



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. FMCP/A/01-ORI/BHU/2021-22

Date: 09.04.2021

To

Shri Harinand Rai, Director & Nominated Owner,
M/s Steel Authority of India Ltd,
Ispat Bhawan, Lodhi Road,
New Delhi-110003

Sub: Approval of Final Mine Closure Plan of Purnapani Limestone & Dolomite Mine over an area of 230.525 ha in Sundargarh district of Odisha State, submitted by M/s Steel Authority of India Ltd under Rule 24 of MCDR, 2017.

Ref: - i) Your letter No. SAIL/DTPRM/2021/101 dated 06.03.2021 received on 22.03.2021.
ii) This office letter of even no. dated 22.03.2021.
iii) This office letter of even no. dated 17.03.2021 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 of Final Mine Closure Plan (FMCP) has been examined in this office based on site inspection carried out on 07.04.2021 by Shri Ramkishan R, Senior Assistant Controller of Mines & Shri S R 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 Final Mine Closure 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 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 Final Mine Closure Plan within **15 (fifteen)** days from the date of issue of this letter 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 Final Mine Closure 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 Final Mine Closure Plan. It may be noted that no extension of time in this regard will be entertained and the Final Mine Closure 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 further necessary action to Shri S.C. Nayak, M/s MINESKETCH Consultants (P) Ltd, Flat No-205, Bhagwan Tower, Cuttack Road, Bhubaneswar-751006.

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

Scrutiny comments on examination of FMCP over an area of 230.525 Ha of Purnapani Limestone & Dolomite Quarry of M/s SAIL in village Purnapani and Karkatnasa in Sundergarh district of Odisha

GENERAL:

1. FMCP document has not been prepared in the format specified in IBM Manual appraisal MP 2014. Need to do necessary corrections at all relevant places in the document.
2. As per the supplementary lease deed executed, the lease period is valid up to 31.03.2020. Further, it has been mentioned that lessee has submitted application for extension of lease period under the provision of Mineral (Mining by Govt. Company) Rules 2015. Need to submit the extended validity of the lease period as per rule to process the FMCP document.
3. The reason for submission of FMCP as mentioned is due to uneconomic mining operation. Uneconomic mining operation has not been justified as per the provisions of MEMC Rules 2015 and UNFC-1997 guidelines. The UNFC guidelines specifies "General and Detail Exploration" in the mining lease area as pre-requisite to categorize uneconomic mining operation so that proper categorization of UNFC codes can be assigned to mineral resources estimated. It has been observed that lease area has not been explored in General and Detail Exploration. The UNFC codes furnished in the table in page 31 is incorrect. Need to do necessary corrections in text, plates etc.
4. The status of exploration of the lease area as per provisions of MEMC Rules 2015 has not been furnished.
5. In the threshold value notification dated 25th April 2018, the threshold value of Limestone has been defined as CaO-34% (Min.) and MgO-5% (Max). All resources have not been assessed up to the threshold value and between the threshold value and the cut-off grade. Need to do necessary corrections.
6. The existing borehole data has not been furnished. During inspection that previous borehole data have been shown in which it was observed that have CaO, MgO etc. values are not present in chemical analysis report. Need to submit the particular of the boreholes drilled in Form J with chemical analysis reports of borehole samples as stated above. Need to do necessary corrections.
7. The bulk density test reports from NABL accredited laboratory for ore and mineral reject has not been submitted. Need to submit the same.
8. Justification of recovery percentage has not been furnished. The same should be justified either through time series data or test reports.
9. Review of Implementation of Mining Plan / Scheme of Mining including five years Progressive Closure Plan upto final closure of mine has not been furnished.

Closure Plan:

10. Mined-Out Land, Water Quality Management, Air Quality Management, Waste Management, Top Soil Management, Tailing Dam Management, Infrastructure, Disposal of Mining Machinery, Safety and Security, Disaster Management and Risk Assessment, Care and maintenance during temporary discontinuance have not been described in detail. Need to do necessary corrections.
11. The existing infrastructural facilities available such as roads, aerial ropeways, conveyer belts etc. and their future utilization should be evaluated. If retained, the measures to be taken for their physical stability and maintenance should be described. If decommissioning proposed, dismantling and disposal of building structures, support facilities and other infrastructure, electrical equipments and infrastructures such as electric cables, transformers etc. should be described.
12. An account of infrastructural facilities available in the ML area should be given in tabular format indicating its details. Any infrastructural facility which is an essential commodity/related to basic need or which absence may cause any degradation of environment or any damage to flora and fauna in and around the ML area or any danger to public safety or public infrastructure like rail, road etc. shall not be decommissioned (dismantling water supply, water treatment plant, power lines etc.) without prior intimation/approval of appropriate authority.
13. Safety and Security i.e., Securing the Excavations/ pits/ Mineralized Dumps or Mineral Rejects stacks/ Fines stack etc. has not been proposed. Management of Mineral Rejects stacks available in the lease area has not been proposed. The manner in which the waste dumps will be stabilized has not been discussed.
14. A fresh Prefeasibility study to be carried out on the revised resource estimated as per MEMC Rules, 2015. Market assessment has to be done in prefeasibility study. Exploitation cost & sale value of mineral should be clarified and Cost-Benefit analysis and financial appraisal to be carried out based on real time cost involved. Necessary corrections and relevant documents to be submitted.

15. Fencing around quarries, suitable dump stabilization proposals for all the rejects dumps lying in the ML area including mineral stacks with protective measures like retaining wall, garland drain etc.,

Economic Repercussions of closure of mine and manpower retrenchments

16. Manpower retrenchment, compensation to be given, socio-economic repercussions and remedial measures consequent to the closure of mines may be described in detail.

Time Scheduling for abandonment:

17. The details of time schedule of all abandonment operations as proposed may be described here. The manpower and other resources required for completion of proposed job may be described. The schedule of such operations may also be supplemented by PERT (Programme Evaluation & Review Technique), Bar chart etc.

Abandonment Cost:

18. Cost to be estimated based on the activities required for implementing the protective and rehabilitation measures including their maintenance and monitoring programme.

Financial Assurance:

19. 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 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.

Plates:

20. 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 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.
21. All plans and sections to be submitted in UTM grid. Need to do necessary corrections.
22. **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.
23. 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:

24. 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:

25. 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.
26. 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. 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. The blank areas above UPL should be filled with relevant lithology. Need to do necessary corrections.

ENVIRONMENT PLAN:

27. 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:

28. 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:

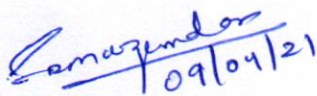
29. The area degraded due to mining and allied activity and waste dump sites to be considered in FA calculation. The existing area and additional area under different heads should be shown properly under different colored hatching.

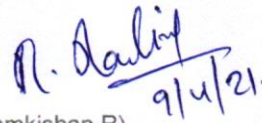
ANNEXURES:

30. Few photographs showing Land use of the lease area, environmental status of the area have not been furnished. 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.

31. Bulk density test reports of ore and mineral reject separately from NABL accredited laboratory has not been submitted. Copies of Form I and Form J of all drilled boreholes have not been submitted. The chemical analysis results of borehole samples either from govt. laboratory or from NABL accredited laboratory have not been submitted. Need to submit the same.

32. Copy of valid bank guarantee has not been enclosed. Indexing of borehole logs with page numbers have not been done in sequence. Need to do necessary corrections.


(Sudip Ranjan Mazumdar)
Senior Mining Geologist


(Ramkishan R)
Sr.Asst. Controller of Mines