

भारत सरकार
खान मंत्रालय
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक का कार्यालय

No. MS/FM/13-ORI/BHU/2016-17

Plot No. 149, Pokhariput
Bhubaneswar – 751 020
Date: 01.12.2016

To
✓ Shri Subrat Bhattacharya, Director,
M/s Jindal Stainless. Ltd,
At/PO- Kaliapani,
Dist – Jajpur – 755047, Odisha.

Sub: Approval of Review of Mining Plan along with Progressive Mine Closure Plan under Rule 17 of MCR, 2016 of Jindal Chromite Mine of M/s Jindal stainless Ltd over an area of 89.00 ha in Jajpur district of Odisha.

Ref: - i) Your letter No. JSL/KLPN/2016/295 dated 25.11.2016.
ii) This office letter of even no. dated 28.11.2016.
iii) This office letter of even no dated 28.11.2016 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 Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 30.09.2016 by Shri Dayanand Upadhyay, 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 along with Progressive 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 23 F of MCDR 1988 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 modified copies of the Review of Mining Plan along with Progressive Mine Closure Plan. It may be noted that **no extension of time in this regard will be entertained and the Modification of Mining Plan along with Progressive 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

Scrutiny comments on examination of Scheme of Mining Plan of Kaliapani Jindal Chromite Mine over 89.00 ha. in Jajpur District of Odisha state of M/s Jindal Stainless Ltd.

Text:

GENERAL

1. Consent letter/ Undertaking/Certificate as furnished by the Lessee may be included the para as "I do hereby undertake to complete exploration in time bound manner in accordance with Ministry of Mines letter no.-10/75/2008-MV, dated 23.12.2010".
2. Certificate produced from qualified person mentioned Scheme of Mining where in cover page and text mentioned Review of Mining Plan.
3. Status of deemed extension of lease under section 8 of MM(D&R) Amendment Act 2015 has not been described in Introduction chapter.
4. Reference of modified Scheme of Mining approved by this office on 13.06.2016 may be mentioned under para-E of Introductory notes.
5. Para 3.4 : Status of compliance of latest violations pointed out after inspections made under MCDR, 1988, should be given.
6. Photo Id of whole time director & nominated owner enclosed at annexure-9 is not clear.
7. Annexures enclosed have not been signed by qualified person and some of the annexures are not readable.
8. A latest list of board of directors duly certified by competent authority along with address/contact nos. to be enclosed. Also, Undertaking regarding working in other firms/company/organization from board of directors should be given.

GEOLOGY AND RESERVE

9. Para-d, name of prospecting agencies/ exploration agencies has not been described properly.
10. Para-(e) (ii), exploration carried out from 2004 to 2012 has not been furnished bore hole wise data with their meterage.
11. Details of All boreholes must be given in the form of standard borehole logs in annexure. Further, details of exploration (all BHs) carried out so far should be corroborated with documentary evidence in respect of order for the work, cost involved, and payment details by the lessee etc. with copy of form J & K maintained as per rule 47 & 48 of MCDR. All details of exploration carried out as enclosed should be certified by the concerned geologist of the mine.
12. Under para-(I) the area cover under different level of exploration, there is 68.05ha unexplored. The proposal for exploration in unexplored area has not been described.
13. Exploration proposal for the entire lease area should be given on a regular grid pattern (excluding the area already covered) to be completed during this proposed plan period for assessing the total mineral reserve/ resources as per UNFC. To convert resource to G1 category and to know the depth ward continuity of ore, Core-BHs should be proposed covering the RC-BHs area. Check BHs should also be proposed in non-potential resource area.
14. Under UNFC the area explored under G1, G2 to be delineated/marked properly. A separate plan showing geology and UNFC may be submitted.
15. Para-k-(iii), updated reserves/resources of Band-VI/ quarry-2, MR (10 to 40% cr2o3) under 111 category has not been estimated correctly.
16. NABL Accreditation certificate of laboratory from where Chemical Analysis of BH samples & bulk density/T.F. test were carried out, should be enclosed.
17. In the UNFC feasibility study : Economic evaluation of the project is not carried out properly like Cost of Production (CPT), Cost-Benefit analysis and Financial appraisal are not carried out based on real time cost involved and also Viability of the project up to the ultimate depth has not been analyzed. Further, In the UNFC feasibility study, following important parameters is not dealt with properly:-
 - a. Assessment of IRR (Internal Rate of Return) and NPV based on present market economics and real time operating cost, reclamation/ rehabilitation cost, closure cost and other important parameters as per UNFC guidelines for the life of the project on the basis of ore body geometry, i.e., depth, width, length etc. and considered for reserve/ resource estimate.

- b. Sensitivity analysis on cash flow due to market changes, i.e., cost of operation, sale price etc. is not carried out.

MINING

18. It has been mentioned that Band -I/ quarry there is no mining since 2012-13 but in tabular form of existing mining method, ROM production and OB excavation has been shown. It may be clarified.
19. Existing/present mining method has not been described properly. Sequence of mining operations should be described properly in brief.
20. Details of existing quarries, processed ore-Lump, fines etc. should be given in text vis-à-vis that is actually available on the site.
21. Page 38: Total exploitation/excavation in cubic meter from the mine/lease has been summarized but table regarding tentative tonnage as arrived considering recovery % and Bulk-Density based on time series data has not been furnished.
22. Page-41, extent of mechanisation, dia. of blast hole 150mm has been considered while at page no. 43 blast hole dia. 163mm has been mentioned.
23. Parameters considered for machineries calculation is not correct. It should be rechecked.
24. Optimum Charge per delay to be considered based on blast induced vibration study; accordingly most suitable drilling & blasting design along with initiation/firing pattern should be proposed and described.
25. In the development and production tables bench wise, year wise area of excavation and average thickness of the excavation or average area of cross section of bench and its average advance is to be given along with RL of bench with direction of advance at the end of the year.
26. The average weighted grade of ore to be excavated and the grade of mineral rejects may be depicted.
27. Ultimate pit limit should be depicted on all relevant plans & sections.

