



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/A/39-ORI/BHU/2020-21

दिनांक / Date: 19.03.2021

To

Shri Harinand Rai, 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 (Amalgamated Lease of ML 130 & ML 162 ) over an area of 2564.323 ha (2486.383 ha+77.94 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. SAIL/DTPRM/2021/085 dated 24.02.2021 received on 02.03.2021.  
ii) This office letter of even no. dated 02.03.2021.  
iii) This office letter of even no. dated 02.03.2021 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 17.03.2021 by Shri Dayanand Upadhyay, Sr. Assistant Controller of Mines and 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 USB Pendrive/Flashdrive)** 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 D. D. Kumar, Qualified Person, Raw Material Section, M/s SAIL, RDCIS Lab. Building 04<sup>th</sup> Floor, Post-Doranda, Ranchi-834002, Jharkhand.
2. Shri Rajendra Prasad Mondal, Sr. Manager (Geology), M/s Steel Authority of India Limited, Basrsua Iron Mines, At/Post-Tensa, Ps-Lahunipara, Dist-Sundargarh, Odisha-770042.

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(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

**Scrutiny comment of Modification of Review of Mining Plan including PMCP in respect of Barusa-Taldih & Kalta Iron ore mines over a lease area of 2564.323 Ha. of M/s SAIL in Sundargarh district of Odisha State.**

**GENERAL:**

1. "The modification of Review of Mining Plan" should be replaced with "Modification of Mining Plan" under rule 17(3) of MCR 2016, on cover page, consent letter and other parts of the text as the instant document is submitted for the amalgamation of the lease ML no.-130 and ML no.-162.
2. Para-2.0, the amalgamated lease area bounded by latitude and longitude should be furnished along with co-ordinates of boundary pillar based on the joined survey DGPS plan.
3. Para-3.2 reason of last modification should be furnished with specific reference of document approved on last occasion. In para 3.3., the review of exploration proposal for 2020-21 has not been updated and action taken for any deviation should be mentioned. The review proposal of modification of review of mining plan for the year 2020-21 has not been updated. Para-3.5, specific reasons of modification of mining plan have not been furnished in light of proposed enhancement of ROM production with plant capacity.
4. The experience of qualified person should be clearly stated in supervisory capacity in the field of mining as per provision of rule 15(b) of Minerals (Other than Atomic and Hydro Carbons of Energy Minerals) Concession Rules, 2016.
5. The updated list of all the directors to be enclosed and same to be given in the text. The latest copy of board resolution about nominated owner to be enclosed.
6. Sequence of paragraph and its numbering should be covered as per IBM Manual Appraisal MP 2014. The annexure submitted are not indexed. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

**GEOLOGY & EXPLORATION:**

7. The UPL shown in plans and sections should be smoothened. Accordingly, the reserves and resources should be rechecked and corrected for different UNFC codes. The date of estimation should be corrected as discussed during inspection. The final presentation of reserves and resources under different UNFC codes should be corrected accordingly. Need to do necessary corrections.

**MINING:**

8. Para 5.0, existing and proposed method of mining should be furnished in light of development plan i.e. production capacity, nos. of pits proposed for production, waste dump and other designing parameters to be discussed. The dimension of existing pit/block should furnished in following table:

Name of block/ pit	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

9. Amalgamation order of ML no.-130 and ML no.-162 has been passed by State Govt. vide letter no. 10418/IV(B)SM-03/2020, dated 02/12/2020 with a condition that supplementary lease deed will be executed within 03 month from date of amalgamation. However it has been observed that supplementary lease deed for amalgamated lease area has not been executed till date.
10. The year wise insitu excavation figures furnished in tones are incorrect. The same should be corrected at all relevant places in the document.
11. UPL has not been marked correctly in development plan and sections considering the ultimate pit profile prevailed on mineralization.
12. The proposed waste dumps and mineral reject dumps have been proposed within UPL. Therefore it should be revised and all the proposed dumps should be kept outside the UPL.
13. Page no.-100, under table dump re-handling, the permission of selling of existing tailings/slime and low grade dumps should be furnished in brief in reference to order issued by ministry of mines and corresponding permission received from State Govt.
14. In view of enhancement of ROM production, the mode of transportation should be described in line NEERI recommendations. The belt conveyor proposed should be marked in development plan and other relevant plans and furnished their year of commencement in view of proposed capacity of the mine.
15. The backfilling proposal as proposed for the year 2021-22 has not been described in text. Before backfilling of the quarry as proposed should be ensured the exhaustion of ore body in terms of their depth & lateral extension in the interest of mineral conservation. Exhausted area to be backfilled specified with RL and year to year basis.
16. The insitu tentative excavation as proposed from different blocks should be furnished with blending proposal in such a way that overall grade of the ore by blending with high grade would usable in the interest of mineral conservation.

