

**Scrutiny comments on examination of Draft Review & updation of Mining plan including progressive mine closure plan in respect of Kudure Kanive Kaval Manganese mine (ML No. 2659) of M/s Jayalakshmi Minerals over an area of 9.71 ha in Hosadurga taluk, Chitradurga district, Karnataka.**

1. **All the headings, subheadings and para nos. should be replicated as per the standard guidelines as given in “IBM Manual on Appraisal of Mining Plan 2014 in an orderly manner**

**Cover Page**

2. i)The Period of proposal is mentioned as “2020-21” which should be corrected to “2016-17 to 2020-21” and it should be mentioned that 2016-17 to 2019-20 is the Lapsed plan period.  
ii) The forest & non forest area to be specifically specified on cover page.  
iii) The name of owner should also be mentioned in the cover page. The authentic contact no of QP to be provided.

**1.0 General**

3. Para 1.0(a)-Pg. (1)- IBM registration no, Mine code, District information is not mentioned in the text.
4. Para 1.0(b)-Pg. (2-3)-The order of the State government for cancellation of the lease under sec 4 A of MMDR act 1957 to be attached as Annexure and reference of the annexure to be given here. Also, the current status of Environmental clearance and Forest Clearance should be detailed here. It should be mentioned here that the Forest Clearance under Section “2” of Forest Conservation act 1980 is valid for 10 years only w.e.f. 17/6/2010 as mentioned in Annexure-III(C).
5. Para 1.0(f)-Pg. (4) The heading should be corrected to “Name of Qualified Person under Rule 15(1) of MCR 2016 preparing the mining plan”. Authentic Contact no, address of QP to be given as per the Photo id proof of QP & the Photo id should be attached in Annexure.

**2.0 Location and Accessibility**

6. Para-2(a)-Period/Expiry date: Pg.-(5)-The period of lease as per the lease deed should be mentioned. The matter between the State Government cancellation of the lease and further the order of Hon’ble High Court of Karnataka dated 3/9/19 to be elaborated here.

Para-2(b)- Toposheet No. with latitude & longitude of all corner boundary point/pillar- GCP-1, GCP-2 & GCP-3 pillar co-ordinates should also be mentioned.

**3.0 Details of approved mining Plan/scheme of Mining (if any)**

7. Para-3.1: Pg(9): Table no -3 should also mention the year 20XX-20XX in the plan period.
8. Para-3.4: Pg (9): IBM Violation letter no 281/58/2011/BNG/2126 dated 15.10.2015 and its compliance status should be mentioned here and the related documents to be added in annexure and annexure reference to be given here.
9. Para 3.5 Pg. (9)- The order given by the state government for cancellation of lease under Sec-4 a of MMDR act 1957 to be mentioned. This is to be attached in Annexure and the annexure reference should be given here. The date of order for Hon’ble High Court of Karnataka is mentioned as 3/12/2019 which is to be corrected as 3/9/19 and the annexure reference to be added.
10. Para3.6: Pg-10: The lapsed plan period details and reasons should also be mentioned here.

**PART-A**

**1.0 Geology and Exploration**

11. Para. -1(e)( i) –Pg. (15 & 16)-The working pit 1,2 & 3 and the trial pits to be clearly demarcated on the geological plan & sections . The details of the working and trial pits should be given as per the below mentioned table.

Pit no	Location		Dimension (L*w*D)	Depth of ore (m)	Analysis	
	Latitude	Longitude			Fe %	Mn %

Para-1(e)-iii)-Pg-16- The analysis report from NABL accredited lab for the above pits as given in the aforementioned table, should be annexed and the reference of the annexures should be given here.

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12. Para-1(f)- The heading mentioning Rule 28(1)(a) of MCDR 1988 to be corrected as 32(a) of MCDR 2017.
13. Para-1(g)-Pg-17- The heading mentioning "Rule 28(1)(b) of MCDR 1988" to be corrected as "Rule 32(b) of MCDR 2017". The details of exploration already carried out along with supporting data for existence of minerals should be added here.
14. Para-1(i)-Pg-18- A table need to be added here as per the universal format.

