



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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BHUBANESWAR-751020

No MSM/FM/10-ORI/BHU/2018-19

दिनांक / Date: 10.05.2018

To

Shri Prashant Kumar Ahluwalia,  
M/s Kaypee Enterprises,  
P.B No-3, In front of MMTC  
Weigh Bridge, At/Post-Barbil, Odisha-758035.

Sub: Approval of Modification of Review of Mining Plan of Thakurani Iron Ore Mines over an area of 228.04 ha in Keonjhar district of Odisha of M/s Kaypee Enterprises submitted under Rule-17 of Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016.

Ref: - i) Your letter no. nil dated 09.04.2018 received on 26.04.2018.

ii) This office letter of even no. dated 26.04.2018.

iii) This office letter of even no. dated 26.04.2018 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

Sir,

This has reference to the letters cited above on the subject. The draft Modification of Review of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 14.04.2018 by Shri Dilip Jain, Junior 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 Review of Mining 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 should be submitted in Auto CAD compatible format and JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR' 2017 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 Review of Mining Plan document.

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 Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the Modification of 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 / yours faithfully,

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Copy for kind information and necessary action to:

1. Shri Pradeept Mohapatra, Qualified Person, At-Unchabali, Post-Bamebari, Joda, Dist- Keonjhar, Odisha, Pin-758034.

(HARKESH MEENA)  
क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

1/1/2024  
3/1/2024



**Scrutiny comment on Modification of Mining Plan including PMCP in respect of THAKURANI Iron Ore Mine of M/s KAYPEE in Keonjhar district of Odisha State.**

1. **General:** On cover page Mining Lease Number/TC Number/Lease Number if any, along with registration number as allocated by IBM under rule 45 of MCDR, 2017 needs to be mentioned. Further, address, e-mail, phone number, fax number of the lessee may be furnished on cover page. Further, summary of the proposals given before the introduction page to be match with the proposals made in the different chapter.
2. The status of the forest clearance in respect of the non-diverted area to be indicated with documentary evidence.
3. Para 3.2: Reason for modification to be indicated. Para 3.3: Review should be carried out for entire period i.e. for the complete year 2017-18. It is mentioned that Sub-grade generation was "NIL", however, it is observed that SG is being generated in the mine. Check and rectify.
4. The details of the lease area (forest and non-forest etc.) to be given as per table given in the IBM manual on appraisal of mining plan 2014.
5. CCOM circular number 2/2010 and its addendum regarding geo-reference mining lease map and ML boundary pillars to be implemented.
6. **Geology and Exploration:** The BH wise sample analyzed to be included in the table presented from page 21 to 25. Nearest section number may be mentioned for the drilled BH, those not falling on the section line. Further, the details of the samples analyzed from NABL accredited lab to be given in para (i) on page number 26.
7. Page 20: 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 form NABL accredited/Government Laboratory. Accordingly, BH wise sample details submitted to above laboratory to be given in tabulated form indicating BH number, original sample number, duplicate sample number, assay of original sample and duplicate sample along with scattered plot (graphical representation) showing R2 value.
8. It is mentioned that a total of 190 BH have been drilled in lease area, however, only 188 BH have been shown on geological plan. Check and rectify. Further, the RC and Core drilling to be shown with different color code.
9. The total resource has been enhanced from 71.798 million tonnes (as per last approved document) to 97.767 million tonnes. The justification to be given. Further, average grade of the deposit to be mentioned for reserve and resource, instead of +55% Fe or 45 to 55%Fe. The grade to ascertain from drilled BH data.
10. The compliance of rule 12(4) and 4 (A) of MCDR, 2017 to be ensure. Accordingly proposal of the exploration should be given to explore entire potentially mineralized.
11. The level of the exploration to be depicted as per the M(EMC) rule 2015. Isolated BH have been considered under G1 level of exploration. Hence, limit of exploration level to be revised as per MEMC, Rule 2015. Accordingly, table presented on page 26 showing area under different level of exploration to be revised. Further, as per submitted information only 09 BH are non-mineralized. However, in table presented on page 26, 30 BH have been mentioned as non-mineralized. Check and rectify.
12. **MINING:** The length, width, area, top, bottom mRL and number of benches of the pits mentioned in text are not matching with the surface plan. Further, the extent of the exiting dumps furnished in the table on page 44 has also not matching with the surface plan. Hence, all the coordinates for proposed and existing feature to be checked rectified. Further, the direction of advancement mentioned at different places is not matching with each other. Check and rectify.
13. Page 44: it is mentioned that "it has been proposed to analyze the all other existing dumps to know the quantity and quality of dumps. In this regard an undertaking has been enclosed". However, no undertaking has been enclosed.
14. To enhance the production of Iron Ore from 5.5 to 8.00 million tonnes to be justified in light of the 17 of MCR, 2016. Accordingly proposal of the production may be modified and furnish justification for enhancement, if any.

