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

150 YEARS OF CELEBRATING THE MAHATMA

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. MRMP/A/35-ORI/BHU/2020-21 दिनांक / Date: 07.12.2020

To

Shri M. D. Rustagi,
Director & Nominated Owner,
M/s Rungta Sons (P) Limited,
Main Road, Barbil, Dist-Keonjhar,
Odisha – 758035.

Sub: Modification of Mining Plan of Oraghat Iron Ore Mine over an area of 82.961 ha in Sundargarh district of Odisha of M/s Rungta Sons (P) Limited submitted under Rule-17 (3) of MCR, 2016.

Ref: - i) Your letter no. RSPL/ED/GEO/2020-21/650 dated 18.11.2020.
ii) This office letter of even no. dated 20.11.2020.
iii) This office letter of even no. dated 20.11.2020 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 04th & 05th December 2020 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 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. Further, inspection of the mine will be carried out after lockdown is over. The deficiencies/ discrepancies to be observed if any during the inspection will be communicated which should also be attended. 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,

7/12/2020

(HARKESH MEENA)
क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Copy for kind information and necessary action to:

1. Shri Abhijit Sen, Dr. S. K. Dash & Shri Anil Kumar Choudhury, Qualified Person, M/s Rungta Sons (P) Limited, Rungta Office, Main Road, Barbil, District-Keonjhar, Odisha-758035.

(HARKESH MEENA)
क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Scrutiny comment on Modification of approved modification of Review of Mining Plan including PMCP in respect of Oraghat Iron Mines of M/s Rungta Sons (P) Ltd. over an area of 82.961 ha in Sundargarh district of Odisha State

GENERAL:

1. In the cover page period and expiry of lease have not been specified. Further, the document should be submitted as "modification of review of mining plan". Need to do necessary corrections at all relevant places.
2. Sequence of paragraph, formats and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings, formats as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text. In table 1, details of three leases have been submitted whereas the sl.4 has been mentioned. Need to do necessary corrections.
3. In Para 3.1, the date of approved mining plan/review of mining plan/ modified mining plan/FMCP etc. along with lease area/area should be given in tabulated format.

Sl. No	Mining Plan / Review of Mining Plan/ Modified Mining plan/ Modification of Review of Mining Plan/ FMCP etc.	Lease area / Area (in Ha)	Submitted Under (Rule Reference)	Approval Letter No. & Date	Period

4. In para 3.6 the reasons for justification of modification of mining plan has not been elaborated in detail with intended specific modifications. Further, the same should be furnished at all other relevant places in the document. Need to do necessary corrections.

GEOLOGY AND EXPLORATION:

