



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/09-ORI/BHU/2018-19

Date: 23.04.2018

To

✓ Shri Bajrang Sharda, Legal Heir of Late Matadin Sharda,
At/P.o- Barajamda,
Dist- West Singhbhum,
Jharkhand-833221

Sub: Approval of Review of Mining Plan of Khajurdih-Baldih Iron & Mn Mine along with Progressive Mine Closure Plan (PMCP), over an area of 31.5654 ha in Sundargarh district of Odisha State, submitted by Shri Matadin Sharda under Rule 17 of MCR, 2016.

Ref: - i) Your letter No. Nil dated 11.04.2018.
ii) This office letter of even no. dated 16.04.2018.
iii) This office letter of even no. dated 16.04.2018 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 Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on earlier site inspection dated 28.07.2017 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 Review of Mining Plan in the light of the contents vide Annexure 1 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 or JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR 2017 of the Review of 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 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 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.

Yours faithfully,


(HARKESH MEENA)

Regional controller of Mines

Scrutiny comment on Review of Mining Plan including PMCP in respect of Khajurdihi Iron & Manganese Ore Mine of M/s Bajrang Sharda over an area of 31.5654 Hectare in Sundargarh district of Odisha State.

1.0 GENERAL:

- i) On cover page the e-mail, phone & fax no. of lessee and forest diversified area to be mentioned.
- ii) Originally mining lease was granted in three discontinuous blocks "A, B & C" and the review of mining plan has been submitted for Block "C" only. Therefore the status of other block may be described with documentary evidence in introduction chapter.
- iii) The mining lease was declared lapsed by State Govt. vide their letter no. 7526/S&M, dated 12/08/2015. A brief review of status of Mining lease at present with documentary evidences may be given. The extension of the mining lease up to 31/03/2020 and date of execution of lease deed & supplementary lease deed may be marked with annexure.
- iv) The documentary evidence in favour of Shri Bajrang Sharda, legal heir of late Matadin Sharda has not been submitted.
- v) The extent and nature of surface right being held by the Lessee to carry out various mining activities to be indicated with documentary evidence.
- vi) All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

2.0 GEOLOGY & RESERVES:

- i) Page 17-19, para-4.3, 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) Page-20, para-4.5.2, The details bore holes drilled yearwise may described with Form-J submitted to this office erstwhile under rule 47 of MCDR'88. Details of bore hole log has not been submitted with document.
- iii) 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.
- iv) The quantity of different ore types and its proportion in lease area to be given. 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.
- v) Page 22, para-4.9, as the lease is going to expire in 2020 the exploration proposal may be revised to explore the entire potentially mineralized area at least G2 level as per rule 12(4)(A) of MCDR 2017. Exploration proposals should be furnished with collar ID, type of BH, grid interval, depth, location, total area covered & level of exploration G1/G2.
- vi) A comparative statement of reserves and resources estimated in existing modified mining plan may be depicted with depletion of reserves and estimated balance reserve as on date of proposed period.
- vii) Page-23, Para-4.10, Under UNFC the area explored under G1, G2 to be delineated/ marked properly on the basis of drilled bore holes data.
- viii) Justification of different UNFC category to be given as per the guideline given in the Minerals Evidence of Mineral Contents Rules 2015.

- ix) Page-24, para-4.11, reserve blocked under 221 has not been furnished. The average grade of iron and manganese ore have not been furnished.
- x) As per guideline of "IBM manual on appraisal of Mining Plan 2014" at least 10% of total samples to be analyzed in accordance to BIS and reports form NABL accredited/Government Laboratory. Accordingly, BH wise sample details comprising of BH number, Samples generated, Samples analyzed, Ore Zone, OB Zone etc. (to be annexed) to be given in tabulated form.
- xi) Page-26, para-4.12.3, cross sectional area mentioned in table of resource and reserve estimation does not match with sectional area presented in geological sections at places. Verify and rectify.

