



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



By Speed Post/E-mail
Phone: 0674-2352463;
Tele Fax: 0674-2352490;
eMail:
ro.bhubaneshwar@ibm.gov.in
Plot No.149, Pokhariput
BHUBANESWAR-751020

No. MSM/OTFM/40-ORI/BHU/2018-19

दिनांक / Date: 15-01-2019

To

Shri J. N. Patnaik,
Mine Owner,
At/Post-Baneikela, Joda,
Dist-Keonjhar,
Odisha-758038.

Sub: Modification of Review of Mining Plan of Bhanjipali Iron Ore Mines over an area of 18.00 ha in Sundargarh district of Odisha of Shri J. N. Patnaik submitted under Rule-17 (3) of MCR, 2016.

Ref: - i) Your letter no. JNP/2018-19/199 dated 18.12.2018 received on 24.12.2018.
ii) This office letter of even no. dated 24.12.2018.
iii) This office letter of even no. dated 24.12.2018 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 Review of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 10.01.2019 by Shri Dayanand Upadhyay, Sr. Assistant Controller of Mines. The deficiencies observed are enclosed herewith as Annexure-I.

You are advised to carry out the necessary modifications in the draft Modification of 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 Modification of 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 modified copies of the Modification of Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the Modification of 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

Copy for kind information and necessary action to:

1. Shri Bhabagrahi Mohapatra, Qualified Person, M/s Patnaik Minerals Private Limited, At-Baneikela, Post-Joda, Dist-Keonjhar, Odisha-758034.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Scrutiny comments of Modification of Review of Mining Plan of Bhanjapali Iron Ore Mine over an area of 18.0 ha in Sundergarh District of Odisha state of of Shri Jitendra nath patnaik submitted under rule 17(3) of MCR 2016.

General:

- I. The lease no., e-mail, phone & fax no. of lessee and Qualified person have not been furnished on cover page.
- II. Descriptions of the lease, status of mining operation and reason for of modification have not been described in introduction chapter.
- III. Page-2, registration number should be furnished with mines code. Para-f, as mentioned is not as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings and sequence of paragraph as mentioned in the text should be as per IBM Manual Appraisal MP 2014.
- IV. Page-5, Para-3.3.1, the exploration carried out in 2018-19 has not been furnished with Copy of form I and J as per MCDR, 2017 and not enclosed in annexure.
- V. Page-5, Para-3.3.2(a), yearwise proposed OB/waste has not been correctly furnished.
- VI. Page-5, Para-3.3.2(b), proposed ROM production has not been furnished as per approved review of mining plan. The quantity of ore re-handling from dump has not been mentioned.
- VII. Page-8, Para-3.7, in the reason of modification it is mentioned that the lease is going to expire on 31.03.2020, which is not correct. The reason of modification should be furnished with shifting of waste dump and maintaining of production due to closure of mining operation.
- VIII. The experience certificate submitted by qualified person is not legible. The experience certificate should be on company letter head and clearly mentioned experienced of supervisory capacity in field of mining as per rule 15 of MCR 2016.
- IX. Recent photographs of pits, dumps, afforestation and reclamation and rehabilitation carried out should be enclosed.
- X. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

Geology:

- I. Page-13, detailed description of geology of the lease area such as shape and size of the mineral/ore deposit, disposition various litho-units indicating structural features etc. to be given.
- II. The Geological boundaries of exploration limit i.e. G1/G2/G3 etc. are not marked as per Minerals Evidence of Mineral Contents Rules 2015.
- III. Litho units as depicted in profile of geological section is not matched with the geological plan and as per bore hole data. Further, Ore zone should be depicted on plan and section based on surface exposure, exploration data and threshold value.
- IV. It has been observed that 12 nos. of bore holes drilled in 2018-19 which are not completely depicted on geological plan and section. Some of the bore holes are differed from bore logs in terms of BH number and location. The RL of bore holes should be furnished in geological plan and section.
- V. Page-14, the details of exploration carried since inception of mining operation till date to be given in tabulated form i.e. year, BH number, Location (Coordinate), nature of BH (Core/DTH), Depth (max-Min), mineralized/non-mineralized, Inclination etc. The relevant forms for intimation of borehole and borehole logs to be submitted as annexures.
- VI. The gist of proposed exploration and exploration carried out may be given in the following table.

