



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/07-ORI/BHU/2021-22

Date: 15.07.2021

To

Shri Bajarang Lal Gupta, Mine Owner,  
7-5-7/4, Sri Radha Raman Kunj,  
Near Panduranga Swamy Temple,  
Pandurangapuram, Visakhapatnam,  
Andhra Pradesh-530003

Sub: Approval of Modification of Mining Plan of Paikadaku guda Semiprecious Stone (Cat's Eye) Mine along with Progressive Mine Closure Plan (PMCP), over an area of 38.316 ha in Rayagada district of Odisha State, submitted by Shri Bajarang Lal Gupta under Rule 17(3) of MCR, 2016.

Ref: - i) Your letter No. Nil dated 21.06.2021 received on 25.06.2021.  
ii) This office letter of even no. dated 25.06.2021.  
iii) This office letter of even no. dated 25.06.2021 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 Modification of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on earlier site inspection carried out on 06.07.2021 by Shri S K Mahapatra, Senior Mining Geologist. 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 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 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 Modification 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 Modification 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 Modification 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

Copy for kind information and further necessary action 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 Modification of Mining plan along with Progressive Mine Closure Plan of Paikadakuluguda Semi-Precious Stone (Cat's Eye) Mine over an area of 38.316 Ha in Village Paikadakuluguda, Tehsil Bisam Cuttack, Rayagada District of Odisha State of Sri Bajrang Lal Gupta

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**GENERAL POINTS:**

1. All the headings as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text. All the text, tables and annexures to be properly indexed/ numbered/ paged and signed by qualified persons. Correct table reference number to be mentioned at all relevant places. All the certificates/annexure should bear signature with date. Necessary corrections need to do at all relevant places in the document.
2. On cover page, complete address of the Lessee along with contact number and email address needs to be furnished. The same also needs to be furnished all other places of the text document.
3. In the introduction chapter a brief history of the mining lease to be given depicting all instances from the date of grant to as on date with documentary evidence as annexure in chronological order with synopsis of the lessee. The details of Surface right area granted needs to be furnished with documentary evidences.
4. In page 1, it has mentioned that; mining lease of 41.485 hectare was granted on 17.11.2007 for 20 years. Further the same area of 41.485 hectare was granted on 07.01.2017 for 50 years. The executed mining lease deed was been registered on 11.01.2017 over an area of 40.946 hectare. The mine development and Production Agreement was signed between State Govt. & Lessee on 10.01.2017, where the lease area has mentioned 41.485 hectare. Further precise area map, boundary description and land scheduled of the retained area over 38.316 hectare was supplied to the lessee by State Govt. vide letter dated 05.05.2021. Subsequently the draft document has been submitted. Hence the relevant document such as mining lease deed, Mine Development and production Agreement over reduced area of 38.316 hectares needs to be submitted for which modification has been submitted. Accordingly necessary corrections need to be made in the text document, plates and all other relevant places.
5. Status of all statutory clearances obtained or to be obtained as mentioned in page 2 & 3 should be given in the chronological order in tabular format along with documentary evidence, if any.
6. Page no.-6, date of execution and period of lease of 40.602 hectare has been mentioned. The same needs to be rectified and furnished properly.
7. Page no.-9, Item wise review of earlier approved proposal and actual work done has not furnished properly, needs to be reviewed and reproduced with authentic data for the corresponding period.
8. Reason for modification of the approved mining plan needs to be properly justified w.r.t. systematic and scientific development of the mine.

**GEOLOGY AND EXPLORATION**

9. The topography of the lease area shown in the surface plan and respective plans of the draft document are not matching with the exact field ground topography. As discussed during the field inspection, the area needs to be survey afresh and accordingly the surface plan and other respective plans and sections needs to be prepared.

