



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



BY REGD POST
Phone: 0674-2352463
Tele Fax: 0674-2352490
E-mail: ro.bhubaneswar@ibm.gov.in
Plot No.149, Pokhariput
BHUBANESWAR-751020

No. RMP/A/31-ORI/BHU/2020-21

Date: 20.10.2020

सेवामे

Shri Sidharth Pradhan, Authorized Signatory,
M/s K C Pradhan, Plot No-1262,
Road No-8, Unit-IX,
Bhubaneswar-751022

विषय: Approval of Review of Mining Plan of Gonua Iron & Mn Mine along with Progressive Mine Closure Plan (PMCP), over an area of 12.56 ha in Sundargarh district of Odisha State, submitted by Shri K C Pradhan under Rule 17 of MCR, 2016.

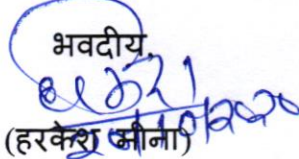
संदर्भ: - i) Your letter No. RoMP/KCP/2020-21 dated 29.09.2020 received on 12.10.2020.
ii) This office letter of even no. dated 12.10.2020.
iii) This office letter of even no. dated 12.10.2020 addressed to Director of Mines, Government of Odisha copy endorsed to you.

महोदय,

This has reference to the letter cited above on the subject. The draft Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office by Shri Ramkishan R, Senior 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 in the light of the contents vide Annexure 1 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 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 final copies of the Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the 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

(हरकेश मिश्रा)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Karaka Suchita Mohanty, M/s K C Pradhan, Plot No-1262, Road No-8, Unit-IX, Bhubaneswar-751022.

(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Scrutiny comment on Review of Mining Plan including PMCP of Ganua Iron & Mn Mine of Shri K.C.Pradhan over an area of 12.56 Ha in Sundergarh district of Odisha

GENERAL:

1. In Introduction chapter it is furnished as CTO was not obtained as valid mining plan was not available. Check the sentence and rectify.
2. The details under para 2.(b) in page no.7 the details regarding the land schedule as per executed lease deed only be furnished not the land use pattern. Check and rectify the same. Under para 2(c) the toposheet details regarding the lease area falls under should be furnished with key plan reference.
3. State government had lapsed the ML w.e.f. 28.10.2011 vide letter dated 27.01.2016, for which lessee has applied to Revision Authority for revival. The present validity status of the ML is to be furnished with documentary evidence. The document should only be considered for the proposed period, if the subsistence of lease period confirmed by competent authority of State Govt. of Odisha
4. Under para 3.4 the details regarding the violations pointed out and the compliance should be furnished. As the details furnished under para 3.6 are not relevant hence they should be omitted. In page no.5 under status of applicant, Supporting documents regarding the lessee viz., signature proof, GST certificate should be enclosed.
5. The rules referred under MCR,1960 and MCDR, 1988 in the document should be replaced by relevant rules of MCR, 2016 and MCDR, 2017. Check and rectify the same.
6. Sequence of paragraph, formats and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings, formats as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text.
7. Indexing of plates and annexures with page nos should be furnished before introduction.
8. The information furnished under Para 3.1, should be as per the following format.

S. No	Mining Plan / Review of Mining Plan etc.	Submitted Under (Rule Reference)	Approval Letter No. & Date	Period	Valid up to

9. In Para 3.3, review of earlier approved proposals in respect of exploration, excavation, reclamation etc. should be furnished. Reason for deviation furnished as not justified properly. Further the figures furnished under year wise proposals and achievement of mineral production, waste, plantation should be rechecked and corrected as per the last approved mining plan and also the Statutory returns submitted by lessee to IBM.

PART-A: (1). GEOLOGY AND EXPLORATION:

10. Regional geology and local geology should be elaborated in detail. The furnished details are not sufficient enough to explain the geology of the area.
11. The details furnished under para (g) and (h) should be checked and rectified.
12. In Para 1.e (iii), the summary of total samples collected and analyzed along with justification for 10% of total samples analyzed in accordance to BIS and reports from NABL accredited/other government laboratory have not been furnished. The year wise drilled boreholes information should be furnished in the following format.

