



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. MPM/A/17-ORI/BHU/2021-22

Date: 27.10.2021

To

Shri Harendra Narayan Das, Nominated Owner,
M/s GM Iron & Steel Company Ltd,
At/Po- Rairangpur, Dist- Mayurbhanj,
Odisha-757043
gmsteelbmpr@gmail.com

Sub: Approval of modification of Mining Plan of Badampahar Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 128.427 ha (As per DGPS)/ 129.610 ha (As per RoR) in Mayurbhanj district of Odisha State, submitted by M/s GM Iron & Steel Company Ltd under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. Nil dated 12.10.2021 received on 13.10.2021.
ii) This office letter of even no. dated 13.10.2021.
iii) This office letter of even no. dated 13.10.2021 addressed to Director of Mines, Government of Odisha copy endorsed to you.

Sir,

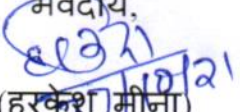
This has reference to the letter cited above on the subject. The draft modification of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 26.10.2021 by Shri Ramkishan R, Senior Assistant Controller of Mines. The deficiencies observed are enclosed herewith as Annexure-I.

You are advised to carry out the necessary modifications in the draft modification of Mining Plan in the light of the contents vide Annexure-I and submit:-

- (i) Three (3) firm bound copies of text in A4 size printable paper and plate/plan in hard copy. The consents and certificates by the Lease holders/Qualified Person and copy of bank Guarantee shall be attached in hard copy of document.
- (ii) Two (2) soft copies of the document in USB Pendrive. The soft copies of the document shall be digitally signed by the Qualified Person and Nominated owner. The text of document should be in excel(.xls) and word format. The plates/plans are to be submitted in .kml/.kmz/.shp format. A few sections may be submitted in .pdf format as indicated in the CCOM Circular 1/2021. All the annexures shall be submitted in soft copy.
- (iii) Financial assurance under Rule 27 of MCDR 2017.


The aforesaid final copies of the 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 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,

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri S C Nayak, Qualified Person, mcpl762005@gmail.com


(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Scrutiny comments on Modification of Mining Plan including PMCP in respect of Badampahar Iron Mine of M/s GM Iron & Steel Company Ltd.

PART-A

CHAPTER-1: GENERAL INFORMATION

1. The document should be prepared as per the mining plan template format provided in CCOM circular No.01/2021 dated 07.06.2021. No alteration/deletion/change in format of the mining plan template is allowed. Any additional information may be submitted as annexure only if required.
2. All the information in the various table columns of different chapters as per the prescribed format in the template should be furnished. No column/rows should be left blank.
3. The final copies of the document should be digitally signed by QPs and Nominated Owner.
4. List of plates and annexures should be properly indexed with page nos. and in case of plates the scale should also be mentioned.
5. Under para 1.1 the details of lease code should be furnished. Recheck and rectify the same. Under para 1.1.2 all the information regarding mining plan submission criteria details have not been furnished. Reasons for modification along with other information should be furnished. Recheck and rectify the same.
6. Under para 1.2 land ownership details, details regarding the khasra no., nature of land, etc., should be furnished. The details should be in accordance with the land schedule in lease deed.
7. Under para 1.3.4.2 the details regarding the consent to establishment should also be furnished.

CHAPTER-2: GEOLOGY AND EXPLORATION:

8. The detailed information under para 2.1.2, 2.1.3..... to 2.1.4.8 should be furnished. The furnished information is not adequate. Needs to be rectified properly.
9. Strike and Dip direction of the orebody furnished under para 2.1.4.8 needs to be reviewed and rectified properly. All the applicable information should be furnished.
10. The information furnished from para 2.2.1. to 2.2.1.14 should be rechecked and rectified properly. All the information should be furnished under the paras.
11. The details of information regarding sampling and analysis under para 2.2.1.9 and 2.2.1.10 has not been furnished. The same should be furnished as per the prescribed format in template with enclosures.
12. The details of information regarding the bulk density under para 2.2.1.13 has not been furnished. The same should be furnished for both ore and waste.
13. The relevant information regarding ore body geometry etc., under para 2.2.3 has not been furnished. The same should be furnished. The descriptive information is not adequate as furnished under para 2.2.4.1, so detailed description regarding the methodology for resources/reserve estimation like, method, threshold, cut off considered influence considered etc., needs to be furnished.
14. The cross section areas drawn on the corresponding sections for the 10 boreholes drilled during the year 2021-22 needs to be reviewed and redrawn considering the log data of previous drilled boreholes also. Necessary changes should be made accordingly in resources and reserves estimation tables wherever applicable.
15. The details of 10% of the sample analysis reports carried out for the 10 boreholes drilled should be furnished along with enclosures.
16. All the information under para 2.2.4.2 needs to be furnished as per the prescribed format of the template for resource calculation, the level of exploration furnished needs to be rectified. The detailed information under para 2.2.4.3 to 2.2.4.13 has not been furnished viz., threshold value and cut off parameters, mining factors, UNFC justification under classification, etc.,. The same needs to be furnished. Proper UNFC codes should be assigned for reserves/resources.
17. Within the G1 explored areas, proposal should be furnished to intersect ore body at depth, if any considering the continuity of boreholes in adjacent sections. The depth of the boreholes proposed should be considered considering the lateral and depth wise continuity of ore body in geological cross-sections and till the end of mineralization intersecting the ore body at depth. The exploration proposal should be complete by 2023-24. The grid spacing for G1 level of exploration for iron ore

should be as per the exploration norms defined in Part III of MEMC Rules 2015. Need to do necessary corrections at all relevant places and modify exploration proposal accordingly.

CHAPTER-3: MINERAL PROCESSING

18. Under para 3.1 the details regarding the valuable mineral name and mineral percentage furnished needs to be rechecked and rectified. Analysis report in support of the same carried out in NABL accredited laboratory/Government laboratory should be enclosed as annexure.
19. Under para 3.2 complete chemical analysis of ROM for all radicals should be furnished with supportive document annexure of analysis carried out in NABL accredited laboratory.
20. Under para 3.3.1 type of crusher details should be furnished viz., jaw, gyratory type etc.,
21. Overall water requirement water balance diagram for mining and processing should be enclosed annexure under para 3.9
22. Material balance chart of mineral processing should be enclosed annexure under para 3.10

CHAPTER-4: MINING OPERATIONS

23. The Pit-Id details furnished under para 4.2.1 should be clearly demarcated on surface plan. The details furnished under 4.2.1.1 and 4.2.1.2 and 4.2.1.3 should be rechecked and rectified. The grid location should be furnished under location column.
24. Information furnished under para 4.2.1.2.2 & 4.2.1.3 should be rechecked and rectified.
25. Ore to OB ratio furnished under para 4.2.2.2 should be rechecked and rectified. The supporting document for justification of recovery viz., recovery test report should be enclosed
26. The information furnished under para 4.3.2 should be furnished for year wise in a single row for one particular proposed year. Check and rectify the same.
27. Under para 4.3.4 the dump handling quantity was furnished whereas under para 4.3.3 No dump workings were proposed. So the table should be modified to the extent that only in-situ workings production quantity should only be proposed.
28. The year wise proposed production quantities for the period beyond two years should satisfy the conditions as mentioned in Schedule-D of signed MDPA. Accordingly necessary changes in insitu excavation in text and development plan and sections should be modified along with necessary modifications at relevant places of the document and plates wherever necessary. Need to do necessary corrections.
29. Under para 4.3.1 the blast vibration study report, bulk density study report and recovery study report and also any other related study reports should enclosed. It is observed that no report has been enclosed annexure.
30. In machinery calculations provisions for standby equipment should be proposed.
31. Details furnished under 4.4.2 should be rechecked.
32. Under para 4.4.5.1 to 4.4.5.3 the details regarding the capacity, manufacturer details should be furnished. Under para 4.5.1, 4.5.2 the details furnished under powder factor should be rechecked. It has not been furnished. It should be furnished. type of explosive should be furnished like emulsion, slurry etc.,
33. The information furnished under 4.6.1 to 4.6.8 should be rechecked and rectified. All the information should be furnished shift wise as prescribed in the format.
34. Under para 4.6.2 the details furnished should be rechecked as per statutory guidelines. Under para 4.7.3 the details regarding the existing stacks only should be furnished.
35. Chemical specification of the use of mineral under para 4.9 should be furnished. The information furnished under column proposed use of mineral should be rechecked.
36. Backup calculation table for production like section wise calculation details should be enclosed as annexure.