10. The geological plan and sections needs to be prepared based on the revised surface plan in in line to the comments as cited at sl. no. 9 above. All the litho units existing in the field, needs to be shown in the geological plan and accordingly geological sections needs to be prepared.
11. The ultimate pit lit has been shown over G3 limit, which is not acceptable. The lateral extension considered for G2 and G3 limit of UNFC may be revised based on field evidence based on exposure of pegmatite, the host rock intruded into khondalite and in soil cover as per the revised geological plan. Reassessment of the resources/ reserves has to be carried out as per the extant provision of Mineral (Evidence of Mineral Contents) Rules 2015 with nomenclature of proper UNFC codes. Accordingly necessary corrections to be done at all relevant places in the text document and plates.
12. The proposed exploration programme needs to be furnished strictly as per the extant provisions of Part III of Mineral (Evidence of Mineral Contents) Rules 2015 and as per provision of rule 12(4) of MCDR2017. The entire potentially mineralized area under the mining lease area should be proposed to cover under exploration under G1 level up-to end of mineralization. All such proposal of exploratory workings may be distinctly marked on the geological plan year wise in different color codes.
13. The priority of drilling may be revised considering the development program of first five years; area earmarked for overburden dumping and area identified for Cat's eye sorting and picking yard should be proved for non-mineralization before commencement of overburden dumping.
14. The proposal for revised future exploration program should be furnished in tabular format indicating number of boreholes, proposed borehole number, borehole location (co-ordinates), proposed depth, type of drilling (Core type), inclination, year of drilling etc.
15. In page no. 19, the method of reserve estimation may be further elaborated and justified with supporting documents w.r.t recovery factor & Length of influence considered in reserve and resource estimation.
16. It has been furnished in the text document that Chrysoberyl in form of Cat's Eye found from the concordant pegmatite intruded in Khondalite has been reported in the lease area. The chemical composition of Chrysoberyl is  $\text{BeAl}_2\text{O}_4$ , refractive index is 1.7 and lusture is vitreous, furnished in the text document. A petrological study report from a Govt. laboratory in support of the above needs to be submitted.
17. A revised section wise and level wise calculation sheet to arrive at the resource and reserve quantities to be furnished in text in line to the comments as cited at sl. no. 10 and 11 above.

#### **MINING**

18. The details of existing pit configuration furnished in page no. 25; is not correct. The same needs to be reviewed and rectified properly as discussed in the field during inspection.
19. Parameters for year-wise development proposal viz. bench height, width, bench slope angle, name of the section along which development has been proposed, direction of advancement, top RL, bottom RL, quantity of ROM, generation of waste, stripping ratio, etc should be furnished in tabular form under each year-wise development proposal.
20. Although there is no "Mine Development and Production Agreement" for the area of 38.316 hectares, for which the modification of mining plan is being submitted; the ROM production proposal submitted in the present submission of modified mining plan should not be less than the production agreement as mentioned in the "Mine Development and Production Agreement" signed between the lessee and State Government" submitted in annexure. Hence, the present ROM production needs to be modified in the modified mining plan to meet the

ROM production as per agreement. Accordingly, the relevant portion of text, calculation and plans and sections shall be modified.

21. There is an ambiguity in the proposed method of mining; in some places it has been furnished that manual method of mining will be adopted with deployment of pick axe, crowbar, hand shovel and chisel etc. whereas under salient feature of method of mining; drilling and blasting has been proposed. The same needs to be reviewed and rectified accordingly.
22. The section wise and level wise calculation sheet to arrive at the annual proposed production quantities and generation of waste to be furnished in separate tables.
23. A detail indicating the boundary extents of the ultimate pit limit, slope angle, bottom pit limit needs to be furnished.
24. Detailed calculation of top soil and waste generated during plan period and conceptual period, area required for disposal, manner of disposal, no of terraces, height of each terrace, protective measures required to be furnished with proper calculation and should be reflected in respective plan & sections.
25. In page 42, the life of mine has to be recalculated providing all the details. Conceptual Mine planning up to the end of lease period taking into consideration the present available reserves and resources. The following format may be used for showing the detail calculation for life of mine

Total available Reserve and Resource	
Production during five years	
Balance reserve and resource for conceptual period	
Average production per annum	
No of years production will be carried out during conceptual period	
Life of Mine	

26. In pursuant to the order dated 14.01.2020 passed by MoM, GoI, consequent up on the order dated 08.01.2020 of the Hon'ble Apex Court passed in W.P.(C) No. 114/2014, the lessee shall carryout "regrassing in mining area after closure of mines". Accordingly necessary proposal needs to be submitted in conceptual planning, conceptual plan and sections. Accordingly necessary proposal needs to be submitted in conceptual planning, conceptual plan and sections.

**MINE DRAINAGE:**

27. In page 45, the information pertaining to maximum depth of workings may be provided in the tabular format below.

Name of the Quarry	Existing depth in mRL		At the end of plan period (mRL)		At the end of conceptual period (mRL)	
	Top	Bottom	Top	Bottom	Top	Bottom
Pit No						

28. The details of construction of check dams/ settling tanks etc. shall be given along with their design in the chapter on mine drainage. The mode of disposal of surface run-off water shall be discussed indicating the schematic route showing its discharge with proposed provisions of check dams/ settling tanks/ water quality monitoring stations etc. The proposal shall also to be shown in the reclamation plan.

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

29. The year wise buildup of waste dumps has not been described in detail. The information should be furnished in the following table.

Year	Waste Generation (in m <sup>3</sup> )	Waste Dumped (in m <sup>3</sup> )	Dump Name	Location of Dump (coordinates)	Existing or new dump	Top RL of the Dump	No of terrace proposed	Individual Terrace height	Slope of the terrace	Overall slope angle of dump

30. Detailed calculation of top soil and waste generated during plan period and conceptual period, area required for disposal, manner of disposal, no of terraces, height of each terrace, protective measures like retaining wall, garland drain, check dams etc. required to be furnished with proper calculation and should be reflected in respective plan & sections.