Year	No. of boreholes (Core/RC/DTH)	Grid interval	Total meterage	No of pits, dimensions volume	No of Trenches, dimensions and volume
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Also, the inclination in Table 7 is mentioned as "-90°" which should be corrected as 90°.

15. Para-1(j)-Pg-20- It has been mentioned in text that "The reduced lateral influence of existing working pits and trial pits as per the UNFC guidelines, reasons between present updated reserves and reserves of previous approved mining plan. This should be further detailed & justified mentioning the lateral influence taken during the earlier calculation and taken currently and the variation. The vertical influence taken in both the cases should also be detailed. There is no reserves in Probable category (121&122) mentioned in this proposal whereas 3.37 lakh tonnes were reported in the earlier approved document. The reserves have been reduced from 4.93 million tonnes reported earlier to only 0.081 million tonnes. This should be checked and detail justification given.

**2.0 Mining**

16. Para-2(b) Pg.-(27)- i)Table No-12 should be corrected as per the below mentioned universal format. The intercalated waste is to be mentioned in OB/SB/IB column as per below mentioned table.
- ii)It is mentioned in I(b)-Pg 24.- "The subgrade ore produced is proposed to stack separately in view future conservation. However, no Subgrade quantity in column- 7 has been shown as per universal format. It should be noted that since the EC is for 51, 750 tonnes/annum of ROM, the total ROM quantity adding Column (6) & Column (7) should not be more than the EC capacity. This needs to be checked and corrections made.

Year	Pit no	Total tentative excavation (Cum)	Top Soil (Cum)	OB/SB/IB (Cum/tons)	ROM		Mineral Reject	Rom/Waste Ratio (by Volm)/ (by tons)
					Mn ore (Cum/tons)	Mineral Reject (cum /Subgrade(tons)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Bulk density of the manganese ore and bulk density of waste to be mentioned.

17. Para-2(II) (d)- Pg. (28-33)- i) The bench width of 10 m is mentioned whereas in all other parts of document bench width is mentioned as 6m. This should be checked and corrected. Also the Ultimate pit slope (UPL) is mentioned as 45° which should be checked taking into consideration the actual open-pit design parameters.
- ii) The back-up calculation for the no of excavators, loaders, drill machines etc. to be given in detail as per the ore and waste quantity to be handled as per the table in scrutiny comment no 16.
- iii) Broad Blasting parameters- The blasting parameters like charge per hole, charge per delay, maximum no of holes blasted in a round, manner and sequence of firing, type of explosive & accessories to be used and storage of explosives like capacity and magazine details etc. should be detailed here. The Explosive requirement annually to be calculated indicating the total quantity to be blasted, Powder factor and others.
18. Para 2(II) (e) - II Pg-(33 & 34)- Production & Mine development during 2020-2021: The table should be added as mentioned below.

**Mine Development details**

Year	Area in (Ha)	Section	No of	Level	Location Co-ordinates
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			benches	MRL.	Northing	Easting
				Top		
				Bottom		

Waste-Dump details

Year	Area in (Ha)	Location		Reduced level in meters		Sections
		Northing	Easting	Bottom	Top	

It is mentioned "51746 tons of prime + 51746 tons of waste". The word prime to be replaced with manganese ore and the quantity to be checked as per aforementioned scrutiny comment no 16.

19. Para 2(II)-(f) - Pg. (34-35) - The present available reserves and resources should be mentioned here. The excavation for the conceptual period along with the plate reference, recovery of ROM, Disposal of waste & the reclamation and rehabilitation plan should be detailed here. No Reclamation plan has been given. The proposal for Retaining wall, garland drain, check dam, catch drains, Siltation ponds afforestation details etc. should be checked as per the EC condition & included in the reclamation & rehabilitation plan.

It is mentioned "the dump angle of repose is 28 degrees". As per the EC condition, the maximum height of dump should not exceed 30 m having 3 terraces of 10 m each and the overall slope of the dump shall not exceed 27 degrees. This should be corrected and the dump design to be specifically done as per the EC conditions. Aforementioned Para 2(II) e related to waste dump details should be also corrected accordingly. The land use for the conceptual period should be added.