5. Information furnished in table 4.3 such as no of boreholes drilled in G1 and G2 area, mineralized and non-mineralized area under G1 and G2 do not corroborate with information furnished in Geological plan. Need to correct the information furnish in the table with the data shown in geological plan. Need to further reassess the area explored under G1 and G2 category as per provision of MEMC Rules 2015. Need to do necessary corrections at all relevant places of text, tables and plates.
6. In Para I, the exploration proposal has not been submitted as per provision of rule 12 (4) of MCDR 2017. Exploration proposal has not been submitted to convert G2 area to G1 level of exploration. The G2 area is found to be mineralized as per borehole data considering the threshold value of iron ore. Further, proposal for re-drilling have not been proposed where boreholes have been terminated in ore zone. The depth of the proposed boreholes is inadequate considering the occurrence of ore body in depth both along and across the section lines. The depth of the proposed boreholes should be adequate enough to intersect the entire thickness of ore body and terminate in waste. The boreholes have to be proposed in dump area for G1 level of exploration and intersect ore body at depth. Exploration proposal should be completed by 2020-21. Need to modify the exploration proposal accordingly.
7. The bulk density test report from NABL accredited laboratory for ore and mineral reject have not been submitted separately for different grades of ore and mineral reject. Need to submit bulk density test report from NABL accredited laboratory. Further, the method to arrive at average bulk density for ore and mineral reject have not been described. Need to do necessary corrections at all relevant places in the document.
8. In Geological sections, the litho correlation has not been done scientifically considering the lateral and depth ward influence of ore body should be limited to depth as per the provision of Part II point no.4 MEMC Rules 2015. The Geological section should corroborate with the lithology. UNFC codes should be shown in geological sections. The gap areas in the geological sections above the UPL have not been filled with relevant lithology. Need to do necessary correction.
9. As per threshold value notification dated 25th April 2018, it is observed that the resources between the threshold value and the cut-off grade have not been reported separately. Considering the cutoff grade of 55% Fe as reported by lessee, reserves and resources of iron ore under different UNFC codes separately for ore and mineral reject have not been estimated. Need to submit the detail calculation of ore and mineral reject for different UNFC codes by cross-sectional method. In the final summary table no. 4.23, the quantity and grade of ore and mineral reject under different UNFC codes have not been furnished. Need to do necessary corrections.
10. The detail calculation of reserve under 111 category of UNFC through cross-sectional method has not been furnished. The justification of recovery factor while separate estimation of ore and mineral reject should be furnished.
11. The justification of different UNFC codes has not been submitted. Further, the justification submitted is not as per UNFC guidelines.
12. In page 37, point (ix), the estimation of resources considering the common boundary with Sanindpur mines is not discussed in detail and not justified. The reference of undertaking mentioned is not annexed as mentioned. Need to elaborate the same and submit require documents.
13. In table 4.12, 4.13, 4.19, 4.20, the term reserve of iron ore in last column of the table is not relevant and should be replaced with Quantity (in tones). Need to do necessary corrections.
14. In page 40, the quantity, grade, recovery percentage of ore and mineral rejects from dump should be recalculated and furnished after complying the scrutiny points on dump report in annexure. Need to do necessary corrections.

MINING:

15. Justification for area proposed for mining has not been submitted with respect to exploration, mineral conservation etc. Need to do necessary corrections.

16. In Page-45, it is mentioned that four quarries are proposed for ROM production whereas in insitu excavation plan only three quarries have been furnished. Need to do necessary corrections at relevant places.
17. Back filling proposal as furnished in development plan and section has not been explained text. Exhausted area to be backfilled by OB/Waste to be specified with RL and area on year to year basis with description of the method & manner of disposal of waste. Need to do necessary corrections at relevant places.
18. Before backfilling of the quarry as proposed, it should be ensured the exhaustion of ore body in terms of their depth & extension in the interest of mineral conservation.
19. The UPL has not been shown along the road considering the safety zone. Therefore UPL has to be revised and same should be shown in development plan, sections and at relevant plans/sections. Need to do necessary corrections.
20. Explosive and blasting as described should be considered practical parameters applicable at mines, the storage of explosive is to be elaborated with location of magazine, its capacity and type of explosive is to be used. Brief description of mine layout with haul road design ultimate pit limit and disposal of waste should be furnished.
21. In the insitu excavation table, the excavation achieved from 01.04.2020 to 31.10.2020 has not been submitted showing the total proposal for the entire financial year 2020-21. Further, considering the revised estimation of ore and mineral reject separately as mentioned in above scrutiny points, the estimation of mineral reject, if any from the proposed development areas should be rechecked and furnished. The details of insitu excavation of ore, mineral reject and waste by cross sectional method should be furnished. The calculation furnished does not match with the insitu excavation figures.
22. A table showing year wise ROM (Ore & Mineral Reject in tones), Waste in cum from insitu and dump workings should be furnished in tabular format along with total ROM and Waste quantity in a summarized table covering all the years.
23. In page 53, the recovery percentage of saleable ore at 60% (+55% Fe) from Dumps have not been justified as the recovery percentage of +55% Fe material from dump has not been established in Dump report submitted as annexure 34. Need to correlate the recovery percentage from dump report and in production planning. Need to od necessary corrections.
24. Development plan and sections should be modified after modification of geological plan and sections. Need to do necessary corrections.
25. Year wise development and production plan should be furnished in the following tabulated format.

