



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/B/13-ORI/BHU/2020-21

Date: 17.08.2020

सेवामे

Shri Debraj Meher, Mine Owner,
At/Po- Chichaiguda, Via- Junagarh,
Dist- Kalahandi, Odisha-766014

विषय: Approval of Review of Mining Plan of Dedar Iolite Mine along with Progressive Mine Closure Plan (PMCP), over an area of 1.39 ha in Kalahandi district of Odisha State, submitted by M/s Tata Steel Ltd under Rule 17 of MCR, 2016.

- संदर्भ: - i) Your letter No. Nil dated 15.07.2020 received on 06.08.2020.
ii) This office letter of even no. dated 06.08.2020.
iii) This office letter of even no. dated 06.08.2020 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 by Shri Dayanand Upadhyay, 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 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 USB Pendrive/Flash drive 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 USB Pendrive/Flash drive)** 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,

(हर्षकेश मीना)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri S.C. Nayak, M/s MINESKETCH Consultants (P) Ltd, Flat No-205, Bhagwan Tower, Cuttack Road, Bhubaneswar-751006.

(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Scrutiny comment of Review of Mining Plan including PMCP in respect of Dedar semi-precious stone (Iolite) mine, Lease area 1.390 ha of Shri Debraj Meher in Kalahandi district of Odisha State.

GENERAL:

1. In introduction chapter brief history of the mines has not been described with present status of mining operation, date of discontinuance and reason etc. The reason of lapsing of period of 2018-19 and 2019-20 should also be furnished. The information furnished under EC is not as per the guidelines of MOEF. Therefore the details of environmental clearance and consent to operate of the mines are to be furnished.
2. Page-7, Latitude and longitude of all boundary pillars as furnished in the text are to be certified for its correctness by furnishing undertaking with signed by qualified person and surveyor.
3. Para-3.0, Page 9-11, in the review of earlier approved proposal an updated figure should be furnished along with proper justification of shortcoming in remarks column. The ROM production and waste generation as furnished from 2013-14 to 2017-18 should be in line with annual returns submitted to this office. The copy of the annual returns is to be enclosed in annexure for ready reference.
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. Sequence of paragraph and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text.
6. The annexures as marked in text are not indexed accordingly. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

GEOLOGY:

7. Page no.15, 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.
8. In page 16, Para (iii), the details of the sample analysis indicating type of sample should be given in tabulated format and nos. of sample analysis from NABL/Govt. lab out of total sample should be furnished along with annexure.
9. Page 18, the complete lease area should be proposed to cover under exploration under G1 level upto end of mineralization as per provision of rule 12(4) of MCDR 2017. The grid interval of proposed bore holes should be maintained 25mx50m. The proposal of exploration to be given in following format:

Sl.No	Year	BH No	Northing	Easting	Collar RL	Core/RC/DTH	Meteage	Inclination	Forest/Non-Forest/ diverted Forest	Surface Right/ Non-Surface	Purpose of BH
1											
2											

At the end of the table cumulative number of proposed BH in forest area, non-forest area, diverted forest area, Surface right area and non -surface right area to be given.

10. The proposed bore holes should be depicted in geological section with their depth and RL for better referencing.
11. The area explored under G1/G2....should be furnished as per as per Minerals Evidence of Mineral Contents Rules 2015.
12. Page-21, in time series data, production of iolite and waste as furnished for calculation of recovery factor should be justified with annual return submitted to this office and it should be enclosed in annexure. The analysis report of bulk density/recovery factor from Govt. lab/ NABL accredited lab should be submitted.

13. The reserve and resources has not been furnished as per Minerals Evidence of Mineral Contents Rules 2015. Since mine is discontinued from 2018-19 and previously no explorations are carried out therefore further change in reserve and resources is not permissible except the depletion of the previous years production and modification UNFC boundaries and codes in light of Minerals Evidence of Mineral Contents Rules 2015. Accordingly the corrections are to be made in plans and sections and in the text and calculation of reserve and resources are to be furnished.
14. Page-25, justification in respect of UNFC codification is not properly furnished as per Minerals Evidence of Mineral Contents Rules 2015. The Pre-Feasibility Study report according to conforming to Part V of Minerals (Evidence of Mineral Contents) Rules, 2015 has not been submitted.
15. 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 from NABL accredited/Government Laboratory.