**4.0 Stacking of Mineral Reject/sub grade material and disposal of waste**

20. The dump design to be checked & corrected as per the EC conditions as already mentioned in scrutiny comment no 19 and corrections to be made in all the relevant portions. The subgrade ore generation quantity is not mentioned as already mentioned in scrutiny comment no 16. This should be mentioned and also the stacking area for the subgrade ore to be clearly mentioned here and also demarcated on all the relevant plans & sections.
21. Para 4.0(a)-Pg.38- Table No-16 should be as per the universal format as mentioned below.

Year	Top Soil (Cum)		Overburden/waste(cum)		Mineral Rejects (Cum)	
	Reuse/spreading	Storage	Backfilling	Storage	Blending	Beneficiation

22. Para 4.0(b)-Pg-38- A table should be added mentioning the details of the dump as mentioned below.

Location	Extent in Ha	mRL.	Total Volume (cum)	Remarks
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Proposed waste dumping areas has not been explored by boreholes and evidence of non-mineralization yet to be established. Hence, as of now, the proposed dumping area should be designated as 'temporary' dumping ground. If in case, mineralization is proved in said dumping ground after exploration, suitable dump re-handling proposals required to be adopted in conceptual stage. The position of dump w.r.t UPL should be elaborated.

23. Para 4.0(c)-Pg-39- The year wise dumping proposal to be added as per the below-mentioned table.

Year	Area in Ha	Level (MRL)	Location Co-ordinates	
			Northing	Easting

The overall dump angle of 28 degrees is mentioned which should be corrected to 27 degrees as already mentioned above.

**6.0 Processing of ROM and Mineral Reject**

24. Para 6.0(g)-Pg-43- It is mentioned "mining and alloyed operations" which should be corrected as mining and allied operations. Table no-19 heading is mentioned as "water required for mining and processing" which should be corrected as water required for mining and allied activities. The source of supply of water should be mentioned.

**7.0 Other**

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25. The List of manpower as mentioned in Table 20 is incomplete as it doesn't include Geologist, Surveyor, Blaster etc. highly skilled manpower. This should be analysed in details and properly classified into Highly skilled, Skilled, Semiskilled and unskilled categories along with nos. in each category.

**Progressive Mine Closure Plan**

26. Para 8.0(Pg-45)- MCDR "1988" to be corrected as MCDR "2017".

27. The Proposal for grassing/plantation during the proposed plan period for the finally mined out areas should be included, as per the recent Hon'ble Supreme Court order.

28. Para 8.2 Pg.(49-51)- Impact Assessment-Land Environment- The area for mining, dumping, mineral storage(stockyard) mentioned in the text and in Table 25 are having different figures. This should be checked and corrected. The area for dumping, mineral storage should be rechecked as per the aforementioned scrutiny comment 16,19 & 20 for table no 25.

Water Quality (iii)-Pg-50- It's mentioned garland drain, Toe wall, check dam & gully check of suitable size will be constructed around the base of dump to prevent siding and wash off the material and to prevent erosion. However, nothing has been included in the proposal. The proposal for Retaining wall, garland drain, check dam, catch drains, Siltation ponds afforestation details etc. should be checked as per the EC conditions & included in the reclamation & rehabilitation plan.

This Reclamation & rehabilitation work to be included in the proposal and also a Reclamation & Rehabilitation plate need to be added. The R & R work area, to be checked as per the aforementioned comment and incorporated.

The information related to water regime, acid mine drainage, surface subsidence, socio-economics has not been provided as per the universal format. This should be checked and included.

29. Para 8.3.5-Pg. (53)- The text mentioned in the portion is not related to surface subsidence. This should be checked and corrected. Also, the information on protective measures for reclamation and rehabilitation works year-wise has not been provided in tabular form as per the universal format. This should be checked and included.

30. Para 8.6-Pg. (54-55)-Financial assurance- i) In the heading Rule 23(F)(2) should be corrected to 27(2) and "1988" to be corrected as "2017".ii) The additional area requirement during plan period should be rechecked as per aforementioned scrutiny comments related to mining, waste dump, reclamation & rehabilitation works, Mineral storage etc. & financial amount calculation should be made accordingly. The Green belt/Afforestation area has also not been included in calculation and should be included. No financial assurance plan has been prepared and attached. The Financial assurance plan should be prepared and reference of the same should be mentioned in the text. iii) The declaration given at the end of Pg.-(55) should be deleted and added in Part B-(9.0) - Certificate/undertaking/consent letter

**Part-B**

31. Para 9.0-Certificate/undertaking/consents- Part-B is not there as per the universal format and should be included. An additional undertaking from the lessee should be added here that all the measures proposed in PMCP will be implemented in a time bound manner as proposed. Authentic Contact no, address of QP to be given as per the Photo id proof of QP.