CHAPTER-5: SUSTAINABLE MINING:

37. SDF at mine level should be descriptive under para 5.1. Accordingly details should be furnished.
38. Under para 5.2 all the cumulative work done details till date should be furnished. The information furnished should be rechecked and rectified. Also the year wise proposals from para 5.2.1.1 to 5.3

should be furnished. They should not be kept as Nil which not acceptable. Proposal must be furnished.

CHAPTER-6: PROGRESSIVE MINE CLOSURE PLAN

39. The details furnished under para 6.1 should be rechecked and rectified. Also the details of stabilized dumps information furnished is contradicting with the information furnished under para 4.2.1.3. need to rectify the same.
40. Under para 6.2.1 the details furnished regarding the waste quantities and top soil quantities should be rechecked and rectified. The estimated expenditure if any needs to be furnished.
41. All the proposals under para 6.2.2 to 6.2.8 should be furnished. It is furnished as Nil which is not acceptable.
42. Under para 6.2.6 the proposals regarding the recreational facility needs to be furnished.
43. Estimated expenditure wherever asked in the proposed PMCP measures should be furnished. It should not be kept as Nil.
44. The coordinates furnished should be rechecked and rectified. the coordinates point should be combination of latitude and longitude.
45. The details furnished under para 6.2.11 regarding the land use at the expiry of the lease period should be rechecked.

CHAPTER-7: FINANCIAL ASSURANCE/PERFORMANCE SECURITY

46. Under para 7.1 the details furnished in the table should be rechecked and rectified. The area degraded due to mining and allied activity to be considered in FA calculation. The degraded area between boundary pillar nos 34 and 35 observed during the field inspection should be updated in tables wherever applicable and also relevant tables of the text.
47. Additional area requirement proposed for waste dumps should be rechecked as there is no waste dumps proposed during the plan period.
48. The details regarding the performance security under para 7.3 should be furnished.

CHAPTER-8: REVIEW OF PREVIOUS PROPOSALS

49. The details furnished under para 8.1.1 regarding lease area utilization needs to be reviewed and rectified properly. Further reasons for deviation if any should be furnished.
50. The proposals and achievement furnished under para 8.1.2 regarding SDF and CSR expenditure needs to be reviewed and rectified properly.
51. The details have not been furnished under para 8.2.6.1, 8.2.6.2, 8.2.8.1, 8.2.8.2 and 8.2.8.3 and also the reasons for deviation is not furnished. Recheck and rectify.
52. The details of information under para 8.3.2 have not been furnished. Need to furnish the same.
53. All the information under para 8.3.3.1 to 8.3.3.5 have not been furnished. Need to furnish the same.
54. Wherever the deviations are observed regarding the proposals vs actual achievements the reasons for deviation should be furnished.

CHAPTER-9: IMPACT ASSESSMENT

55. The information furnished under para 9.3.2 should be rechecked and rectified.
56. The supportive document in justification of the information furnished under para 9.3.6.1 should be enclosed as annexure.