Year of drilling	Exploration Agency	Borehole No	UTM Coordinate		Collar mR	Bottom mR	Borehole Depth	Angle of drilling	Type of drill hole(Core/RC/DTH)	No of samples collected	No of samples analyzed
			Northing	Easting							

The above table should also be furnished for trial pits/quarries/trenches considered for resource estimation. The iron ore grade furnished in page no.13 & 14 should be detailed like samples nos and their corresponding analysis reports.

The expenditure incurred for exploration is furnished under para e.(iv) should be supported with document like invoice etc.,

13. The lease area explored under different category of UNFC norms is incorrect and should be recalculated as per the provision of Part II point no.4 and part III of Minerals (Evidence of Mineral Contents) Rules, 2015 (MEMC Rules, 21015) and should be furnished in the format tabulated below.

The justification for area considered for G1/G2/G3 etc. have not been furnished as per the provision of MEMC Rules'2015. Necessary corrections to be done at all relevant places of the document and resource estimation.

14. In page no.17 the resources estimation date should be as per the last survey date and updated plans and sections. The borehole log and geological section do not corroborate with each other. Need to do a fresh geological mapping of the lease area including pits etc. and update the geological plan and sections. Need to do necessary correction.
15. future exploration proposal should be modified to the extent that area that falls under G2 and G3 UNFC category and unexplored area after complying the point no10, should be converted to G1 level of exploration as per exploration norms specified in Part III of MEMC rules 2015. The depth of proposed boreholes should be up to 300 meters or up to discontinuance of ore body, whichever is earlier. In the table under proposed exploration program, a column should be inserted showing the purpose of borehole (for lateral extension or depth ward) conversion of G2,G3 or unexplored area area to G1. The entire proposal for exploration should be given in year 2021-22 only. Necessary changes to be done in exploration proposal.

Year	No of Boreholes	Grid Interval	Total Meterage	No. of Pits, dimensions and volume	No. of Trenches, dimensions and volume
2021-22					

The details of the proposed boreholes should be furnished in the following tabulated format.

Year of drilling	Section No	Proposed BH No	Northing	Easting	Collar RL	Core/RC/DTH	Proposed Depth of BH (in meter)	Inclination	Forest/ Non Forest/ Diverted Forest area	Surface Right/ Non-Surface right area	Surrendered area applied/ retained area

As per MEMC Rules 2015, check analysis of at least 10% of samples may be analyzed from third party NABL accredited/or department of science & technology (DST) / BIS recognized laboratories or government laboratories for assessing the acceptable levels of accuracy. Accordingly, the proposal should be given under future exploration programme.

16. Lateral influence should be rechecked and corrected considering the provision of Part II point no.4 and part III of Minerals (Evidence of Mineral Contents) Rules, 2015 (MEMC Rules, 2015). Justification of recovery factor has not been furnished. The reference of Bulk density test report has not been mentioned and should be supported with report from NABL laboratory. Necessary corrections to be made at all relevant places.
17. Justification of UNFC codes in tabulated format has not been furnished. Cutoff grade considered for the iron ore mineral should be furnished. Parameters to be considered for resource assessment should be as the points mentioned in IBM appraisal of MP. Need to do necessary correction.
18. Reserves and Resources have to be re-estimated as per the provision of MEMC Rules 2015 after complying point no 10. As per the provision of Part II point no.4 of MEMC Rules, 2015, the depth ward projection of ore body should be limited up to the depth up to which direct evidence of mineralization has been proved through borehole. Further, the resource estimation has to be done based on latest updated survey. Detail calculation of section wise reserves and resources based on latest updated survey and updating the borehole information by cross sectional method for various categories of UNFC should be furnished showing cross-sectional area, length of influence, volume, bulk density and tonnage. Further, the boreholes whose chemical analysis results and borehole logs are not available should be omitted from plan and section and subsequently from resource estimation. The average grade of reserve and resource under various UNFC categories has not been furnished. The summary of ore and mineral reject along with grade under various level of UNFC should be furnished. Prefeasibility report should be submitted.
19. The cross sections should be drawn from boundary to boundary of lease area on the Geological plan with equal interval. Accordingly relevant plans and sections should be modified.
20. Form I&J as per MCDR, 2017 should be submitted along with the chemical analysis reports of 10% borehole samples analyzed in NABL Lab. The rest of the samples analysis reports should also be enclosed.

