



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/02-ORI/BHU/2019-20

दिनांक / Date: 09.04.2019

To

Shri Vivek Gupta, Director &
Nominated Owner, M/s Steel
Authority of India Limited,
Ispat Bhawan, Lodi Road,
New Delhi-110003.

Sub: Modification of Mining Plan of Barsua-Taldih-Kalta Iron Mine over an area of 2486.383 ha in Sundargarh district of Odisha of M/s Steel Authority of India Limited submitted under Rule-17 (3) of MCR, 2016.

Ref: - i) Your letter no. nil dated 30.03.2019 received on 03.04.2019.

ii) This office letter of even no. dated 15.03.2019.

iii) This office letter of even no. dated 15.03.2019 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 Modification of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 05.04.2019 & 06.04.2019 by Shri G. C. Sethi, Deputy Controller of Mines alongwith Shri Sudip Ranjan Mazumdar, Senior Mining Geologist. 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 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 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. It may be noted that no extension of time in this regard will be entertained and the Modification 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

Copy for kind information and necessary action to:

1. Shri S. C. Nayak, Qualified Person, M/s Minesketch Consultants (P) Limited, Flat No-205, Bhagwan Tower, Cuttack Road, Bhubaneswar-751006.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

SCRUTINY COMMENTS ON EXAMINATION OF MODIFICATION OF MINING PLAN AND PROGRESSIVE MINE CLOSURE PLAN FOR BARSUA-TALDIH-KALTA IRON MINES OF M/S STEEL AUTHORITY OF INDIA LTD., OVER AN EXTENT OF 2486.383 HECTARES, LOCATED IN VILLAGES TANTRA, BAHAMBA AND TODA RESERVED FOREST, UNDER KOIRA TAHASIL, BONAI SUB-DIVISION OF SUNDARGARH DISTRICT, ODISHA STATE, SUBMITTED UNDER RULE 17(3) OF MCR, 2016.

- (1) In the front cover, the address of the mine is mentioned to be only Barsua Iron Mine but there are other two block such as Kalta Iron mine and Taldih iron Mine in the same lease, thereby address of other two mine covered under ML 130 also be furnished. (ii) The lease period is mentioned to be from 06.01.1960 to 05.01.2030 but the lease deeds for the entire period mentioned has not been submitted.
- (2) Numbering of pages of the annexures is not in order with reference to the contents of the annexure, which should be reconciled.
- (3) The I.D proof of the qualified person is missing in the enclosed annexure-2. Besides, the copy RQP certificate enclosed along with the annexure-2 is uncalled for and must be detached.
- (4) The modification of mining plan has been submitted by Shri Vivek Gupta, Director (Raw Materials & Logistics) in his capacity as nominated owner but in the list of Board of Directors enclosed as annexure-4, name of Shri Vivek Gupta is not there.
- (5) In the extract of the minutes of meeting held on 03.08.2018, enclosed as annexure-5, Shri H.N.Rai has been nominated as the owner of the SAIL Mines & collieries, whereas Shri Vivek Gupta Director (Raw Materials & Logistics) has signed the modification of mining plan in his capacity as nominated owner but the copy of the Resolution of Board of Directors nominating Shri Gupta as the owner of the mine has not been submitted.
- (6) I.D proof & address proof of Shri H.N. Rai, Director (Technical) has been enclosed as annexure-6, which is uncalled for as Shri Vivek Gupta has been submitted the modification of mining plan.
- (7) Few pages of the 2nd RML deed enclosed as annexure-8 is not clearly legible, thereby a fresh and legible copy of the same should be submitted. Besides, the copies of the lease deeds executed in different occasions may also be submitted.
- (8) The chemical analysis report enclosed as annexure-25 & 26 are very old analysed during April 2015, which is not acceptable, instead fresh analysis report either from Govt. laboratory or from NABL accredited laboratory should be submitted.
- (9) The bulk density test report enclosed as annexure-27 & 28 are very old analysed during April 2015, which is not acceptable, instead fresh analysis report either from Govt. laboratory or from NABL accredited laboratory should be submitted.
- (10) The copy of the explosive procurement license issued by the competent authority in favour of M/s SAIL for Barsua, Kalta & Taldih blocks 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) No photographs in support of the quarry/dump/stack/reclamation & rehabilitation /afforestation etc. have been enclosed along with the document, which should be submitted for Barsua, Kalta and Taldih separately.
- (12) A copy of the valid Bank Guarantee for the extent of area put to use in different counts during the ensuing modification period has not been enclosed & the same should be submitted.
- (13) In 3rd para of the introduction chapter, the valid reasons for submission of modification of the mining plan has not been furnished, which should be clearly mentioned and the page under reference may be revised. Accordingly, necessary corrections /modification may also be made at all the relevant places in the document. (Page No. 1 & para 3.6)

- (14) The mine office address only for Barsua has been given, instead the same for all the three mines of ML 130 need to be furnished. Accordingly, necessary modifications may also be made in Para 2.0 (a).
- (15) The term "subgrade" part of ROM should be replaced with "Mineral Reject" and the term "usable" iron ore if above cut off grade may be replaced with "saleable iron ore" at all places in text, tables and plates.
- (16) All plan and section should be updated as on 01.04.2019. Need to do necessary corrections.
- (17) In Para 1©, the stratigraphy of the area should be rechecked and corrected. In Para 1(e)(i), the dimension of the quarries as on 01.04.2019 have not been furnished. The date of survey has not been mentioned.
- (18) The future exploration program to be revised incorporating the followings.
- It has been shown in the table in page 29 that 573 Ha and 1006.383 ha has been explored under G2 and G3 level of exploration respectively but status of mineralisation (mineralised/non-mineralised) in the same area has not been mentioned. Hence, boreholes have to be proposed to convert area under G2 and G3 level of exploration to G1 level of exploration. In page 29, the information of the lease area explored as per UNFC norm should be furnished in the following tabulated format.
 - Additionally, new core boreholes to be proposed in the location adjacent to existing drilled boreholes that have been either terminated in the ore zone or closed prematurely without intersecting the proposed ore zone in depth.
 - The depth of the proposed boreholes should be around 100m or till the end of mineralization/discontinuance of ore body. The proposal to be mentioned.
 - The revised drilling proposal complying the above points (a and b) should be given in the format tabulated below.