PART-B

ANNEXURES

57. LOI should be submitted.
58. The complete GR report authenticated by state government should be submitted.
59. The form I and J as per MCDR,2017 for the boreholes drilled during the last approved mining plan period should be enclosed.
60. Chemical and mineralogical analysis reports.
61. Environmental monitoring reports should be submitted.
62. Qualification and experience of QPs as per rule 15 of MCR, 2016.
63. CTO and CTE from SPCB should be enclosed.
64. Surveyor certificate should be enclosed.

65. All the study reports should be enclosed as per para 4.3.1 should be enclosed.
66. Pre-Feasibility/Feasibility report should be enclosed.
67. All the lithologs with chemical analysis of the all the exploration work carried out till date should be submitted.
68. Any other annexures as referred in the text should be submitted.
69. Copy of surface right granted letter.

PART-C

PLANS AND SECTIONS

70. 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 and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist as per provisions of MCDR, 2017 and MMR, 1961. 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.
71. All plans and sections should be prepared on UTM grid.
72. All the plans should be submitted as hard copies and also soft copy of all plans and sections in KML/KMZ/SHP should also be submitted which were geo-referenced.
73. Progressive Mine closure plan and sections should be submitted.
74. Key Plan: the key plan has not been submitted so the same should be submitted. The key plan should incorporate all features as mentioned Rule 32 5 (a) of MCDR 2017. The prominent wind direction to be shown by rose diagram in key plan and other relevant plans. The approach road to the lease area should be shown with Co-ordinates of extremity of lease area.
75. Surface Plan: all the old lessee mineral stacks details should be clearly demarcated on the plan as observed during field inspection. All the boundary pillar coordinates to be given UTM too. All the updated boundaries of Fines stack, Waste dump, Mineral reject dumps to be shown on the plan. Surface right area to be shown on the plan with different type of land schedules. All the features have not been shown in the index. Pit Id names should be clearly demarcated on the plan with distinctive boundary. Common boundary with other lessees if any should be shown on the plan. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017.
76. Geological Plan & Section: (i) part geological plan and sections should be prepared on same scale i.e. 1:2000 (ii) Geo structural information has not been furnished adequately. (iii) Limit of estimation should be as per MEMC rule 2015. (iv) The redefined UNFC boundaries and UPL to be shown in Geological Plan and sections. (v) All the geological information to be furnished on geological plan and section based on drilled BH, exposed pit, trial pits etc with their configuration profile (dimensions) like depth. Section lines with nomenclature should be highlighted on the plan. The litho sequence should be shown as per the borehole logs data in the sections. The sections should be prepared on the same scale as prepared for plan. Proposed boreholes should be shown in dotted line. bauxite mineralization area should be clearly demarcated on the Geological plan. Plan and section should be drawn on same scale. The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017.
77. Development plan & Section: (i) present pit profile configuration of benches with UPL to be shown with red color and proposed development benches of each year with some other color. All development section to be submitted for which development is proposed. The proposed yearwise development area boundaries should be clearly depicted. (ii) The layout of the haul road for present and future excavation proposal should be properly addressed in line with safe movement of fleet of the machinery.(iii) The proposed and existing bench mRL to be shown clearly over year wise development plan and sections. (iv)Geological information to be furnished on development plan and sections like litho units. v) Year wise mining plan proposals should be submitted in softy copy in the format of .kml or .shp file along with document. Need to do necessary corrections.
78. Progressive Mine Closure plan and sections: All revised year wise proposals as per comments in PMCP chapter to be depicted on the plan and sections.

79. Conceptual plan and sections: the plan and sections should be prepared taking into consideration of the production from in-situ excavations, available reserves and resources describing the excavation, , Disposal of waste, backfilling of voids, reclamation and rehabilitation measures, end of lease period etc.
80. Environment plan: The Environment Plan as prepared should be satisfy the provision as laid down rule 32 (5) (b) of MCDR'2017. Wind rose diagram should be depicted.
81. Financial Assurance Area Plan: The existing and additional area requirement should be separately hatched on the plan with FA table.

R. Ramkishan
27/10/21

(Ramkishan R)
Senior Asst. Controller of Mines

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