



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. BBS/SNG/IRON/2173/MRMP/2022-23

Date: 18.08.2022

To

Shri C S Grewal, Proprietor,
M/s National Enterprises ,
At/Po- Barbil, Dist-Kendujhar,
Odisha-758035

Sub: Approval of Review of Mining Plan of Raikela Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 45.932 ha in Sundargarh district of Odisha State, submitted by M/s National Enterprises under Rule 17 of MCR, 2016.

Ref: - Your letter No. NE/BBL/322/22-23 dated 08.07.2022.

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 carried out on 08.07.2022 by Shri Kewal Krishan, Regional Mining Geologist. 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:-

- (i) Three (3) firm bound copies of text (A4 size printable paper), plate/plan and Annexure in hard copy. The consents and certificates by the Lease holders/Qualified Person shall be attached in hard copy of document.
- (ii) Two (2) soft copies of the document in USB Pendrive. The text of document should be in excel(.xls) and word format. The plates/plans are to be submitted in .kml/.kmz/.shp and .dwg format. All the annexures shall be submitted in soft copy.
- (iii) Financial assurance under Rule 27 of Mineral Conservation and Development (Amendment) Rules, 2021 shall be submitted.
- (iv) It is also advised to submit all details of mining plan online on <https://miningplan.ibm.gov.in> simultaneously for processing.

The aforesaid final copies of document will be submitted within **15 (Fifteen)** days from the date of issue of this letter, for further necessary action.

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.

भवदीय,

(बाबुलाल गुर्जर)

क्षेत्रीय खान नियंत्रक

Copy for kind information to:-

(i) The Controller of Mines (EZ), Indian Bureau of Mines, CP-13, Sector V, Salt Lake City, Kolkata- 700 091.

(ii) Shri Hemanta Kumar Sahoo, M/s Geomac Solutions Pvt Ltd, S-26, BDA Market Complex, Nilakantha Nagar, Nayapalli, Bhubaneswar-751012.

(बाबुलाल गुर्जर)
क्षेत्रीय खान नियंत्रक

Scrutiny comments on examination of in Review of Mining Plan in respect of Raikela Iron Ore mine , over an area of 45.932, Sundergarh District ,Odisha , of M/s. National Enterprises Ltd. (Based on site inspection on 8/7/2022)

GENERAL INFORMATION

- 1) Complete Review of Mining Plan is to be submitted on online mode also.
- 2) On the cover page, only proposal period is to be furnished, review period is to be deleted.
- 3) Area as per ROR and as per DGPS is to be mentioned on the cover page of document. Similarly all the proposals are to be given as per DGPS plan only. Need correction at all the relevant places of the document.
- 4) At glance information with respect to the mineral resources under 221 and 331 are not correct with respect to the table given on page no 31. Need correction at all the place of document.
- 5) Under introduction part , it is noticed that in the history of mining lease, boundary dispute is described in detail with the adjacent lessees. Disputed lease area with adjacent lessee may be briefly discussed and marked on the plan. All other disputed matter discussed in the document should be deleted.
- 6) It is mentioned in the introduction part that 13.565 ha area is over lapped with the JSPL and PTA Ltd. Therefore the mining and allied activities are shown in the remaining part of 32.367ha. The mining and allied activities are to be shown in the area as per DGPS only. Need correction.
- 7) Since the mine has common boundary with other lessees such as JSPL, PTA and M/s SD Sharma etc , Keeping in view the conservation of mineral , the common working proposal are to mentioned in the text and are to be shown on the development plan and sections with all the lessee.
- 8) The total length of different leases area having common boundaries is to be discussed in the introduction part also and the same is to distinctly marked on the common joint working plans. Similarly co-ordinates of the common corner boundaries are to be furnished and same are to be shown on the plans also. All statutory permissions from government authorities for under taking mining over the safety zone area having common boundaries are to enclosed as an annexure. Copies of MOU signed with other lessees are to be enclosed with the document
- 9) Status of the EC is to be discussed in the introduction part also. As per the information furnished in the document it is obvious that the present EC limit is 502200 T and the target production proposal is given for 1 million .Hence the production should be enhanced only after getting the desired EC from competent authority. The same should to be also mentioned in the introduction. Copy of the valid EC is to be enclosed.
- 10) Present status of all statutory clearances viz., EC, FC, etc. are to be furnished with referring to documentary evidences as annexures.
- 11) Under para 1.3.5 topo-sheet no is not mentioned correctly.
- 12) Para 1.3.5.1 location of boundary pillars for the entire area as per lease granted with reference DGPS survey are to be furnished.