MINING:

21. Justification for area proposed for mining has not been given with respect to exploration, targeted quantity and grade considering mineral conservation and grade.
22. Justification of equipment should be based on maximum excavation quantity to be handled in five year excavation proposal. Information of existing and proposed machineries with capacity should be proposed. Necessary correction in the calculation need to be done.
23. The table should be furnished in the format specified in IBM appraisal of MP 2014 both in cum and in tones in separate table. In situ excavation of OB/IB/waste, Ore, Mineral reject have not been calculated based on last updated survey and updated geological plan and sections after complying scrutiny point no10. All the calculation should be rechecked and corrected based on updated survey and updated Geological sections after re-estimation of reserves and resources based on MEMC rules 2015. The term subgrade should be replaced with mineral reject.
24. The details under para (c) and (d) should be elaborated in detail in page no.22 and page no.27
25. The dump rehandling is proposed for mineral or not should be specified under para II in page no.22. if mineral recovery is not proposed then it should be omitted.
26. Conceptual Mine planning should be modified taking into consideration of the revised production from in-situ excavations, available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections. Life of mine should be recalculated based on re-estimated resources.

MINE DRAINAGE

27. the max and min depth of working should be given in following tabulated format.

Name of the Quarry	At the end of plan period (mRL)		At the end of conceptual period (mRL)	
	Top	Bottom	Top	Bottom

STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE

28. The nature/ type of mineral reject and waste material have not been described or classified. Necessary corrections to be done. In para 4(c), the waste generation quantity does not match with the proposal for waste generation. Necessary corrections to be done. The disposal of waste and mineral reject and soil to be furnished as per table furnished in IBM Manual appraisal MP 2014.
29. The proposal for dumping may be given in tabulated format as shown below: Further, Build-up of dumps from year to year to be mentioned in text w.r.t. designed capacity of dumps, bottom and top mRL of individual terrace, dump slope, individual terrace height and slope with description of method & manner of disposal of waste should be mentioned. The method of waste dumping should be in retreating manner. The year wise buildup of dump should be described. The waste dumping should be proposed in non mineralized area only.

Year	Waste to be dumped (in m3)	Dump No	Location of dumping (coordinates)	Proposed area (m2)	Proposed dumping mRL.	No of terrace proposed.	Individual Terrace height	Slope of the terrace

30. Existing as well as proposed protective measures like retaining wall, garland drain, check dams etc., should be furnished in tabular format with details of location, length, dimensions etc., a separate table should be given showing the year wise construction of retaining wall, garland drain and settling tank having specific proposal. Details of year wise proposal for construction of retaining wall, garland drain, settling tank etc. to be given with their location. Proposal for protective measures have not been submitted around mineral reject dumps and waste dumps.

PROCESSING OF ROM AND MINERAL REJECTS:

31. A material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery, and its grade at each stage of processing has not been furnished.

The arrived percentage of recovery of saleable ore and mineral reject should be justified properly with documentary evidence.

OTHERS:

32. Information in respect to the existing and proposed manpower right from management level to unskilled labor both on role and contractual has to be mentioned separately in the text.

PROGRESSIVE MINE CLOSURE PLAN:

33. The air, water and noise monitoring stations and their frequency of monitoring have not been furnished in tabulated format. All water discharge points from lease area to external should be monitored. Accordingly, monitoring proposal to be submitted. Further, Gap plantation along the safety zone should be furnished.
34. All the paragraphs should 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 of FA table of different heads. The degraded land during the plan period should be rechecked and furnished.
35. Copy of bank guarantee as per rule 27 of MCDR, 2017 should be submitted.

