



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/OTFM/25-ORI/BHU/2018-19

दिनांक / Date: 31.08.2018

To

The Managing Director/Nominated Owner,  
M/s Odisha Mining Corporation Limited,  
OMC House, Bhubaneswar, Odisha – 751001.

Sub: Approval of Modification of Mining Plan of Roida-C Iron & Manganese Mines over an area of 192.81 ha in Keonjhar district of Odisha of M/s Odisha Mining Corporation Limited submitted under Rule-17 (3) of MCR, 2016.

Ref: - i) Your letter no. nil dated 11.06.2018 received on 13.08.2018.  
ii) This office letter of even no. dated 13.08.2018.  
iii) This office letter of even no. dated 13.08.2018 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

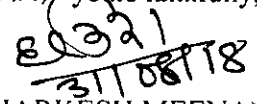
Sir,

This has reference to the letters cited above on the subject. The draft Modification of Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on site inspection carried out on 30.08.2018 by Shri G. C. Sethi, Deputy Controller of Mines & 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 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 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. It may be noted that no extension of time in this regard will be entertained and the Modification 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 S. C. Nayak, Qualified Person, M/s Minesketch Consultants (P) Limited, A/185, Saheed Nagar, Bhubaneswar, Odisha -751007.

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(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 ROIDA-C IRON AND MANGANESE MINE OF M/s OMC LTD.**

- On examination of the cover page Mine code, Mining Lease Number/TC Number/Lease Number was found to be missed. Same to be furnished on cover page. Rule position of mentioned for PMCP submission to be check and rectified as per MCDR, 2017. Summary of proposals to be given before introduction chapter.
- Page 3: The status of balance area to be diverted to be given along with documentary evidence. Page 4 & 19: The email address, fax and phone number etc. to be submitted in respect of the mine office.
- The reason of modification under rule 17 of MCR, 2016 to be justified properly as per rule content. Further as per appraisal of mining plan format 2014, sub-grade to be termed as Mineral Reject. Accordingly, all sub-grade to be replaced with the mineral reject.
- Geology and Exploration:** The highest and lowest altitude mentioned is not matching with the surface plan. The name of the drilling agency and other details to be furnished for drilling in the year 2017-18. The length and width of the quarries mentioned on the page number 19 is not matching with the surface plan. Further, the extent of the quarries to be referred by grid value in same table.

- Page 31 and 32: The details of All drilled BH to be given as per following tabulated form:

S.No.	Year	Agency	BH Id	Eastin g	Northi ng	Collar RL	Inclinati on	BH Type (Core/N C)	BH depth	No. of sample s	Rema rk
1				UTM	UTM	mRL					

- Para 4.5.3: The details of total number of samples generated and analysed to be submitted in the para. As per guideline 10% samples to be analysed through 3<sup>rd</sup> party NABL accredited laboratory. Details of same to be submitted.
- Para 4.5.4: The expenditure incurred in exploratory drilling during 2017-18 to be furnished along with documentary evidence. It is observed that recent drilling has been conducted in the year 2018-19. Accordingly, correction to be made. Para 4.9: The depth of exploration to be proposed for open cast mining shall be as per rule 12(4) of MCDR, 2017.
- Page 36: On examination of geological plan it is observed that the area mentioned under different categories (G1, G2 etc) of exploration has not been depicted on the plan. Same to be depicted and justified as per MEMC rule, 2015.
- The details of exploration carried out to be submitted as per following format.

