

Scrutiny comments on examination of Mining Plan submitted by Director of Mines, Odisha for Pre-embedded clearance in respect of Kalimati Manganese Block, over an area of 67.177 Hectares in Keonjhar District.

Introduction

1. The block details is to be furnished on cover page as per guidelines issued by Ministry of Mines vide letter no.16/4/2020-M.VI, dated 03/06/2021. The words "Mining Plan for Embedded Clearance" should be replaced with "Mining Plan for Pre-Embedded Clearance" in all places of the text.
2. As per guidelines issued by Ministry of Mines vide letter no.16/4/2020-M.VI, dated 03/06/2021, Para-7(ii) states that "The State Government may set up a Project Monitoring Unit (PMU) to complete the preparatory work for obtaining the requisite clearances/approvals and related work. The PMU will become the applicant for all the clearances required to start the mining operations". However in the text the name of applicant as furnished is Government of Odisha and consent letter/undertaking/certificate is signed by Director of Mines. It may be clarified.
3. Page no.-2, in block details the name of associated minerals is furnished iron ore whereas no information of iron ore is furnished in geological report. It may be corrected as per geological report.
4. In introduction chapter, the rule quoted for preparation of mining plan is not correct. It is to be simply furnished that the mining plan has been prepared under guidelines issued by Ministry of Mines vide letter no.16/4/2020-M.VI, dated 03/06/2021.
5. Page no.-5, under Para mine location details, the toposheet number is not correctly furnished.
6. A format of summary at glance needs to be furnished and the copy of the same is enclosed as annexure. The final soft copy of the document should be digitally signed by QP and consent letter by Nominated Owner.

GEOLOGY AND EXPLORATION:

7. Page-8, the highest RL and lowest RL are not correctly furnished and also not matched with the geological plan.
8. Page-no-9, local geology and structure of the block area is to be described with reference to the lease area. Similarly local geological succession is to be mentioned.
9. Page no.-10, Lithology, petrographic & mineralogical description, associated and indicated mineral is not described properly. Mode of occurrence, control of mineralization and extent of weathering is not described properly. Need correction.
10. Type of deposit is to be specified as per MEMC Rule 2015. Copy of Bulk density report and recovery test report from NABL is to be attached with the document.
11. Page no-17, In the drilling table, year of drilling and nomenclature/id of boreholes as per the geological report is to be mentioned. Total no. of bore holes as furnished in geological report and in the document is not matched.
12. Page-42, area under different level of exploration is not furnished correctly in the table and other part of the text. Need correction at all the relevant places of the document.
13. Page no.-43, Reserves/resources estimation, methodology adapted for estimation is to be elaborated in detail by mentioning the various factors considered. Need correction.
14. Page no.50, it is mentioned that 2% of the resources are considered as block resources. The same is to be modified. It should be as per plan and sections calculation only. Need correction at all the relevant places of the document.
15. It is noticed that there are old pits in the block area. The samples from these pits are to be drawn and analysed and accordingly delineation of area, whether mineralized/ non-mineralized is to be done. Need correction accordingly at all the relevant places of the document.

16. Page no. 50,51 & 52, In resource/reserve estimation table, the cross-sectional area shown in the table is no matching with the cross section drawn. Need correction in all the cross sections of the document accordingly. Reserve/resources estimated in geological report are exaggerated, needs thorough checking.
17. In view of point no.-19, as mentioned above the entire Geological report is to be revised and submitted along with document as a fresh vetted by State Government. The said report should be prepared as per MEMC amendment rules 2021.

MINING OPERATIONS

18. Page no.55, under Para existing inventory, the dimension of pits are not correctly furnished. In waste dump location the UTM grid should be furnished in place of local grid.
19. Page no.56, in proposed method of mining, the justification of site selection is to be furnished. It is observed that the existing pits are not analysed by pit sampling for further establishing the reserve/ resources and no other data has been enclosed.
20. Page no.-57, Part-2, the maximum depth of working as furnished year wise in table is not matched with the development sections. It is to be re-checked and corrected.
21. Page no.-58, Part-2, year wise mineral length and width as furnished in Table are not matched with development plan and sections. The profile of development sections are also not matched with the development plan.
22. The percentage of recovery is furnished in different range year wise which is not justifiable. A specific recovery percentage is to be furnished based on the technical data with supporting document.
23. Page no.-58, part-2, year wise the OB to ore ratio is not correctly furnished. The location of advancement should be furnished in UTM grid in place of local grid.
24. Page no.-60, in table under column of insitu mining, handling quantity (ROM) year wise is not correctly furnished. It is to be re-checked and corrected.
25. Page-65, as per development plan existing waste dump-1 has been proposed for dumping for 2 years, however in the text part dump id is not correctly furnished. Further in the text, the proposal of new dump is furnished not applicable however in development plan a new dump-4 is proposed. It may be re-checked and corrected.
26. As suggested under Geology chapter, the reserves/resources are to be re-estimated hence the year-wise development proposal of Iron ore and manganese are to be revised at all the relevant places of the document..
27. Page no.-61, Machine calculation and machine requirement are not correctly furnished. The formula applied for Shovel/ excavator calculation is also not correct and not as per format.