Year	Number of BH carried out/ proposed			
	Diverted forest area	Non-diverted forest area	Non-forest area	Total

- VII. It is observed from geological section that some of the exploratory BH have been closed in mineralized area, hence, exploratory proposal in such area up to the end of the mineralization to be given. Further, proposal of exploration to be given/revised as discussed during site visit.
- VIII. All the drilled and proposed BH to be depicted on the Geological section along with mRL and its actual and proposed depth for better referencing
- IX. 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. The quantity of different ore types and its proportion in lease area to be given.

- X. Page-14, the details of total lease area explored under UNFC have to be furnished in the tabular format provided below.

Total Lease Area: Ha						Remarks/ 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 dt.....					
	Total lease area = A+B+C+D+E					
	G1 Level	G2 Level	G3 Level	Explored and found non- mineralized with level of exploration (Remarks)	Un-explored 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:						
Remaining Resource after above exploration as on dated:						
Total Reserve / Resource after above exploration as on dated:.....						

- XI. Copy of form I and J as per MCDR, 2017 to be enclosed for all the drilled BH for ready and future reference as per Rule 47 and 48 of MCDR, 2017 and the same should be signed by the Geologist appointed under MCDR, 2017.
- XII. Page-20, the calculation of reserve and resources is not as per guide lines of Minerals (Evidence of Mineral Contents) Rules, 2015. Feasibility study report is not enclosed in annexure. Sectionwise volume of waste/OB will be excavated has not been furnished in tabular form of reserve and resource estimation.
- XIII. Page-16, the recovery factor considered in geological reserve and resources estimation is 70% of total excavation. It should be clarified with time series data.
- XIV. Page-20, the calculation of reserve and resources is not as per guide lines of Minerals (Evidence of Mineral Contents) Rules, 2015. Sectionwise volume of waste/OB will be excavated has not been furnished in tabular form of reserve and resource estimation.
- XV. Reporting of Mineral Resources in the format prescribed in Part IV-A of Minerals (Evidence of Mineral Contents) Rules, 2015 to be submitted.

Mining:

- I. Page-25, para-2.0, the existing method of mining has not been described properly. The dimension of existing pit/block should furnished in following table:

Name of pit/Block	Location	Length	Breadth	Depth	Top mRL	Bottom mRL	No. of benches in ore/No. of benches in OB	Pit slope	Area backfilled	Area reclaimed & rehabilitated

- II. Page-26, proposed mining operation has not been described with bench height & width, haul road, no. of pits /block considered for iron ore production.
- III. Page-28, the quarrywise proposed production of ROM in year 2019-20,2020-21 & 2012-22 should be furnished along with cumulative figures.
- IV. It has been observed that part of existing dump-2 lying in the excluded area within lease boundary. Therefore proposal should be revised in light of condition mentioned in Sl. No. (a) as laid down vide proceeding no. 1811/SM, dated 13/03/2018 of Steel & Mines, Govt. of Odisha to shifting the dump lying in the excluded lease area within ML boundary within 60 days of resumption of mining operation.

- V. Page-29, the existing dumps lying in the lease have been proposed for re-handling. Therefore location of the dump, size, total volume, recovery percentage and average grade should be furnished in tabular form with details analysis report.
- VI. In the text and table, the low grade ore should be replaced with mineral reject. The details of mineral reject dumps should referred with dump size and location.
- VII. Page-49, the proposed tentative excavation as furnished in table, below table Bulk density should be mentioned.
- VIII. Page-50, table-2.8, cumulative yearwise production of ROM has not been summarized.
- IX. Page-30-33, Quantum of production and development may be described with no. of benches, mRL, depth of excavation, direction of advance, location and cross-section considered.
- X. The existing benches and geological information has not been shown in development plan.
- XI. The dump re-handling should be shown in development plan and sections yearwise with different colour codes.
- XII. Conceptual mining plan, cumulative waste generation and backfilling and protective measures should be furnished properly. Restoration of safety zone, dead dump and slope of the dump may describe properly.