32. Certificate from QP- This should be attached after "Consent letter/undertaking/certificate from the applicant. Para (1) - 1988 should be corrected as 2017.

**Annexures:**

33. i) The order of the State government for cancellation of the lease under sec 4 A of MMDR act 1957 to be attached in Annexure.

ii) The Professional Qualification certificate (Degree in Mining Engg.) of the QP should be attached as Annexure.

iii) Annexure-X-The Experience certificate attached shows working tenure of QP from 12.01.2003 to 30.06.2008 as Mines Manager. The tenure is not matching with this office records. The professional

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Experience of 5 years of working in a supervisory capacity in the field of mining after obtaining the degree is to be attached.

iv) The photo identity proof of QP with permanent addresses and contact no to be attached.

iv) The Photo identity card of Lessee with permanent address proof should be attached.

v) Copy of analysis report from NABL accredited laboratory as per aforementioned scrutiny comment no 11 should be attached.

vi) Copy of Violation letters issued by IBM and its compliance thereof should be attached.

vii) Few Photographs showing land use of the lease area, environmental status of the area to be added as annexure.

viii) Annexure-VII-Feasibility Report-1. General Mine Description-Pg. (2)- i) The Production capacity is mentioned 51,770 tonnes of Manganese whereas EC capacity is 51,750 tons. The feasibility report should also be checked w.r.t aforementioned scrutiny comments 16,17,19,20 & 25 and corrections to be made.

ii) Economic Evaluation- Exploration cost, DMF & NMET cost should also be included.

34. All the Annexures should be provided Pg. No. and the page no to be added in the List of annexures index.

**Plates:**

35. i) Plate -2A- DGPS Plan- DGPS plan authenticated by the State Govt. should be attached and the copy of M/s Sri tech Engineers, as approved DGPS survey agency by State Govt. should be added in Annexure.

ii) Plate-3-Surface Plan-Ground Control points- GCP-1, 2 & 3 co-ordinates should also be given in plan.

iii) Plate-4- Geological Plan- The working pit 1, 2 & 3 and the trial pits to be clearly demarcated on the geological plan & sections. The area under G-1, G-2, G-3 category to be clearly demarcated on plan & section.

iv) Plate-6 & 7 -Production & Development Plan & section-2020-21- The year-wise sections proposed for development for ore and waste along with corresponding volume and tonnage w.r.t the section should be added in tabular format in this plate. The proposed mine development, propose waste dump, proposed subgrade dump, Plantation etc. should be clearly demarcated on plan with different colours and same should be updated in Index. This should also be checked and updated w.r.t aforementioned scrutiny comments no 16, 19 & 20. The section should also be checked and corrected accordingly.

v) The reclamation plan as per the format needs to be added.

vi) Plate-8 (Environmental plan)-The Contour line should be at 5 m interval. This should be prepared as per 32(5)(b) of MCDR 2017. The air, noise, water, soil sample locations should be marked on the plate with index. The proposed Engineering measures etc. should also be mentioned in the plan.

vii) Plate-9- (Land use plan)-The table in Land use pattern should include Existing land use (in Ha) and plan period land use (in Ha) with land particulars and index in tabular format and demarcated accordingly in plate. The Land use to be checked as per the aforementioned scrutiny comment no 30.

viii) Plate-11- (Conceptual plan)- The Conceptual land use to be rechecked and corrected w.r.t the aforementioned scrutiny comments.

ix) A Financial Area Assurance plan is to be added as per the universal format. The plate should also include table as per the universal format.

x) All the plates should mention in the legend "Review and updation of mining plan from 2016-17 to 2020-21" & 2016-17 to 2019-20 is the Lapsed plan period.

xi) It should be ensured that all attached plates are prepared as per the content & scale specifications, of Rule 32 of MCDR 2017.