17. In 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.
18. In pursuant to the order dated 14.01.2020 passed by MoM, GoI, consequent up on the order dated 08.01.2020 of the Hon'ble Apex Court passed in W.P.(C) No. 114/2014, the lessee shall carryout "re-grassing in mining area after closure of mines". Accordingly proposal has not been submitted in conceptual planning, conceptual plan and sections.

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

19. Total numbers of waste dump, low grade/mineral reject dump etc. are to be furnished mine wise and block wise in tabulated form comprising dump number, designed capacity, present quantity, remaining quantity, bottom RL and top RL.
20. The active/proposed dumps have not been furnished with their location bounded by easting and northing co-ordinates. The area proposed for dumping proved non-mineralized by drilling. The dumps proposed to be re-handled should also be described in text and marked in plan and sections.
21. The nature and quantity of top soil, OB/waste and mineral reject generated year wise to be described and information to be provided in the table as below.

Year	Top Soil (cum)		Overburden		Mineral Rejects		
	Reuse/spreading	Storage	Backfilling	Storage	Blending	Storage	Beneficiation

22. Details Existing and proposed retaining wall, garland drain, settling tank etc. to be given year wise with their location. Location of sub-grade storage along with year to year development of the SG dumps to be given.

**PROCESSING OF ROM AND MINERAL REJECT:**

23. The ROM feed grade and tonnage with recovery%, grade and tonnage of product at each stage of processing may be shown in the flow sheet along with block diagram. The summary of the physical and chemical composition of feed material, grade and quantity along with different output products with physical and chemical composition (with nomenclature of product) should be furnished with recovery percentages. The recovery percentage considered at each stage of processing should be justified properly.
24. The water balance chart as furnished should be revised in light of enhancement of ROM production and wet beneficiation of ROM. The source of water consumption and permission taken from competent authority should also be furnished.

**PROGRESSIVE MINE CLOSURE PLAN:**

25. Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
26. The information of Progressive reclamation plan of mined out land should furnished as below:

Year	Pits/ Quarries/ dump	Area beginning of year(ha)	Additional degraded during year(ha)	Area to be reclaimed by backfilling(ha)	Area rehabilitated by plantation (ha)	Balance area at the end of year

27. Monitoring station of air, noise and water should be described in text and their locations furnished in tabular form. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity to be enclosed.
28. 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. 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.
29. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished. Matured area of backfilling and dump slope should be stabilized with plantation.

**PLATES:**

30. Authenticated lease map over an area of 2564.323 Ha has not been submitted. Need to submit the same.
31. All the plan and sections should be signed with date by certified surveyor, qualified person, mines manager and mining geologist. The plans and sections submitted bear the certificate that --the plans and sections are prepared based on the lease map authenticated by the state government.
32. 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.
33. Wind direction may show through wind rose diagram in key plan and environmental plan. Approach road to the ML to be shown.
34. Existing and proposed bench RL to be mentioned in the all plans and sections. The UPL should be shown in red color in all relevant plans and sections. Magnetic Meridian and date of observation of should be given on all relevant plans.

**Surface Plan:**

35. Forest & Non forest area, Surface right acquired area etc. are not marked clearly. Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with color codes.

**Geological Plan & Section:**

36. The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017. Need to do necessary corrections.
37. In the Geological plan and sections, the UPL has to be modified complying the scrutiny point mentioned and reserves and resources under different UNFC codes should be rechecked and corrected. The UPL should be smoothened. Need to do necessary corrections.

**Development Plan & Section:**

38. Existing and proposed RL of benches/dumps should be mentioned clearly in development plan and sections. In development section UPL should be revised considering the mineralization/ public roads. Backfilled area is not updated in plan and sections. Year wise generation of sub grade dump is to be furnished. Retaining wall and garland should be marked clearly year wise with color codes. UPL should be shown in red color.

**Environment Plan:**

39. The Environment Plan as prepared should satisfy the provision as laid down rule 32(5) (b) of MCDR2017. The proposed and existing environment protective measures to be shown in environment plan. The drainage pattern of the lease area is to be shown on the plan. Contours should be shown in core zone.

**Conceptual plan:**

40. In conceptual plan the RLs of matured backfill area are not matched with development 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 longitudinal section is to be furnished.

*Sudip Ranjan Mazumdar*  
19/3/21  
(Sudip Ranjan Mazumdar)  
Senior Mining Geologist

*Dayanand Upadhyay*  
19.03.21  
(D Upadhyay)  
Senior Asst. Controller of Mines