



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. RMP/A/15-ORI/BHU/2019-20

Date: 21.10.2019

सेवामे

Shri T V Narendran, Managing Director & Nominated Owner,
M/s Tata Steel Ltd,
At/P.o- Jamsedpur,
Dist – East Singbhum,
Jharkhand - 831001

विषय: Approval of Review of Mining Plan of Malda Manganese Mine along with Progressive Mine Closure Plan (PMCP), over an area of 822.00 ha in Sundargarh district of Odisha State, submitted by M/s Tata Steel Ltd under Rule 17 of MCR, 2016.

- संदर्भ: - i) Your letter No. MGM/P&E/702/19 dated 23.09.2019.
ii) This office letter of even no. dated 26.09.2019.
iii) This office letter of even no. dated 26.09.2019 addressed to Director of Mines, Government of Odisha copy endorsed to you.

महोदय,

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 site inspection carried out on 13.10.2019 by Shri Kewal Krishan, Regional Mining Geologist. 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.

भवदीय,
हरकेश मीमा
(हरकेश मीमा)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Sabyasachi Mishra, M/s Tata Steel Ltd, At/PO- Bichakundi, Dist- Keonjhar , Odisha-758034.

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Scrutiny comments on Review of Mining Plan , Malda Manganese Mine M/s TATA steel Ltd Ltd ,for an area of 822.0 ha, Submitted under rule 17(2). The area was inspected by the under signed on 13/10/2019.

General:

- 1) E-mail, phone & fax no. of lessee, location of mines i.e village, tehsil, district etc have not been furnished on cover page. On the cover page Mine code, registration no under rule 45, name of mineral, lease period are to furnished. Similarly category of mine is to be shown as, A mechanized, instead of A-OTFM. Need correction.
- 2) On page no 7, period and expiry date of the lease is to be furnished.
- 3) In the review of mining plan on page no 19, year –wise/block wise, details of plantation carried out are to be furnished as per the annual return submitted.

Geology & Exploration:

- 4) Under heading Geology and exploration, proper heading is to be given for, topography, drainage, vegetation, climate, rainfall and then their description is to be furnished.
- 5) Under local geology, on page no 26, average thickness of various Litho- units, as encountered in the boreholes drilled is to be furnished.
- 6) Under heading detail of prospecting/exploration already carried out. The details of prospecting/exploration carried out earlier are to be discussed under this heading. Similarly, this to be mentioned in the paragraph that the same has been already considered/furnished in the earlier approved document.
- 7) Under table 1.3, only core boreholes are to be proposed, in case, where enhancements of reserves/resources are to be done in future. Exploration proposal is to be furnished as per MEMC rules 2015. Need correction/clarification.
- 8) The details of total lease area explored under UNFC have to be furnished in the tabular format provided below.

Total Lease Area: Ha						Remarks/ comments 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:.....						

- 9) On page no 32 proper heading is to be furnished on the table ie mineral reserves/resources as on 1.10.2014 as per the earlier approved document for the period 2014-15 to 2018-19. Similarly need correction in all the places of document where the reference of earlier document is given.
- 10) On page no 33 and 36, table 1.4d and 1.5, sub grade Iron ore is furnished for the grade 45-58%Fe. Nomenclature of the various grades is to be done as per the revised threshold values of minerals as notified by IBM, dated 25th April 2018. Need correction at all the relevant places of the document.
- 11) Parameters considered for estimation of resources are to be discussed in details.
- 12) Under calculation of resources on page no 37 and onwards, the heading is to be given as block wise resources estimation ie level of exploration (G1/G2/G3) instead of stead of proved mineral reserves (111), probable mineral reserves (122),inferred mineral resources (333). etc . Need correction. Similarly in table, boreholes considered on section line are to be furnished.
- 13) After mineral resources table on page no 55, area covered under various levels of exploration ie G1/G2/G3/G4 in hectare is to be furnished.
- 14) Reserves /resources within the lease may be arrived after discussing various axis of UNFC, i.e. Economic Axis, Feasibility Axis and Geological Axis. Similarly an updated reserves/resources as per UNFC may be arrived after applying the above said three axes.
- 15) In the Geology and Exploration chapter, chronological order as per IBM manual is to be followed, particularly in case of level of exploration and reserves/resources estimation.