Rehabilitation

28. Page no 68, area shown under existing status of land are not correctly furnished. It is to be rechecked from surface plan and corrected. On page no 69, year-wise preparation for ground water recharging are to be mentioned on the table.
29. Page-68, the quantity of waste/backfill material available at site as furnished in table is not correct. Page no.-72, in dump area stabilisation & development, the dump id is not correctly furnished.
30. Welfare and development program table in case of drinking water is to be furnished correctly. Year-wise details on support to transport service & Infrastructure, are to be furnished on the table.
31. The complete Socio-Economic aspect part is to be revised keeping in view the year –wise CSR initiative development proposed programs..

PROGRESSIVE MINE CLOSURE PLAN


32. On page no 82, in the table on present status of pre-mining use of area is not correct. It is to be rechecked and revised as per the plan,
33. The Environment monitoring stations for air, water noise etc are to be proposed in core and buffer as per MOEF guidelines. The same are to be marked on the Environment plan also.
34. Ten year time series data in case of climate and meteorology is to be furnished in case of temperature, relative humidity and average rainfall.

ANNEXURES

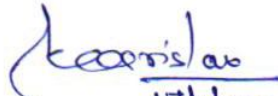
35. Copy of letter from Govt. of Odisha regarding PMU from State government for this purpose may be enclosed.
36. Legitimate copy of Geological Report from state government.
37. All the lithologs with chemical analysis of all the exploration work carried out till date should be submitted. The bulk density test report, recovery report etc are to be enclosed.
38. Calculation of insitu tentative excavation year wise considering the cross-sections, Bench RL etc should be furnished.

PLANS AND SECTIONS

39. The precise area map/lease plan/DGPS plan should authenticated by the State Govt. needs to be submitted.
40. All the plans should be submitted as hard copies along with their soft copies in KML/KMZ/SHP file (Georeferenced) , except sections in Pdf/dwg format . All plates are to be submitted in soft copy having separate file with proper co-ordinates system.
41. Key Plan: Grid Lines are to be shown properly with co-ordinates. Scale shown on the plan is to be corrected. The key plan should incorporate all features as mentioned Rule 32 (5)(a) of MCDR 2017.
42. Surface plan: All the features such as lease boundary symbol etc have not been shown properly in index and on the map. The surface plan is to be prepared as per rule 32(1)(a) of MCDR 2017.
43. Geological Plan and Sections: area under G1/G2/G3 is to be shown. Explored and unexplored area is to be shown. Dip and strike is to be marked on the plan. Index and lease boundary are to be shown properly. Boreholes nomenclature should uniform on plan and in text part.. Need correction.
44. Geological sections: the cross-sectional area is considered for calculation of reserve/resources is not correct. All the cross sections should be re-checked and corrected. The Scale of the plan and section and in the vertical and horizontal direction should be same. All the cross-sections are to be rechecked/ plotted again accordingly.
45. Development plan & Section: The profile of the development sections are not matched with the development plan. Proposed development of benches of each year needs to be revised based on the re -estimation of reserves/resources. UPL is to be revised. The layout of the haul road for excavation proposal should be properly shown.
46. Environment plan: Environment monitoring stations are to be marked properly. . The Environment Plan to prepared as per the provision as laid down rule 32 (5) (b) of MCDR'2017.
47. Financial Assurance Plan; Area put to use under different activities shown on plan is not matching with the text. Need correction.
48. At glance information before chapter-1 of document as given below may be provided.


17.01.22

Annexure


17/1/22

AT A GLANCE INFORMATION

Name of the Applicant /lessee	
IBM Registration no	
Address of Applicant	
Name of Mine	
Minecode	
Lease area in hecets.	
Forest area	
Name of Mineral	
Lease period from to	
Plan proposal period-	
Mineral Reserve (111& 112) in tonnes	
Mineral Resources (211, 221,222, 331, 332, 333&334) in tonnes	
Production proposal (1 st yr) in tonnes 2022-23 (Mineral Name)	
Production proposal (2 nd yr) in tonnes2023-24	
Production proposal (3 rd yr) in tonnes2024-25	
Production proposal (4 th yr in tonnes2025-26	
Production proposal (5 th yr) in tonnes2026-27 (include only saleble/ usable & sub grade mineral)	
OB/Waste handling proposal 1 st yr CUM	
OB/Waste handling proposal 2nd yr CUM	
OB/Waste handling proposal 3rd yr CUM	
OB/Waste handling proposal 4th yr CUM	
OB/Waste handling proposal 5th yr CUM	
Present EC permission in tonnes(Mineral or ROM)	
Plantation proposal in five years in numbers	
Plantation area proposal in five year(ha).	
Back filling proposal in hecets in five years	
Check Dams numbers in five year	
Garland drain in meters five years	
Settling ponds (Numbers)	

<i>Area put to use at end of five year in ha</i>	
<i>Bank Guarantee Amount Rs</i>	
<i>Validity of BG upto</i>	
<i>Any other important information</i>	
<i>Percentage of revenue sharing bid in case of auction grant of block</i>	
<i>Amount of performance security and details if any</i>	