Stacking of mineral reject/ sub grade material and disposal of waste:

- I. It has been observed that the site selected for the dumping of OB/waste close to the mineralized area. As discussed during field the dumping proposal should be revised and it should be proposed outside the UPL. The handling of screen reject/waste lying in scattered manner in lease area and safety zone should also be proposed to shift on proposed site.
- II. Page-51, the existing dumps should be furnished in table as below:

Name of Dump	Block	Location(Grid)	Top RL	Bottom RL	Length	Width	Area in ha.	Volume	Average Grade

- III. Further, Build-up of proposed dumps from year to year to be mentioned in text w.r.t. designed capacity of dumps, bottom and top mRL of individual terrace, dump slope, individual terrace height and slope with description of method & manner of disposal of waste should be mentioned.
- IV. The details analysis report of existing dumps should be furnished from NABL accredited lab or Govt. laboratory.
- V. Storage/Stacking of Sub-grade material/ Mineral reject in earmarked area to be described with m. RL and area on year to year basis with description of the manner of its disposal.
- VI. Details Existing and proposed retaining wall, garland drain, settling tank etc. to be given yearwise with their location. Location of sub-grade storage along with year to year development of the SG dumps to be given.

Other:

An organizational chart has not been furnished. Proposed manpower both direct and contractual has to be mentioned in the text.

Progressive Mine Closure Plan:

- I. Page-81, Para-8.3, in progressive reclamation plan, yearwise steps proposed for phased restoration has not been described.
- II. Page-87, para-8.6, Amount of financial assurance should be calculated as per rule 27(1) of MCDR-2017 and submitted accordingly.
- III. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity for last one year to be enclosed.
- IV. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished.
- V. All the active dumps should be proposed with extension of retaining wall and garland with settling tanks with proper terracing and stabilization of slope. The dead dumps should be proposed for fully rehabilitation by plantation and with gap plantation if necessary. The proposed and existing retaining wall, garland drain and settling tanks should be clearly marked yearwise on reclamation plan.

Plates:

- I. The plans and sections submitted do not bear the certificate that --the plans and sections are prepared based on the lease map authenticated by the state government.
- II. Wind direction may show through wind rose diagram in key plan and environmental plan.
- III. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist. Magnetic Meridian and date of observation of should be furnished on all relevant plans.

- IV. All plans and sections shall show a scale of the plan at least twenty five centimeters long and suitably subdivided. All plans & sections prepared shall follow the sign conventions under MMR 1961.
- V. Magnetic declination and date of observation of should be given on all relevant plans.
- VI. The UPL should be shown in red colour in all relevant plans and sections. The updated plans and section should be submitted.

Key Plan:

Approach road to lease area should be shown in key plan. The key plan should incorporate all features as mentioned Rule 32 5 (a) of MCDR 2017 and all features should be shown in index as well.

Surface Plan:

- I. Information of boundary pillars in UTM coordinates as well as in Latitude and longitude of all ML boundary points should be depicted in tabulated form on surface plan.
- II. Virgin area to be shown by contours and spot RL in surface plan. Forest & Non forest area, Surface right acquired area etc. should be marked clearly.
- III. Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes.

Geological Plan & Section:

- I. The index of Geological features should be same in both Geological Plan and Geological sections. Some of the index are missing in plan and section.
- II. The mineralised area should be shown distinctly on geological plan and sections. Different level of exploration like G1, G2, G3 etc in line with MEMC rule 2015 to be depicted on geological plan and UNFC codes should clearly furnished in sections.
- III. All the lithology within and outside the UPL to be shown in the Geological sections. Necessary corrections to be done in all the sections.
- IV. In Geological section (3500N) bore hole no-7/05 not shown . Depth of proposed bore holes should be marked in sections.
- V. Bench RL given in geological section not match properly with plan, All section should be rechecked.
- VI. The color of the UPL should be same in all plans and sections.

Development plan & Section:

- I. The lithology of the area has not been shown in year wise development plan and sections in the area proposed for development The index should be same in both development Plan and sections. Some of the index is missing. It is to be checked.
- II. Re-handling of Dump to be shown yearwise in different colour codes.
- III. Location of proposed mineral reject with RL to be shown in plan and section.

Environment plan:

- I. The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017.
- II. Environment Plan, natural drainage systems such as water course, streams, nallah, river, Forest with tree density, waste land, agricultural land, grazing land and surface features of 500 buffer zone should be shown.

Conceptual plan: Conceptual plan may be prepared considering mineralization as revealed from the borehole logs. Direction of run off from the area based on surface contours may be shown on the plan and the sections.

Reclamation Plan: Proposals of land restoration/reclamation/rehabilitation, afforestation, waste dump management, safety and security etc should be depicted in Reclamation Plan yearwise with different colour codes.

Financial Assurance Area Plan:

In the Financial Assurance plan area of land degradation due to mining activity and processing unit, dumping etc. at the end of plan period may be shown clearly with highlighted boundaries and different colour codes for FA calculation.