Mining:

- 16) On page no 56, present and proposed method of working is to be discussed along with the details of existing pits. Further justification for site selection for next five years should be furnished.
- 17) On page no 63, the year –wise consolidated excavation table is to be corrected. The total excavation, OB, ore, sub grade and reject (fines) figures furnished are not matching with the block wise details given on page no 62. Need correction at all the relevant places of the document. Similarly the grade of reject (fines) and BD density consider for waste are to be furnished.
- 18) On page no 64, block-wise details furnished (ROM)for the year 2021-22 and 2022-23 are not matching with the table given on page no 63. Need correction.
- 19) Details of year wise dump re-handling, if any (for the purpose of recovery of mineral) is to be given.
- 20) Individual yearwise development proposal should be furnished with bench slope angle, RL of benches, direction of advance etc at the end of each year. Further development of pit , dumps, stacks of mineral reject, if any, etc. are to be discussed and are to be shown on the plans also.
- 21) Salient features of the proposed method of working indicating the category of mines are to be described.
- 22) Layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc are to be discussed.
- 23) Conceptual mine planning is to be discussed up to the end of lease period taking into consideration the available reserves/resources, describing the excavation, recovery of ROM, disposal of waste, backfilling of voids, reclamation and rehabilitation.
- 24) The life of the mine is to furnished based on the reserves available and lease granted.

Mine drainage:

- 25) Minimum and maximum depth of water table based on observations from nearby wells and water bodies. Indicate maximum and minimum depth of Workings etc.

26) This chapter is to be discussed as per the IBM manual for preparation of mining plan 2014. Need correction.

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

27) On page no 95, total generation of mineral reject for the year 2020-21 is not matching with the earlier table given on page no 63. Need correction.

28) On page no 95 stacking of mineral reject/sub grade and disposal of waste is to be furnished as per the IBM manual for preparation of mining plan 2014. Need correction.

29) On page no 100, table is to be corrected as per the table given on page no 63. Similarly proper heading of the table is to be given.

30) Year wise manner of disposal of waste, configuration and build-up of dumps along with the proposals for protective measures are to be given .

31) Processing of ROM and mineral reject are to be described as per the heading/sub heading given in the manual for preparation of mining plan 2014. Similarly location of the same is to be described and to be marked on the plan also .

PROGRESSIVE MINE CLOSURE PLAN:

32) Under Para 8.1 details of public building, places of worships, monuments, sanctuary are to be described.

33) Proper heading of the table on page no 142 is to be given.

34) Table no 8.90 and 8.10, year-wise proposal is to be given for various activities.

35) On page no 158, area shown under green belt is to be corrected /justified properly.

36) On table no 8.17 area under plantation is to be shown and accordingly to be calculated in FA.

37) Financial assurance is to be enclosed with the document.

Plates

1) Geo-referenced cadastral map of the lease area is to be enclosed with the document.

2) a) **Surface plan** is to be prepared on non-earth scale.

b) Different feature marked on the surface plan are to be shown in the index also.

c) On composite surface plan, Stack yard marked in block II and III are to be deleted.

3) **Geological Plan :**

a) Details of boreholes drilled earlier and proposed boreholes are to be marked distinctly.

b) Dip and strike is to be marked.

c) Area under various levels of exploration ie G1/G2/G3 are to be marked.

d) Section lines are to be marked properly..

e) lease boundary is to be marked in standard symbol.

f) Composite geological map is to be prepared on non-earth scale.

4) Geological cross sections.:

a) RL and total depth drilled of the boreholes are to be marked.

b) UNFC code are to be marked on all the sections.

c) sections are to be drawn from lease to lease boundary.

d) Scale is to be marked properly.

5) Development plan:

a) Individual year wise plans of pit development, dumps, and stacks of mineral reject are to be enclosed properly. Proper non-earth coordinate are shown on the year wise development and production plans.

b) The coordinates shown on the individual blocks should match with the coordinates of composite plan .

6) The Geological surface plans ,environment plan etc are not prepared as per the specification of scale given in MCDR 2017. All the plans and sections enclosed with the document are to be prepared as per the specification of scale given in MCDR 2017.

7) 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.

8) 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.

9) Wind direction may show through wind rose diagram in key plan and environmental plan. Approach road to the ML to be shown.

10) The UPL should be shown in red colour in all relevant plans and sections. Magnetic Meridian and date of observation of should be given on all relevant plans. Approach road to the ML to be shown.

11) All the plans and sections are to be maintained in chronicle order.

Annexure

1) As per 15(b) of MCR 2016, professional experience certificate of the person who have prepared the document, for working in supervisory capacity in the field of mining after obtaining the degree is to be enclosed.

2) Documentary proof regarding the extension of lease period up to 12/8/2030 , as received from state government is to be enclosed.

- 3) As the mine was lapsed by the state government but as mentioned in the text that the order has been revoked by the state government, Copy of letter regarding revoked order from state government is to be enclosed.
- 4) Documentary proof regarding the bulk density of different grade, from NABL lab is to be enclosed.
- 5) Boreholes lithologs along with their analysis for all the boreholes drilled are to be enclosed with the document.
- 6) All the annexure to be properly indexed/ numbered/ paged and signed by qualified person.