforestation**, an extent of 44.989ha is required for mining & allied activities but the split up of the area proposed to be utilized in different counts in each year of the proposed five years has not been given, which should be furnished in tabular form for ease in monitoring. (Page No.70)

(25) The survival rate of plantation is missing in the refer table, which should be furnished by adding one more column for ease in monitoring. (Table 2.17)

(26) The land use by end of the plan period has been furnished instead the same by end of each year of the mining operation should be furnished in separate tables. Accordingly, the proposed land degradation status furnished in table -8.1 may also be revised. (Table 2.18)

(27) Nothing has been given about the proposed size /capacity /number of terraces for the proposed waste dump/sub-grade dump/reject dump, which should be furnished. Besides, the proposed construction status of retaining wall /garland drains etc. for the dumps may also be furnished for ease in monitoring. [Para 4.0(b)]

(28) In 2nd table furnished in the page under reference, the location co-ordinates of the proposed dumping site is missing, which should be furnished & the table may be revised suitably. [Page No. 78]

(29) The flow sheet for the screening/crushing unit has not been given and the same should be furnished in the para under reference. [Para 6.0(a)]

(30) Proposal for monitoring of ambient air, water quality, noise level, vibration level etc. has not been envisaged, which should be furnished and the para may be revised accordingly. (Para 8.1)

(31) Pit/quarry wise extent of area proposed to be degraded in each year of the five year period should be furnished. Besides, pit wise extent of area utilized for dumping, stacking, reclamation, rehabilitation & afforestation for each year of the aforesaid period may also be furnished. All should be furnished in tabular form. (Para 8.3.1)

(32) 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)

(33) All the plan & sections submitted along with the mining plan should be certified by the Qualified Person indicating that, the plans and sections are prepared based on the precise map authenticated by the State Govt. of Odisha and found to be correct.

(34) Plate-1: There are two plates has been submitted as plate-1, one for key plan and the other for index map, instead there should be separate plate number for each of the plate. Besides, in the index for the list of plates, the enclosed **key plan** has been indicated to be key map, which is not correct. As the key plan is a statutory plan, the details of the deficiencies found on the plan are as follows: (i) The index reference given for metal road is not matching with that of the plan portion of the plate. Besides, if the metal road is for public, then to which important places both end of the roads leads to may also be marked. (ii) The index reference given for un-metal road is not to be seen on the plan, which should be depicted. (iii) Direction of flow of nala is missing, which should be furnished. (iv) The index reference given for forest land is not matching with that of the plan. (v) 25cm long scale has not been marked on the plate.

(35) Plate-2(DGPS Map): The plate has not been authenticated by the competent authority of State Govt. of Odisha, thereby not accept in its present form. Besides, in the contents for list of plates, the plate-2 has been mentioned to be as block area map, which is not proper.

(36) Plate-3 (Surface Plan): Surveyor's signature is missing, which should be signed by a competent surveyor.

(37) Plate 4&5 (Geological plan and section: Direction of the sections to be depicted on geological section along which the sections have been drawn. Further, On Geological Sections, section AA' has been mentioned instead of HH'. Verify and rectify. Ultimate pit limit has been shown as a straight line, needs to be shown as per the ultimate bench height and width as proposed in conceptual plan. The color code in the index for drilled BH is not matching with the depicted drilled BH. Verify and rectify. Further, color code in plan and section needs to be same and color code of shale in the section may be revised as discussed in field visit.

(38) Plate-6A1 (I Year Development of N Pit): (i) The location of proposed development has not been properly depicted on the plan portion of the plate & the status of bench formation also not depicted. Besides, the benches proposed for soil, Shale, SLO, BD & HLO may also be marked on the plan. (ii) The lithology given in the development cross sections are not matching with that of the plan, thereby the sections should be drawn in such a way that, the same will match with the plan. Accordingly, the plates submitted showing the development plan & sections for the period from II

year to Vth year for N-pit & all development plan & sections submitted for the S-pit should be revised accordingly. (iii) Separate plates showing the development plan & sections after Vth year has been submitted for both the pits, which are uncalled for and need not be submitted. (iv) Even if, this is a fresh area, there are two pits are proposed under excavation planning for average production of 2 million tonnes per annum, which can be achieved from a single pit but the specific scientific reasons for the same has not been furnished in the text part of the document.

(39) Plate-7 (Dump Plan & Sections): (i) The dump plan & sections for each year of the plan period has not been depicted in a dump like manner. (ii) The retaining wall proposed around the dump is too touching to the toe of the dump, instead which should be atleast 10m away from the toe of the dump. (ii) Besides, nothing has been given about the proposed sub-grade stacks/mineral reject dump and the same may also be depicted for each year for ease in monitoring. (iii) The proposed dump is located in the area over which the exploration has been proposed in the 2nd year of the mining operation; instead the said area should explored in the 1st year itself. Accordingly, the exploration proposal depicted on the plate submitted for surface geological plan should be revised accordingly.

(40) Plate-8 (Conceptual Plan): The features which will not be seen by end of the conceptual period should be erased and the land use by at that point of time only need be depicted & plate may be revised accordingly.

(41) Plate-9 (Conceptual Sections): On examination of the conceptual sections, it is found that, even after the end of the conceptual period, the entire ore zone has not been exhausted; thereby sections should be re-drawn showing the status of reclamation, rehabilitation & restoration activities carried out at that time. In the light of the above, the plate submitted for conceptual plan may also be revised.

(42) Plate-10 (Environment Plan): All existing features available within 500m radius of the auctioned block should be depicted and rest of the things should be erased & the plate may be revised accordingly.

(43) Plate-11 (Environment Management Plan): The proposed working, dumping, stacking & afforestation for each year of the mining plan period have not been depicted with different colour codes, which may be marked. Besides, the plate submitted for progressive mine closure plan may also be revised accordingly. A separate plate for reclamation plan may also be submitted. It is also found that, in the dump plan & section (plate-7), only one dump has been proposed but on this plate, the status of two dumps has been depicted, thereby the plate submitted for dump plan & section may also be revised accordingly.

(44) Plate-12 (Progressive Mine Closure Plan): The proposed status of three nos. of dumps has been depicted on this plan, whereas, in the environment management plan, two nos. of dumps are proposed and it is a great surprise that, on the dump plan & section (plate-7), only one dump has been proposed, thereby all the relevant plates should be revised suitably. Accordingly, necessary modifications/incorporations may also be made in connected paras in the text of the document.