3.0 MINING:

- i) Page-40, para 5.1.2, the average grade of saleable ore and mineral reject to be furnished. The bulk density considered for saleable and mineral reject should depicted in bullet notes.
- ii) Page-41, Dump re-handling has been proposed to recover the iron ore but analysis of the sub grade has not been furnished. The bulk density considered is for dump re-handling is 2.6 T/cu.m which is lower side. It may be justified.
- iii) Page 38-39, In the development and production tables bench wise, year wise area of excavation and average thickness of the excavation or average area of cross section of bench and its average advance is to be given along with RL of bench with direction of advance at the end of the year.
- iv) Page-42, drill diameter is taken 100mm in calculation of drilling machine while in list of machineries DTH of drill dia. 110mm has been proposed. It may be clarified.
- v) Page-51, table 5.1, cross sectional area as depicted in production schedule is not matched with sections.
- vi) The dump lies in south western part of the quarry-1 is declared as waste dump while it has been observed during inspection that the dump equipped with sub- grade ore. Therefore it is advised that analysis of dump sample should be carried out from NABL Lab and result may be submitted with final document. Accordingly if it is found positive re-handling of dump may be proposed with yearwise tentative excavation schedule. The total quantity of dump may furnished with final document.
- vii) Page-41, para-5.1.4, proposed method for excavation has not been described properly. The nos. of benches in ore & OB, top & bottom mRL, bench mRL considered during excavation may describe properly.
- viii) The quantity of Sub-grade to be generated during conceptual period and its utilization and future planning for beneficiation may be given.
- ix) Conceptual mining plan, cumulative waste generation and top soil generation and protective measures have not been described properly.
- x) Ultimate pit limit should be depicted on all relevant plans & sections. The ultimate pit marked in plan is not revealed with actual mineralisation area.

4.0 STACKING OF MINERAL REJECT/SUB GRADE AND DISPOSAL OF WASTE:

- i) A retaining wall may propose all around the dump lies in south western part of the quarry-1.
- ii) All existing Sub-grade dumps and waste dumps may describe with its location alongwith mRL in text. The top mRL of all above to be depicted clearly on plans.
- iii) Further, Build-up of 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 slop, individual terrace height and slope with description of method & manner of disposal of waste should be mentioned.
- iv) Details of existing and proposed retaining wall, garland drain, settling tank etc. to be given with their location.
- v) The proposal for construction of retaining wall, garland drain may furnish yearwise in different colour codes in terms of their length width and height.

- vi) Proposal of blending of Sub-grade/Mineral reject to be given in the interest of conservation of Mineral. Blending ratio also should be mentioned.

5.0 PROGRESSIVE MINE CLOSURE PLAN

- i) The lease is expiring in 31st March 2020, therefore PMCP submitted in instant document should in line with the FMCP.
- ii) A separate undertaking may be given that FMCP will be submitted as per rule 24 of MCDR, 2017.
- iii) Amount of financial assurance should be calculated as per rule 27(1) of MCDR-2017 and submitted accordingly.
- iv) Under impact on land, cumulative land degradation at present, at the end of proposal period and at the end of conceptual period may be given referring to conceptual mining plan given in scheme of mining.
- v) Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are not given properly. The same to be elaborated.
- vi) Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity for last one year to be enclosed.

6.0 PLATES(General):

- 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) 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 mentioned under MMR 1961.
- iii) Wind direction may show through wind rose diagram in key plan and environmental plan.
- iv) All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist.
- v) Magnetic Meridian and date of observation of should be given on all relevant plans.

7.0 Key Plan:

Approach road to the ML not shown. North direction has not been marked.

8.0 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) Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes.
- iii) Forest & Non forest area, Surface right acquired area etc. should be marked clearly.

9.0 Geological Plan & Section:

- i) Dip and strike as shown in plan is not matching with the field exposure of ore body.
- ii) mRL of bore holes has not been furnished in plan & section. The grid marked on section is not as per scale.
- iii) The exploration proposal may be revised at least G-2 level of exploration of entire lease area and all proposed drilling restricted to the year 2017-18 only.
- iv) G-1/G-2 line as shown in geological plan is not as per guidelines of UNFC. Area marked under G1/G2 under different level of exploration should be rechecked on the basis of exploration data.
- v) The blocked mineral resource is not under 221 is not shown in plan and section.
- vi) The direction along which geological section has been prepared to be depicted on geological section.

vii) The UPL as shown in geological section is not correct as the mineralization is continue in depth.

10.0 Development plan & Section:

- i) The proposed bench mRL and existing bench mRL have not shown. The UPL marked under section is not correct.
- ii) The yearwise dump development with mRL has not been depicted
- iii) The location of an office, crushing & screening plant has not been shown.
- iv) Location of subgrade dump as proposed is not marked in development plan.
- v) As discussed during the filed visit, the profiles of development/geological sections are not matching with the plans at places. Verify and rectify.

11. Environment plan:

- i) The Environment Plan as prepared should be satisfied the provision as laid down rule 32(5)(b) of MCDR2017.
- ii) The proposed and existing environment protective measures to be shown in environment plan. The drainage pattern of the lease area also to be shown on the plan.

12. Financial Assurance Area Plan:

In the Financial Assurance plan area of each individual land i.e land degradation due to mining activity and processing unit etc at the end of plan period may be shown separately on this plan with highlighted boundaries and different colour codes for FA calculation.

13. Reclamation Plan:

Year wise progress of dumping, stacks, afforestation using different colour codes for easy understanding may be shown.

14. Conceptual plan:

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