Particular for the year…		
Bench Geometry	Height (in m)	
	Width (in m)	
	Individual bench slope angle	
Quarry Development	Location (Quarry Name)	
	Extent of Development (in UTM coordinate)	
	Sections considered for development	
	Number of benches	
	Benches considered for development with RL	
	Top RL	
	Bottom RL	
	Direction of advancement	
	Dimension of the quarry at the end of the year including existing benches	
	Area occupied (in sq. m)	
	Overall quarry slope angle	
	Production of Ore (in MT)	
	Generation of Mineral rejects ore from quarry (in MT)	
	Production of ROM (Ore+Mineral Reject) in MT	
	Total Generation of waste (in cum)	

26. The material balance chart as shown in page 56, 57, 58 does not represent the grade of +55% Fe processed ore from dump. Further, the recovery of subgrade ore and waste has not been justified. The same should be shown through plans and sections with detail calculation.
27. 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. The proposal for installation of wet beneficiation plant etc. has not been described.
28. 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 "regrassing 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 MATERIAL AND DISPOSAL OF WASTE

29. Justification of proposed waste dumping sites w.r.t to status of exploration, non-mineralization and outside the UPL have not been furnished. Dump plan and sections should be modified to the extent that sub surface lithology has not been shown.
30. The information regarding existing waste dumping sites over mineralized or non-mineralized area, within or outside UPL, temporary or permanent should be furnished in detail in tabular format. The rehandling of existing waste dumps should be proposed if their sites fall within the UPL and over mineralized areas with technical justification.

31. Existing as well as proposed protective measures like retaining wall, garland drain, check dams etc., should be furnished in tabular format with details of location, length, dimensions etc., a separate table should be given showing the year wise construction of retaining wall, garland drain and settling tank having specific proposal. Details of year wise proposal for construction of retaining wall, garland drain, settling tank etc. to be given with their location. Proposal for protective measures have not been submitted around mineral reject dumps and waste dumps.

32. The proposal for temporary stacking of mineral stacks should be modified to the extent that it will not hamper the overall systematic and scientific development of the mine. Need to modify the proposal accordingly.

33. Backfilling proposal should be justified to the extent that before commencement of backfilling the area is devoid of mineralization justified through plans and sections showing subsurface lithology, BH date etc. else proposal for backfilling should be modified accordingly. Need to modify the exploration as well as backfilling proposal accordingly.

34. The mineral rejects, if any that are going to be generated during the plan period year wise should be addressed so that how they are going to be handled like storage, temporary storage, beneficiation etc., Need to do necessary corrections in the entire text of the document wherever relevant.

PROCESSING OF ROM AND MINERAL REJECTS:

35. 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 of dry processing plant. 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.

36. In page 106, it is mentioned that 0.4 million tones of -55% Fe iron ore fines will be generated due to dry processing of old dump whereas in table 5.5 in page 53, it is shown that 0.4 million tones of -45% Fe material will be generated. The statements are contradicting to each other. Need to do necessary corrections at all relevant places.

PROGRESSIVE MINE CLOSURE PLAN:

37. The air, water and noise monitoring stations and their frequency of monitoring have not been furnished in tabulated format. All water discharge points from lease area to external should be monitored. Accordingly, monitoring proposal to be submitted. Further, Gap plantation along the safety zone should be furnished.

38. Year wise plantation covering number of saplings to be planted, location and area to be covered may be furnished. The same should be reflected in reclamation/rehabilitation measures tables furnished year wise. Proposal of coir matting/geo textile and area covered etc. may be furnished.