GEOLOGY AND EXPLORATION:

- 13) Para- 2.1.4.1 , local Geology, thickness of various litho units (minimum and maximum) as encountered in the bore holes drilled are to be furnished.
- 14) Para 2.1.4.2 local Structure of the lease area /block is to be described properly.
- 15) Para 2.1.4.5, Extent of weathering is to be discussed on the basis of boreholes data.
- 16) Para 2.1.4.8, Type of deposit as per MEMC rule is to be specified.
- 17) Para 2.2.1.7 , boreholes drilled during the last plan period are to be shown in the table and are to be enclosed as separate annexure along with Form I , Form J and their analysis from NABL lab.
- 18) Para 2.2.13, method adopted for calculating the bulk density of ore etc. are to be discussed in brief. Similarly proper Bulk Density report of different grade is to be enclosed.
- 19) Para 2.2.1.14 , area covered under different levels of exploration is to be rechecked and furnished again. Similarly, area converted to G1 from G2, G3& G4 is not correct.

- 20) Under para 2.2.4.1, recovery factor considered for ore is 90% and for waste is 10%. It is noticed from the boreholes logs with their analysis that the recovery of ore should be more than 90%. Need clarification/ correction at all the relevant places of the document.
- 21) Under Para 2.2.4.2 The calculation of resources made against section N746 and N646 are not correct with reference to the Geological cross sections. The ore body projection are to be shown based on the borehole data and their analysis. Hence all the estimations of resources are to be rechecked and furnished again. UNFC code shown in the table and on the sections are not matching. Need correction accordingly at all the relevant places of the document.
- 22) The cutoff grade by the lessee for Iron ore is +55% Fe and below 55 to 45% Fe is consider as subgrade. Based on this the resources are estimated ie +55%Fe and 45 to 55% Fe. Hence, grade wise demarcation of different grades of ore as per the estimation made is to shown on the Geological cross sections also.
- 23) Para 2.2.5.5, It is mentioned that the entire ML has been explored under G1 Level of exploration. The statement made is contrary to details furnished under para 2.2.4.3. Need correction The entire area should be explored as per rule 12(4) of MCDR 2017. Accordingly the boreholes are to be proposed. The same are to be shown in the text and plates.

BENEFICIATION

- 24) Para 3.2 Complete chemical analysis of ROM/mineral is to be enclosed with the documentary evidence.
- 25) Para 3.5.1 ,3.5.3, aperture size of screen/classifier and product quality are to be furnished properly.
- 26) Para 3.5 and 3.6, dry and wet processing details are to be furnished properly in all the relevant tables with reference the processing methods implemented in the lease area.
- 27) Para 3.10 , material balance chart of the mineral processing in case of dry processing and wet processing, proper feed size with grade and output product with size, quantity and quality with percentage are to be furnished. Similarly reference of annexure in case of beneficiation is to be given on the table.
- 28) It is noticed that some of the column in the beneficiation chapter are kept blank. They are to be furnished as not applicable or details are to be mentioned accordingly.

MINING OPERATIONS

- 29) Under para 4.2.1.1,Pit dimensions in respect of length, width and depth are to be furnished in the table for both the pits.
- 30) Para 4.2.1.1, under inventory of pits, area shown under pits is not matching with area shown under OC working in the Annual Return submitted for the year 2021-22. Need correction.
- 31) Para 4.2.1.2. 2, Grade-wise stack quantity is to be furnished as per the last monthly return submitted. Similarly area covered under stack and their height are to be furnished in the prescribed column. Need correction.
- 32) Para 4.2.2.1 , No of bench in top soil, OB ,benches, depth of water table are to be furnished.
- 33) Para 4.2.2.2 year –wise opencast development, the recovery percentage given is not correct. The table is to be revised with reference to ROM volume of different grades and subgrade, along with ROM quantity and recovery percentage. Similarly co-ordinates with reference to the location of advancement are to be mentioned in the column. OB to ore ratio is to be rechecked and furnished again.

- 34) Under para 4.3.2, grade range is to be furnished in the column.
- 35) Under para 4.3.3 , dump working is shown as nil, whereas in the year-wise column, proposed dump handling quantity is shown. Need clarification/correction. In case of dump handling procedure adopted for calculation of quality and quantity should be elaborated in detail.. The mined out ore from dump should not be included in reserve and it is to be furnished separately.
- 36) Para 4.7.3 and 4.7.4 , details of existing stacks and new stacks are to be furnished in the column.

SUSTAINABLE MINING:

- 37) The details furnished under para 5.2.1 to 5.2.5.14 needs to be reviewed and rectified properly as per the discussion held with mine management during the site inspection on 8//7/2022.

PROGRESSIVE MINE CLOSURE PLAN

- 38) Para 6.1, status of land, the details given under mining operation are not correct. Hence the status of land is to be rechecked with reference to the annual return submitted for the year 2021-22.Need correction.
- 39) Under para 6.2.1 , it is proposed that the silt of beneficiation will be back filled in part of bottom-B quarry. Before backfilling it should be ensured that the mineral has been exhausted completely in the area proposed for backfilling..
- 40) Under para 6.2.2.1, proposal for ground water recharging is to be given.
- 41) Para 6.2.2.2, Retaining wall is to be proposed all along the stack yard to avoid the slippage of ore. Need corrections in the text and on the plates .
- 42) Under para 6.2.5.5 and 6.2.6.1, quality of water and details of expenditure are to be furnished.
- 43) It is noticed that some of the column in the PMCP chapter are kept blank. They are to be furnished as not applicable or details are to be mentioned accordingly.