Area (in Ha) Explored under G1 and G2 as per UNFC				Remaining area (in Ha) to be explored under G2 as per UNFC		Required number of boreholes for exploration of balance lease area under G1/ G2 level	
Forest		Non-Forest		Forest	Non-Forest	Forest	Non-Forest
G1	G2	G1	G2				

- The details of the proposed exploration to be given as per 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	2018-19	PBH 01									
2	2018-19	PBH02									
Total						Total BH	Total mts				

- The recovery of ROM, saleable ore, sub-grade to be justified with time series data or appropriate method. The details/documentary evidence to be submitted.
- The Reserve and Resource of Manganese has not been classified as per MEMC, rule 2015. The detail section wise estimation calculation to be revised and updated in view of change in level of exploration. Justification of different UNFC categories to be carried out as per MEMC, rule 2015.
- MINING:** The length and width of the quarries and waste dump mentioned on the page number 35 and 36 is not matching with the surface plan. Further, the extent of the quarries and waste dumps to be referred by grid value in same table. Reference to be made for active dump and dead or established dumps (page 49-51).
- Proposal of stacking has been given in the existing quarry i.e. in new pit. In the interest of scientific development of mine same is not acceptable. Proposal to be revised and same to be given on the non-mineralised ground.

15. The grid reference of all proposed development sections to be given in tables presented on page from 53 to 55. Further, proposed development to be referred year wise by grid value in same table.
16. Page 56: The material below 45% Fe has been termed as mineral reject. As per guideline/format same to be treated as waste. Accordingly, table to be revised.
17. As per guideline conceptual plan should be upto the end of lease period. In Conceptual Mine plan the details about total excavation, Disposal of waste, Sub-grade generation and its beneficiation/utilization, mine development, manpower and equipment requirement, conceptual exploration, land degradation, waste required and its availability for back filling the ultimate pit details, depth of the back filling, reclamation and rehabilitation of pit and waste dump, Proposal of any expansion, etc. showing on a plan with few relevant sections to be given for conceptual period. Accordingly conceptual plan and section along with text to be revised.
18. **Mine Drainage:** Para 6.2.2, 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

19. Para6.3, Details in respect of quality and quantity of water likely to be encounter, the pumping arrangement, and place final discharge to be discussed. Para6.4: Information about catchment area and likely quantity of rain water to flow through the lease area and arrangement for arresting solid wash to be furnished.
20. It is observed that a substantial amount of rain water supposed to be passed from the lease area. Hence, mine drainage plan to be submitted showing flow direction of the water, location final discharge, arrangement of arresting of solid waste etc. Further, 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 Material and Disposal of Waste:** Page 79- All the proposed features like waste dumping, back filling, mineral reject stacking etc to be referred by grid value. The details of waste dumping and mineral reject dumping should also include about the number of terrace proposed for dumping, additional area required for dumping and waste proposed for backfilling etc.
22. An addition area has been proposed for waste dumping. The proposed area should be proved for non-mineralisation. The information of proving dumping area as non-mineralised to be furnished.
23. All the proposed protective measures to be completed within the first year of proposal. Further, all proposed and existing sub-grade stacks should be secured with retaining wall, garland drain and settling tank. . Accordingly proposal to be revised.
24. **Processing of ROM and Mineral Reject:** Para 9.2: The recovery various size of material to be indicated in flow sheet at each stage. Para 9.7: The details of water requirement for domestic and industrial purpose and provision it's recycling to be given. A water balance chart to be submitted.
25. **Others:** Proposed manpower both direct and contractual has to be mentioned in the text.
26. **Progressive Mine Closure Plan:** Baseline information of the lease area should be described on the basis of environment monitoring data.
27. **Water Quality Management:** Describe in detail the existing surface and ground water bodies available in the lease areas in terms of IS: 10500 or IS: 2490 (as the case may be) and the measures to be taken for protection of the same, for protection of contamination of ground water from leaching etc.
28. The details in tabulated form comprising location (core and buffer zone), grid reference, parameters of monitoring, frequency of monitoring etc. to be submitted for proposed water monitoring stations. Similar information may also be furnished for, air quality, noise quality monitoring stations.
29. Adequate proposal of retaining wall, garland drain, settling tank etc. to be given along proposed and existing waste dumps, mineral reject/sub-grade dumps, area earmark mineral stacking. Proposal of coir matting and plantation long matured slope of waste dumps and safety zone to be given. Proposal of peripheral garland drain to channelized rain water to be given.
30. The 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 & rehabilitation, 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.