39. The complete degraded area for mining and allied activities has not been considered for FA calculation. Financial assurance should be recalculated as per provision of rule 27 of MCDR 2017. Calculation of Financial Assurance as shown in table no. 8.22 is not in per the format specified in IBM appraisal of Mining Plan 2014. The area under different heads of FA table should be properly shown in different hatching with present area and additional area in FA plan. Need to do necessary corrections.

40. Year wise mining plan proposals and land use pattern should be submitted in soft copy in the format of .kml or .shp file along with document. Need to do necessary corrections.

PLATES (GENERAL):

41. Magnetic Meridian and date of observation should be given on all relevant plans. Date of survey should be given on all plans and sections and signature should bear date of signature. All plans & sections prepared should follow the conventions mentioned under MMR 1961. All plans and sections shall show a scale a scale of the plan at least twenty five centimeters long and suitably subdivided. The plans and sections submitted should bear the certificate that - the plans and sections are prepared based on the lease map authenticated by the state government. The index should be kept same in all the plans and sections.

42. All plans and sections to be submitted in UTM grid. The orientation of plans and sections as per UTM North should be rechecked and corrected. Need to do necessary corrections.

43. **Key Plan:** The key plan should incorporate all features as mentioned Rule 32 (5) (a) of MCDR 2017. The approach road to the lease area, 5 Km boundary and wind rose diagram etc. has not been shown.

44. With reference to CCOM Circular No 2/2010, the geo-referenced mining leases map superimposed on latest high-resolution satellite data has not been submitted.

SURFACE PLAN:

45. Forest, Non-forest and surface right area to be shown in surface plan. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017.

GEOLOGICAL PLAN & SECTION:

46. Geological sections prepared on natural scale of geological plan at suitable interval across the lease area from boundary to boundary have not been submitted. 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.

47. The revised exploration as mentioned in the scrutiny points should be incorporated in geological plan. The proposed boreholes to be plotted in dotted lines in Geological sections along with proposed borehole number, RL and proposed closing depth at the bottom of the borehole. The year wise proposal for drilling to be shown in different contrasting color in both Geological Plan and Geological sections. The year wise color of the boreholes proposed in Geological plan should match with the plotted proposed boreholes in Geological sections. Longitudinal sections have not been submitted. Need to do necessary corrections.

48. In geological sections, the grid lines along the X-axis have not been shown. The UNFC codes should be rechecked and corrected in all plans and sections. Bench RL have not been shown in the sections. Need to do necessary corrections.
49. The demarcation of ore and mineral reject has not been shown in geological sections justifying the calculations for reserve and resource estimation for the same by cross sectional method. Need to do necessary corrections.
50. The blank areas above UPL should be filled with relevant lithology. Need to do necessary corrections.

DEVELOPMENT PLAN & SECTION:

51. Development plan and sections should be revised based on updated geological map and sections. Index of the UPL should be shown in plan and sections. The proposed and existing bench mRL to be shown clearly over year wise development plan and sections. Need to do necessary corrections.
52. Geological information (lithology) has not been furnished on the area proposed for development in year wise development plan and sections. Plan and section should be drawn on same scale on 1: 2000.
53. Existing and proposed protective measures and plantation should be shown in different colors around all waste dumps and mineral reject dumps. Index of safety zone boundary and surface right area should have distinct color.
54. Year-wise development plan and section should be separately submitted on same scale. Color index of the year wise proposal should be modified as discussed in during field inspection.
55. Re-handling of dumps should marked in development plan & section. Development plan has not been furnished with existing benches.

DUMP PLAN AND SECTION

56. Dump plan and sections should be modified to the extent that sub surface lithology has not been shown. Dumping proposal should be outside the UPL and in barren area. Section showing reclamation of mined out pit through backfilling should be submitted with due justification of exhaust of minerals.

ENVIRONMENT PLAN:

57. The environment plan has not been prepared as per the provision laid down in rule 32 (5) (b) of MCDR'2017. Adjacent lease boundaries within 500m of lease boundary have not been shown.