FINANCIAL ASSURANCE/PERFORMANCE SECURITY

- 44) Under para 7.1 Under Para 7.1, Area put to use at the start of the year in case of mining, mineral storage , infrastructures etc are not correct with reference to the Annual Return submitted for the year 2021-22. The entire area put to use under different activities at the start of year and additional area required are to be rechecked and mentioned correctly.
- 45) The FA is to be submitted based on the MCDR 2017 and amended on 3/11/2021.

REVIEW OF PREVIOUS PROPOSALS :

- 46) The details of the plan period for which the review is carried out is to be mentioned as remarks. All the details shown in the review of mining plan should incorporate with the annual return submitted, wherever required.

PLANS AND SECTIONS

- 47) All the plans should be submitted properly in hard copies along with their soft copies in KML/KMZ/SHP file (Geo-referenced) , except sections in Pdf/.dwg format.
- 48) Key Plan: Location of lease map is to be marked based on the DGPS .The plan should incorporate all features as mentioned in Rule 32 (5)(a) of MCDR 2017.
- 49) DGPS Plan duly authenticated by the State Government is to be enclosed with the document .
- 50) Surface plan: Existing sub grade stacks, area proposed for stacking etc are to be furnished as per text/FA table . Forest and non- forest area is to be marked distinctly. The entire features on the plan are not shown as per index. All the features shown on the surface plan and on the index should be properly matched. The surface plan is to be prepared as per rule 32(1)(a) of MCDR 2017.

- 51) Geological Plan : Boreholes drilled earlier and year –wise future exploration proposal are to be shown properly in index and on the plan. The entire potential mineralized area is to be proposed for exploration under G1 category. The exploration proposal is to be revised keeping in view the MEMC rule 2015. Dip and strike is to be marked on the plan. Area under G1/ G2 etc. is to be shown properly. All the features/ lithology shown on the plan is to be clearly shown in the index. Need correction.
- 52) Geological sections: All the cross sections are to be rechecked based on the analysis of boreholes. Ore body projections are to be justified properly, accordingly the UNFC codes are to be furnished correctly. Color codes for different grades as per the estimation of reserves/resources are to be shown on the sections and in index. RL and total depth of the boreholes drilled is to be marked. Area proposed for joint working with other lessee is to be marked distinctly. Need correction accordingly at all the relevant places of the document.
- 53) Development plan & Section: In all the Development plans, Coordinates along with Northing and easting Line are to be furnished/mentioned with reference to the development proposed for the particular year. Color code in production and development plan & sections and Geological sections should be kept same. Common working areas are to be shown distinctly on the plans and sections.. Need correction.
- 54) Environment plan: The Environment Plan is to be prepared as per the provision as laid down rule 32 (5) (b) of MCDR'2017.
- 55) PMCP and Reclamation plan, year-wise proposed plantation along with other activities are to be shown properly on the map and in the index.
- 56) Financial Assurance plan, area put to use under different activities is to be rechecked and furnished again as per the text. Need correction.
- 57) In all the plans and Sections etc, Modification of Review of Mining Plan is to be replaced as Review of Mining Plan along with proposed plan period. Similarly all required features /codes as shown on the plans, are to be shown in the index. Unwanted features shown in the index are to be deleted. Need corrections at all the plans and sections accordingly.
- 58) Drone survey of the mining lease is to be submitted as per rule 34A(3) of MCDR 2017 (amended on 3/11/2021).

Discrepancies have been found in the kml file submitted;

- a) Kml file submitted by lessee of all relevant plan is not in proper order. Lessee converted whole dwg file into KML, which should be rectified accordingly. The land use patterns, and file type should be classified as given below for kml/shp file for all plates.

Sl. No.	Description	Format	Remarks
1.	Mining Lease Boundary, pit area, dump area, stack yard area, afforestation, others etc	.shp & .kml file	Feature type should be in polygon

- b) Separate kml file should be submitted for each year development plan.

c) Existing quarry & dump should be depicted along with the proposal of each year in KML file of development plan with different color code. Existing position & proposal should be clear.

d) FA Plan; Existing & proposed quarry not shown properly in FA plan. A portion of existing quarry between grid E-12701 & E-12801 not consider in Financial assurance area. Entire area consider for FA calculation is to be rechecked and furnished again.

ANNEXURE

59) The final soft copy of the document should be digitally signed by QP.

60) All the text, tables and annexures should be properly indexed/ numbered/ paged and signed by qualified person. Correct table reference number to be mentioned at all relevant places. All the certificates/annexures should bear dated signature.

61) Copy of Declaration of Owner/Nominated Owner in case of Company/partnership firm is to be enclosed.

62) log sheet of each borehole in csv/excel format is to be attached.

Keenanislaw
17/8/22