31. **Plates:** All the plan & sections submitted along with the Modification of review of Mining plan should be certified by the Qualified Person indicating that, the plans and sections are prepared based on the basis lease map authenticated by the State Govt. of Odisha and found to be correct. The relevant plan and sections to be named and signed by Geologist, Mining Engineer, and surveyor as per MCDR.
32. The existing, proposed and ultimate bench MRI to be mentioned in all relevant plan and section.
33. **Key Plan:** Information i.r.t. forests with tree density, sanctuaries, wastelands, agricultural lands, grazing lands and boundaries of all villages and towns with their population to be indicated as per rule 32 of MCDR, 2017.
34. **Surface Plan:** Surface plan has not been prepared as per the rule 32 of MCDR. All the existing features along with drilled BH to be shown on the plan. Diverted forest land to be marked. Mine road and public road to be shown with different colour code. The existing mineral stack and reject to be shown with firm colour code.
35. **Geological plan and Section:** Surface geological feature to be highlighted in Geo plan like lithology, structural detail, litho contact, proposed exploration etc. Potentially mineralised area and non-mineralised area etc to be marked on the geological plan. All the sections to be prepared from boundary to boundary and across to general trend of the different litho unit. The colour code for different litho unit should be same in plan and section.
36. The core and non-core drilling to be shown with different colour code. Geo structural information has not been furnished adequately. The nomenclature of BH on the geological plan and section should be same and should be as per form J/K of MCDR. All the proposed BH to be shown on geological section along with proposed depth. At places the depth of the drilled BH are not matching with information given in the J/K of MCDR.
37. **Development, dump plan& Sections:** All sections between proposed developments to be submitted. No development section to be escape, whether development was proposed or not. Crusher pit to be marked on the plan and sections. Bench slope angle has been mentioned as 75 degree; however, same has been depicted vertical in sections. The layout of the haul road for present and future workings has not been depicted on the plan and sections.
38. **Environment Plan:** All the existing features available within 500m radius of the lease area has not been depicted and same to be reflected in the text.
39. **Reclamation Plan:** Plan to be revised in line with comments in chapter progressive mine closure plan. Proposed and existing features to be shown with different colour code.
40. **FA Plan:** The FA calculation table to be depicted on the plan showing exiting land use and additional land use required during plan period. The bank guarantee to be submitted in the name of the lessee.
41. **Annexure:** All certificates should bear the name of signatory. Consent letter from lessee should be signed by the nominated owner. The copy of the ID & address proof of the applicant/nominated owner enclosed as annexure-II is not legible; thereby, fresh legible copies for the same should be submitted.
42. The NABL accreditation certificate of lab M/s SGS to be enclosed along with a copy of scope of the work.
43. All the annexure to be properly numbered/paged and indexed. Relevant annexure to be signed by Geologist/surveyor/RQP etc. It is observed that many of the annexure are not legible. A legible copy of same to be enclosed.
44. The details of exploration to be submitted year wise in annexure. Copy of form J and K as per MCDR, 2017 has not been submitted for all the drilled BH and same to be submitted year wise. Further, copy of original chemical analysis report of all the samples to be enclosed year wise.
45. In support of the core exploration drilling carried out, documentary evidence to be submitted.
46. The feasibility report to be prepared in line with guideline given in the MEMC rule 2015. Accordingly, feasibility study report to be revised. Economic viability of the deposit to be justified.
47. Few photographs in support of the quarry /dump /stack /reclamation & rehabilitation /forestation etc. to be enclosed along with the document, which should be submitted for more informative.
48. The approval status of the mining plan/scheme of mining in different occasions has been furnished but the copies of such approval letters have not been enclosed.
49. The lease was granted to M/s OMC ltd. However, the mine is running by M/s IDCOL. Hence, copy of agreement between M/s OMC ltd. And M/s IDCOL to be enclosed for ready reference.

(DILIP JAIN) (G.C. Sethi)  
 Junior Mining Geologist Deputy Controller of Mines