RECLAMATION PLAN:

58. Existing and proposed protective measures and plantation should be shown in different colors along all waste dumps and mineral reject dumps. Backfilling proposal should be shown clearly. Index of safety zone boundary and surface right area should have distinct color.

FINANCIAL ASSURANCE AREA PLAN:

59. The area degraded due to mining and allied activity and waste dump sites to be considered in FA calculation. The existing area and additional area under different heads should be shown properly under different colored hatching.

CONCEPTUAL PLAN AND SECTION:

60. Conceptual Mine planning up to the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections.

ANNEXURES:

61. Few photographs showing Land use of the lease area, environmental status of the area have not been furnished.
62. Copy of quality of air, water, soil, noise and other environmental a parameters monitoring report of the last year should be enclosed.
63. All the annexure to be properly numbered/paged and relevant annexure to be signed by qualified person etc. It is observed that many of the annexures are not legible. A legible copy of same to be enclosed. The details of all the BH to be annexed year wise BH wise. The lithology of the borehole logs should match with the lithology shown in Geological sections.
64. Bulk density test reports of ore and mineral reject separately from NABL accredited laboratory has not been submitted. Need to submit the same.
65. Copy of valid bank guarantee has not been enclosed. Need to submit the same.
66. Copies of Form I and Form J of all drilled boreholes have not been submitted. Need to submit the same.
67. The chemical analysis results of borehole samples from NABL accredited laboratory have not been submitted.
68. NABL accreditation certificate of the laboratory has not been furnished.
69. Indexing of borehole logs with page numbers have not been done in sequence

Report on Detail study of Dump-1 and Dump-2

a) The location of boreholes and trenches should be furnished in UTM coordinate. The grade furnished in table no. 08 should be the weighted average grade of lump and fines collected from particular trench. Need to do necessary corrections.

b) In Para 3.7, the recovery of subgrade material (45-55% Fe) and Ore (+55% Fe) from Dump-D1 and D2 have not been furnished with detail calculation and justification. Need to do necessary corrections.
c) In Para 3.9, the date of survey of dump volume have not been mentioned. Need to do necessary corrections.
d) The average grade of dump-D1 and D-2 has not been determined. Need to furnish detail calculation of arriving at average grade of each dump.
e) In table 15, the detail calculation of ore and mineral reject/subgrade in Dump- 1 and Dump-2 separately by cross – sectional method have not been furnished along with average grade of ore and mineral reject.
f) In Para 3.10, the range of grade furnished is incorrect and should be corrected. Further, average grade of dumps have not been furnished. The average recovery of ore and sub grade from dumps has not been furnished. Thus, volume, quantity, recovery percentage and grade of dumps have to be reestimated and furnished with detail calculation.
g) The dump quantity estimated and reported in the current draft mining plan (refer page 40) and in dump report does not match with the depletion of production from dumps during 2017-18 and 2020-21(till Oct'20) considering the earlier dump quantities in the approved mining plans during the current review period. Need to recheck the estimation process, calculation etc. Need to do necessary corrections at all relevant places.
h) In plates, the date of survey should be mentioned clearly. The plans and sections have not been signed by Geologist and Qualified Persons.
i) All plans and sections shall show a scale a scale of the plan at least twenty five centimeters long and suitably subdivided. The plans and sections submitted should bear the certificate that - the plans and sections are prepared based on the lease map authenticated by the state government. The index should be kept same in all the plans and sections. Need to do necessary corrections.
j) In Drg.No.05, the sub-surface geological information has not been shown. The section does not show the material between 45-55% Fe and +55% Fe justifying the recovery of ore and mineral reject from each dump.
k) The part geological plan should be submitted.
l) Under heading trench details on dump 1 and dump-2, page no 10, procedure adopted for trench preparation and sampling is to be elaborated as per norms.

Samajumdar 07/12/20

(Sudip Ranjan Mazumdar)
Senior Mining Geologist

07.12.2020

(Dayanand Upadhyay)
Sr.Asst. Controller of Mines