15. The dimension of the quarry at end of each proposed period mentioned on page 47 and 51 to be checked and rectified. Further, the figures mentioned for production of ROM from each pit and total to be checked.
16. Page 48 & 51: The RL mentioned for benches to be developed is not matching with the development plan. Other information in same table about area of excavation, thickness of excavation to be checked.
17. It seems that the estimation for side burden excavation has not been carried out based on the side burden area on section. Figures of the excavation for the year 2018-19 and 2019-20 are exactly same. The details furnished to be checked and rectified.
18. On page 45 it is mentioned that haul road will be having a width of 18 to 25 meter for safe movement of dumpers and trippers. However, on page 60 the width of the haul road is mentioned as 11.50 meter. Further, it is mentioned that benches of the proposed quarry will be utilized as a haul and prposla of 85 tonner dumper has been given for hauling of the material. Hence, an adequate width of haul road is required for safe movement of machineries. Check and rectify.
19. The stack yard has been proposed in DN pit for the year 2018-19 and 2019-20. The stacking of ore in DN pit and development of the DN pit simultaneous is not allowed in the interest of systematic and scientific development of the mine. Further, the proposed site of stacking is within the UPL and should be outside of the UPL.
20. **Mine Drainage:** The grid value furnished is same for check dam 1 and sump 1. All referred grid to be checked and rectified. The details of water drawn from external source and arrangement of its recycling may be given for domestic and industrial purpose
21. **Stacking of Mineral Reject/Sub-grade and Disposal of Waste:** From current proposal of dumping, it is observed that the height of the proposed dump will be attained around 105 meters with seven numbers of terraces at the end of the plan period. Moreover the dump is proposed on the hill slope. A proposal of scientific study for dumping upto such height form the institute of repute to be given and dumping of waste will only be done as per the recommendation of the study. Unless supported by proper technical study report, increasing height of waste dump will not be in the interest of safe & systematic mining. Further, the proposed dump height should be satisfied the conditions imposed by environmental clearance dated 03/02/2012. Accordingly proposal to be revised.
22. The table presented on the page 74 should be as per IBM manual of appraisal of Mining Plan 2014. Check and rectify. Briefly described about the dumping ground for presence or absence of mineral.
23. Page 79: The grid references of proposed sub-grade dump with other details (as given for waste dumping) of dump to be given in text.
24. **Use of Mineral and Mineral Reject:** The physical specification as described by end-user industry to be given.
25. **Processing of ROM and Mineral Reject:** It is mentioned that 250 TPH and 500TPH screen will be deployed, however, information of same has not furnished in the proposed fleet of machineries. Para G: It is mentioned that around 2100 CuM of water will be recycled. The arrangement for such recycling to be furnished.
26. **Progressive Mine Closure Plan:** The lease is expiring in 31st March 2020, there for PMCP submitted in instant document should in line with the FMCP. Baseline information of the lease area should be described on the basis of information incorporated in first approved mining plan at the time of grant of ML. The environment monitoring data of last one year to be enclosed for ready reference. Further, base line information to be furnished for surrounding 500 meter form lease boundary
27. The proposal of fencing should be given for entire Excavations/ pits endangering fall of persons/cattle etc. Proposal of geo-textile/coir matting with plantation to be given for matured slop of the proposed dump. If the Sub-grade material is not utilized fully by the end of 31/03/2020, proposal of coir matting over such dumps to be given in the interest if protection of environment. Garland drain and retaining wall to be proposed along the proposed sub-grade stack. Proposal of garland drain along the waste dump 03 to be given. Accordingly progressive mine closure plan to be revised.