Year	No of Boreholes	Type of borehole	Grid Interval	Total Meterage	No. of Pits, dimensions and volume	No. of Trenches, dimensions and volume
2019-20						

The details of the proposed boreholes have to be furnished in following tabular format.

Year of drilling	Section No	Proposed BH no	Northing	Easting	Collar RL	Core/ RC/DTH	Proposed Depth	Inclination	Forest/ Non Forest/ Diverted Forest area	Surface Right/Non-surface Right area

- Complete chemical analysis for entire strata for all radicals may be undertaken for selected samples from a NABL accredited Laboratory or Government laboratory or equivalent. Entire mineralized area may be analysed meter wise with 10% of check samples. (At least for 10% of total samples may be analysed in accordance to BIS and reports from NABL accredited/other government laboratory). Accordingly, the proposal should be submitted.
- (19) In page 29, the table showing lease area explored as per UNFC as on date 01.04.2019 (to be mentioned) should be furnished separately for Barsua, Taldihi and Kalta Block separately and a combined table for all three blocks. The area explored should be recalculated as per the provision of MEMC Rules, 2015 and furnished in the following tabulated format.


Total Lease Area: _____ Ha						Remarks/ comments including reasons for not carrying out the exploration as per UNFC norms
Item of Information	Lease area explored as per UNFC norms (in Ha) as on date. _____					
	Total lease area a = A+B+C+D+E					
	G1 Level	G2 Level	G3 Level	Explored and found non-mineralized with level of exploration (Remarks)	Unexplored lease area	
	A	B	C	D	E	F
Area as per level of exploration						

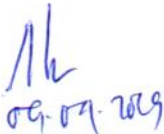
No. of BH drilled						
No. of BH considered for Resource						
Meterage drilled						
Grid Interval						
Scale of Mapping						
Reserve estimated after above exploration as on dated : 01.04.2019						
Remaining Resource after above exploration as on dated : 01.04.2019						
Total Reserve / Resource after above exploration as on dated: 01.04.2019						

- (20) It has been shown in the table in page 29 that 573 Ha and 1006.383 ha has been explored under G2 and G3 level of exploration respectively but in the Geological plan, the area under G2 and G3 level of exploration has not been shown. Further, the proposed boreholes have not been shown in plan and in index of Geological plan. The Geological section lines have not been shown in the Geological plan.
- (21) The total reserve and resource of iron ore of 484.212 million tonnes as on 01.04.2019 as mentioned in the text is not justified by resource /reserve calculation by cross-sectional method as per the provision of MEMC rules, 2015. The Geological sections have not been submitted with the document. Therefore, updated geological sections as on 01.04.2019 have to be submitted. Geological sections should be prepared across the lease area from boundary to boundary. UNFC codes have to be furnished in Geological sections. The index of the lithology should be same in Geological plan and sections.
- (22) Section wise resource and reserve calculation by cross –sectional area method under different categories of UNFC have not been furnished. The reserves and resources have not been calculated by cross-sectional method rather it has only been depleted. Therefore, reserves and resources have to be re-estimated by cross sectional method as per the provision of MEMC Rules 2015. The grade wise resource estimation should be done between threshold value for iron ore and cut-off grade and above cut-off grade of iron ore.
- (23) The term “Geological Reserve” to be replaced with “Geological Resource” and “mineable reserve” to be replaced with “reserve”. The resource categorisation has not been properly explained as per the provision of MEMC rules, 2015.
- (24) In the table furnished, under the heading Insitu Tentative Excavation: The following observations are made: (i) The proposed generation status of Top soil/OB+SB +IB & ROM has been furnished in tabular form but the bench/RL of the excavation planning has not been given, which should be furnished. (ii) The recovery percentage of iron ore & mineral reject, waste/overburden generation is missing. (iii) The location co-ordinates of the excavation planning for each block for 2019-20 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 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)].
- (25) The location co-ordinates of the proposed workings should be furnished in the table furnished in the page under reference 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 development during 2019-20. (Page No. 52).
- (26) On examination of the 1st column of the table, it is found that, the extent of existing land degradation furnished is less than the existing land use furnished in the scheme of mining approved in the last occasion, thereby the existing and proposed land use furnished in the table

should be checked and corrected. Accordingly, the calculations furnished for financial assurance may also be revised. (Para 8.6)

- (27) Plate-MMP/I (Key Plan): Population of village falling within the 5 km radius of the lease area is missing, which should be furnished. Besides, the direction of flow of nala also not marked.
- (28) Plate-MMP/VI (Environment Plan): On the plan, 500 meter of the lease area has not been marked, which should be done depicting all existing features available within the 500 meters and the plate may be revised accordingly.
- (29) The plate for conceptual sections has not been submitted along with the document, which should be submitted.


(Sudip Ranjan Mazumdar)
Senior Mining Geologist


(G. C. Sethi)
Deputy Controller of Mines