MINING:

16. Page-28, existing method of mining has not been described in brief with date and reason of discontinuity of mining operation and present status of mining operation along with statutory clearances etc.
17. Page-29, in proposed method of mining, reason of 2 years lapsing period of proposal should also be described in brief. Proposed method of mining should be furnished in light of development plan i.e production capacity, nos. of pits proposed for production, site selection of waste/ mineral reject dump.
18. Page 29-30, 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 (coordinates)	
	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)	

19. In insitu tentative excavation, the ROM production is to be re-scheduled after assessment of mineable reserve as suggested in geology chapter. The extent and nature of surface right being held by the Lessee to carry out various mining activities be indicated with documentary evidence.
20. Page-31, in insitu tentative excavation, the stripping ratio is not correctly furnished. The recovery factor and cut-off grade should be furnished with proper justification.

21. Page 33, briefly describe the 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.
22. In conceptual mining plan, the life of mines has not been furnished correctly. 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.

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

23. It should be ensured that the area proposed dumping should be proved non mineralized. Therefore exploration proposal priorities to prove the non-mineralized area before the dumping of waste/mineral reject.
24. The extent/location of the proposed dumps to be given also mentioned whether within UPL or not. Also give the details of the existing dumps (top soil, waste dump, mineral reject dump) within the lease area in tabulated form comprising dump number, designed capacity, present quantity, bottom RL and top RL.
25. 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.
26. The proposal of dumping may be given in tabulate format as shown below. The year wise build up of dump should be described in details.

year	Waste to be dumped	Dump No	Location of Dumping (Grid)	Proposed area	Proposed dumping RL	No of terrace proposed	Individual terrace height	Slope of the terrace

PROGRESSIVE MINE CLOSURE PLAN:

27. Page-53, Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
28. Monitoring station of air, noise and water should be described in text and their locations furnished in tabular form.
29. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity to be enclosed.
30. Page-63, Human settlement has not been furnished with population distribution pattern around mines area, male female ratio, literacy etc.
31. 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.
32. 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.
33. 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:

34. 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.
35. 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.

36. Wind direction may show through wind rose diagram in key plan and environmental plan. Approach road to the ML to be shown. The CCOM circular no.2/2010 and its addendum should be implemented.
37. 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. Approach road to the ML to be shown.
38. **Key Plan:** The key plan has not been prepared as per the provision of rule 32 (5) (a) of MCDR 2017 particularly the boundaries of all villages and towns with their population, forests with tree density, approach road to lease area.
39. **Surface Plan:** Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with color codes. Virgin area is to be shown by contours and spot RL in surface plan. Forest & Non forest area, Surface right acquired area etc. should be marked clearly. All the dumps should clearly notified with nos. and their RL.
40. **Geological Plan & Section:** Data related to strike, dip, dip-direction etc. shown on the geological plan clearly. In the Geological Plan UNFC boundaries of G1, G2 .. area are to be demarcated as per MEMC Rules 2015. The Proposed bore holes with their depth should be marked in sections. Some of the indexes are missing, it should be re-checked.
41. **Development plan & Section:** The year wise development proposal should be furnished in distinct color. Existing and proposed RL of benches/dumps should be mention clearly in development plan and section. Retaining wall and garland should be marked clearly year wise with color codes. UPL should be shown in red color in standard symbol.
42. **Environment plan:** The Environment Plan as prepared should be satisfy the provision as laid down under 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.
43. **Conceptual plan:** Conceptual plan and section may be prepared considering mineralization as revealed from the exploration data. Direction of run off from the area based on surface contours may be shown on the plan and the sections.