PLATES (GENERAL):

1. Magnetic Meridian and date of observation should be given on all relevant plans. Date of survey should be given on all plans and sections and signature should bear date of signature. All plans & sections prepared should follow the conventions mentioned under MMR 1961. All plans and sections shall show a scale a scale of the plan at least twenty five centimeters long and suitably subdivided. 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. The index should be kept same in all the plans and sections.
2. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist
3. The plans should be prepared on latest survey carried out in the field depicting the exact surface features.
4. **KEY PLAN:** The key plan should incorporate all features as mentioned Rule 32 5 (a) of MCDR 2017. The approach road to the lease area, 5 Km boundary and wind rose diagram etc. has not been shown.
5. With reference to **CCOM Circular No 2/2010**, the geo-referenced mining leases map superimposed on latest high-resolution satellite data has not been submitted over the lease area by certifying the lease area over the plan.
6. **SURFACE PLAN:** The index of surface right area shown should be distinct from index of safety zone. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017. The DGPS surveyed latitude-longitude and UTM coordinates of all the boundary pillars have not been furnished in tabulated format. The plan should be updated based on the recent survey. Forest area and non-forest area should be demarcated on the plan. Surface right area should be demarcated on the plan.
7. **GEOLOGICAL PLAN & SECTION:**
 - (i) The redefined UNFC boundaries to be shown in Geological Plan and sections. The UNFC codes shown in plans and sections are incorrect and should be corrected as per scrutiny point no 10. Cross section lines with nomenclature have not been shown on the geological plan.
 - (ii) The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017
 - (iii) Index of different grade of limestone do not corroborate with the index shown in plan and sections. Need to recheck and correct at relevant places. Proposed boreholes should be shown in plan and sections. The proposed borehole should be shown in dotted lines in geological sections. The borehole log do not corroborate with geological sections. The lithology shown in geological plan do not corroborate with lithology shown in section. Scientific correlation of geological section has not been done as per the provision of MEMC, Rules 2015.
 - (iv) UNFC codes, UPL should be shown in Geological sections.
8. **DEVELOPMENT PLAN & SECTION:**

- (i) Development plan and sections should be revised based on updated geological map and sections. Index of the UPL shown in plan and section and those shown in index is different.
- (ii) The proposed and existing bench mRL to be shown clearly over year wise development plan and sections. Geological information (lithology) has not been furnished on the area proposed for development in year wise development plan and sections. Plan and section should be drawn on same scale on 1: 1000.
- (iii) Existing and proposed protective measures and plantation should be shown in different colors around all waste dumps and mineral reject dumps. Index of safety zone boundary and surface right area should have distinct color.
- (iv) Yearwise waste dumping/mineral rejects stacking should be shown

9. **ENVIRONMENT PLAN:**

The environment plan has not been prepared as per the provision laid down in rule 32 (5) (b) of MCDR'2017.

10. **RECLAMATION PLAN:**

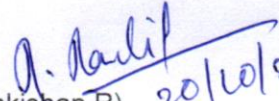
Reclamation plan should be submitted instead of progressive mine closure plan. Existing and proposed protective measures and plantation should be shown in different colors along all waste dumps and mineral reject dumps. Index of safety zone boundary and surface right area should have distinct color.

11. **FINANCIAL ASSURANCE AREA PLAN:**

The area degraded due to mining and allied activity and waste dump sites to be considered in FA calculation. The existing area and additional area under different heads should be shown properly under different colored hatching.

ANNEXURES:

1. Few photographs showing Land use of the lease area, environmental status of the area have not been shown.
2. Copy of quality of air, water, soil, noise and other environmental a parameters monitoring report of the last year should be enclosed.
3. Copy of certified surveyor certificate should be enclosed.
4. All the annexure to be properly numbered/paged and relevant annexure to be signed by qualified person etc. It is observed that many of the annexures are not legible. A legible copy of same to be enclosed.
5. The details of all the BH to be annexed year wise BH wise. The lithology of the borehole logs should match with the lithology shown in Geological sections.
6. Copy of bank guarantee has not been enclosed. Photographs of boundary pillars should be enclosed.
7. NABL accreditation certificate of the laboratory has not been furnished.


(Ramkishan R) 20/10/2020.
Senior Asst. Controller of Mines