28. Time scheduling for proposed activity like waste dump management (Garland drain, retaining wall, settling tanks, plantation), safety and security (fencing of pits, dumps etc), disposal of machineries, reclamation & re-habilitation, infrastructure, protective measures of environment should be supplemented by PERT (programme evaluation review technique) or Bar chart and these activities should be clearly shown on reclamation plan.
29. Provision of sump to be given and as far as possible all the rain water of catchment area to be diverted to that sump. If, possible proposal of ground water recharge structure may be given. The location and schedule of environment protective measure to be given in text.
30. Para 10, Page 92: The rule position for PMCP mentioned rule 32 of MCDR, 2017 to be corrected as rule 23 of MCDR, 2017.
31. **Plates: General-**All plans and section to be updated as on 01/04/2018. Relevant plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist. Further, a 25 cm scale suitably sub-divided should be depicted on all the plans and sections.
32. Magnetic Meridian and date of observation of should be given on all relevant plans. Further, the UPL should be shown in red colour in all relevant plans and sections.
33. **Key Plan:** The approach road to lease area has not shown. Many of the feature as prescribed under rule 32(5) of MCDR, 2017 has not been shown on the plan like village boundary with population, forest with tree density, sanctuary, waste land, agriculture land etc. The prominent wind direction to be shown with wind rose diagram.
34. **Geological Plan & Section:** In geological plan, geology of lease area to be highlighted. Adequate structural details have not been provided. The index in geological plan and section should be same. From section it is observed that many of drilled BH has been shown above/below the ground profile. Justification to be given and needs to Check and rectify.
35. **UNFC Plan:** The UNFC code mentioned in the section are not visible clearly. For proposed exploration 2017-18 has been mentioned in UNFC plan. UNFC plan to be revised in view of comments in geology chapter. The level of exploration i.e. G1, G2 etc. to be shown with unique color code and non-mineralized/mineralized area within the G1, G2 boundary may be shown with different hatch. Accordingly, plan may be revised.
36. **Development plan & Section:** The layout of the haul road for present and future workings has not been depicted on the plan and sections.
37. **Dump plan and section:** Existing position of waste dump terrace to be marked with mRL. All nearby BH to be depicted on the sections. Direction of the sections to be mentioned along which section have been generated. Dump plan and section to be submitted separately for easy handling.
38. **Drainage Plan:** Catchment area to be depicted on drainage plan. The index to be given separately for proposed sump and check dam. Number of check dam and sump may be depicted on the plan as check dam 1, check dam 2, sump 01 etc. As per text features area proposed in the first year. However, proposal of retaining wall has been given in the second year as well. Accordingly, other relevant plan to be revised.
39. **Environment plan:** The information submitted in plan for other lessee sharing common lease boundary is not matching with other plan. Check and rectify. The Environment Plan should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017. All surface features of adjacent to lease boundary has not been shown. The prominent wind direction to be shown with wind rose diagram. In index "check wire" is mentioned, needs to describe.
40. **Reclamation plan:** The color code for existing and proposed feature should be different. All the proposed features in tabulated manner may be depicted on the plan. The color code for proposed garland drain and bench position is same. All proposed feature along with quantum, location in tabulated form to be depicted on plan along with suitable index.
41. **Financial Assurance Area Plan:** The amount of financial assurance calculated is not as per rule 27(1) of MCDR-2017. The area between lucky pit and waste dump 1 has not been considered under FA assessment. It should be re-calculated and submitted accordingly. Few features, as indicated in index have not been shown on the plan.
42. **Enclosures:** All the annexure to be properly numbered/paged and relevant annexure to be signed by Geologist/surveyor/RQP etc. It is observed that many of the annexures are not legible. A legible copy of same to be enclosed.

43. Qualification certificate as per rule 15 of MCR, 2016 in respect of the qualified person to be enclosed. Address proof and photo id of QP to be enclosed. Further, copy of the address proof and photo id of lessee submitted is not legible.
44. Certificate from the lessee should also include: The information furnished in the Modification of Mining Plan and Progressive Mine Closure Plan is true and correct to the best of my knowledge and records.
45. Page 11: Documentary evidence for dispatch of material as a mineral minor mineral to be enclosed.
46. Copy of letter of OMDC consent for share TK-1 railway siding as mentioned on page 46 to be enclosed.
47. Copy of form I and J (year wise) as per MCDR, 2017 to be enclosed for all the drilled BH for ready and future reference as per Rule 47 and 48 of MCDR, 2017. The same should be signed by the Geologist appointed under MCDR, 2017.

In view of above, wherever necessary correction required to be made in text and plates.

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