**PROGRESSIVE MINE CLOSURE PLAN**

31. All the paragraphs have needs to be addressed in detail under PMCP chapter as per IBM Manual Appraisal MP 2014. The present land use pattern should be furnished as per the format under different heads.

32. Baseline information to be furnished for surrounding 500 meter form lease boundary. The monitoring of various environmental parameters as per the relevant statue should be proposed in the core and buffer zone the lease area. The details of proposed monitoring stations should be marked on the reclamation plan.

33. In FA table the different heads should be kept as per the format specified in IBM manual appraisal 2014. The area under different heads of FA table should be properly shown in different hatching color codes in FA plan. Accordingly necessary corrections need to be done at all relevant places.

**PRE-FEASIBILITY REPORT**

34. Prefeasibility Study report conforming to Part V of Minerals (Evidence of Mineral Contents) Rules, 2015 has not been submitted particularly with reference to Cost and revenue factors such as the derivation of, or assumptions made, regarding projected capital and operating costs, the assumptions made regarding revenue including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, final price offer etc., the allowances made for royalties payable, both Government and private, Basic cash flow inputs for a stated period, Yearly planned production, Net Present Value (NPV) and Internal Rate of Return (IRR) of the deposit, intrinsic value of the deposit based on annual projected production has not been furnished. Market sensitivity study has not been submitted. Accordingly, necessary corrections should be made at all relevant places in the document.

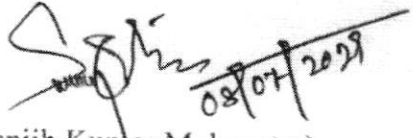
**PLATES (GENERAL):**

35. All plans and sections should comply with the provisions of Rule 32 of MCDR 2017. 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. All plans and sections should be signed with date by Qualified Person.

36. With reference to CCOM Circular No 2/2010 and its addendum, the geo-referenced mining leases map superimposed on latest high-resolution satellite data has not been submitted. An authenticated Lease plan should be submitted.

37. 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, Latitude/longitude of the extreme ML pillar coordinates etc. have not been marked in key plan.

38. Surface Plan: The topography of the lease area shown in the surface plan of the draft document is not matching with the exact field ground topography. As discussed during the field inspection, the area needs to be surveyed afresh and accordingly the surface plan and other respective plans and sections need to be prepared. The Surface Plan needs to be prepared as per the provision laid down under rule 32 (1) (a) of MCDR'2017.
39. Geological Plan & Section: The Geological Plan should be prepared complying with the provision as laid down in rule 32 (1) (b), (c) and (d) of MCDR'2017. The geological plan and sections need to be prepared afresh based on the revised surface plan. The proposed exploration needs to be shown in dotted lines in Geological sections along with proposed borehole number, RL and proposed closing depth at the bottom of the borehole. The year-wise proposal for drilling to be shown in different contrasting color codes in both Geological Plan and Geological sections. The revised UPL needs to be shown in plans and all sections accordingly proper UNFC codes need to be shown in both geological plans and sections. The revised UPL needs to be shown in plans and all sections. All litho units and geological features shown in the geological plan and sections need to be shown in distinguishable color codes and should be properly indexed.
40. Development plan & Section: The development plans and sections should be prepared on updated geological plan and sections. The UPL needs to be shown in all year-wise development plans and sections. Existing and proposed year-wise bench profiles, waste dumps etc. to be shown in the development plans and sections including legend. Year-wise proposed benches RL should be clearly depicted and distinguishable color code for proposed development and waste dumping should be furnished. Proper nomenclature of proposed pits & dumps should be clearly marked along with other protective measures should be clearly depicted. Separate development plan and section for each year need to be submitted.
41. Environment plan: The Environment Plan as prepared should satisfy the provision as laid down in rule 32 (5) (b) of MCDR'2017. The Environment Plan needs to be prepared afresh based on the revised surface plan. The drainage pattern, land type, air, water and noise monitoring stations within the core and buffer zone need to be shown. Wind rose diagram should be shown with predominant wind direction.
42. Conceptual plan & Section: The conceptual plan and section need to be prepared on updated geological plan and sections with revised UPL. The position of pits and dumps at the end of the life of the mine need to be shown.
43. Reclamation plan: Reclamation plan needs to be prepared afresh based on the revised surface plan. Proposals of land restoration/reclamation/rehabilitation, afforestation, waste dump management etc. should be depicted year-wise with different color codes in the reclamation plan. The proposed retaining & garland wall, settling pond should also be furnished.
44. Financial Assurance Plan: The area under different heads of FA table should be properly shown in different color code hatching with present area and additional area in FA plan. The FA table should be furnished.

  
(Sanjib Kumar Mohapatra)  
Senior Mining Geologist