MINE DRAINAGE

28. Southern part of the area is bounded by dry nala and damsal nala towards north-western part of the lease and substantial quantity of rain water likely to be flow through lease area. Hence, adequate rainwater management plan or drainage plan along with engineering detail of arrangement for arresting solid wash off etc. should be prepared and incorporated in the document in view of environmental protection.

HANDLING OF MINERALS REJECT/ SUB-GRADE AND DISPOSAL OF WASTE

29. Back filling proposal has not been explained properly. Exhausted area to be backfilled by OB/Waste to be specified with mRL and area on year to year basis with description of the method & manner of disposal of waste.
30. Storage/Stacking of Sub-grade material/Mineral reject in earmarked area to be described with mRL and area on year to year basis with description of the manner of its disposal.
31. Details of Stocks/Dumps of Waste, Sub-grade/mineral rejects etc. is to be given. Retaining wall & garland drain all along the dump & towards Tata's dump of quarry may be proposed.
32. Further, manner of disposal of Mineral reject/low grade ore/fines/screened fines etc. to be specified in terms of blending, beneficiation or selling to intermediate industries involved in up-gradation of mineral.
33. Specific proposal for stabilization, reclamation & rehabilitation by plantation, coir matting etc. of existing dumps should also be given year wise in quantified terms.

USE OF MINERAL & MINERAL REJECT

34. Requirement of end-use industry to be given in terms of physical & chemical composition matching with proposed production of mine. Hence, production of Lumps & fines to be specified with quantity and grade along with its proposed sell to end-use industries.
35. Requirement of intermediate industries involved in up-gradation of mineral should be assessed and disposal of Mineral reject/low grade fines/screened fines etc. should be proposed accordingly.

PROGRESSIVE MINE CLOSURE PLAN

36. Environmental Base line information & EIA : It should be clarified that base line data collected & assessment done by which agency, period of data collection & assessment and whether it is conforming to the norms of MoEF.

37. In summary of PMCP table, Cumulative actual achievement as on date and specific proposal should be given year-wise in absolute quantified term. Under heading 'others', protective works to be carried out year wise around waste and sub grade dumps also to be given.

38. In Para "Risk Assessment", risk analysis of different mining operations and safety management plan needs to be given.

Plates:-

39. All the plan & sections prepared bear the signature of certified surveyor.

40. Wind direction may show through wind rose diagram in key plan and environmental plan.

41. All plans & Sections should bear dated signature.

42. Magnetic north and date of observation of Magnetic Meridian should be given on all plans except Khasra Plan.

43. DGPS has not been enclosed.

44. Key Plan:

Direction of north has not shown. Wind direction may show through wind rose diagram.

45. Surface Plan:

i) Latitude, longitude of all corner pillars may be indicated on the plan. Few pillars may be correlated with some permanent ground features giving distance and direction. Different land use may be shown with colour codes.

ii) Forest & Non forest area, Surface right acquired area etc. should be marked clearly over a separate Lease Plan & Surface plan.

iii) Surface contours are not shown properly.

46. Geological Plan & Section:

i) Geological features like strike, dip, dip direction etc to be marked.

ii) The reserve under G1 & G2 category and limits of reserves/resources 111 and 211 marked on geological plan and sections in different colour codes.

iii) The direction along which geological section has been prepared to be depicted on geological section.

iv) mRL depicted on geological plan & development plan are not visible properly & section is not in proper order..

47. Year wise development plan:

i) Excavation in ore and OB is not clear hence on year wise plans and sections ore and OB may be marked. Show position of faces and bench RLs at the beginning and end of the year distinctly with direction of advance and individual year workings with colour code. Spot levels at sufficient no of places on original surface, in the pit, and at the toe of benches may be shown so as to ascertain the average depth of excavation in a particular bench.

ii) Section along A-A', B-B' of quarry-1 not matched with mrl & plan.

iii) Section along A-A', G-G' & I-I' of quarry-2 not matched with plan.

48. Environment plan:

i) The Environment Plan as prepared should be satisfied the provision as laid down rule 28(5)(b) of MCDR'88. In the Environment plan Environment monitoring stations to be shown.

ii) Wind direction may show through wind rose diagram.

49. Financial Assurance Area Plan:

Area as depicted in text for FA not matched with area given in plan. In the Financial Assurance plan area of each individual land i.e land degradation due to mining activity and processing unit etc at the end of plan period may be shown separately on this plan with highlighted boundaries and different colour codes for FA calculation.

50. Reclamation Plan:

i) Yearwise afforestation has not been shown.

ii) Year wise progress of dumping, dump re-handling, backfilling, afforestation using different colour codes for easy understanding may be shown.

51. Conceptual plan:

This may be prepared considering mineralization as revealed from the borehole logs. One longitudinal section may also be submitted. Direction of run off from the area based on surface contours may be shown on the plan and the sections.