

## Annexure

**Inspection report cum Scrutiny comments on examination of Review of Mining Plan in respect of Shiv Shanthi Manganese mine of Sri D.Shanker Lal Sharma over an extent of 4.973 Ha. situated in Sy.nos.259/1, 260/2, 261/1 to 7 of Gharbam Village, Merakummedidum Mandal, Vizianagaram Dist. of Andhra Pradesh State submitted under Rule 17(2) of MCR, 2016.**

Date of Inspection: 17.10.2017

Inspecting officer: M.Pratap Reddy, AMG.

Accompanying official: Shri D.Shankarlal Sharma Lessee and Shri P.R. Mishra Qualified person

### General:

1. The cover page should be displayed with total lease area details, land type, Rule under which the document has been submitted, Plan period, complete address of the lessee and Qualified person.
2. The document be prepared in the universal format (2014) as per the guide lines displayed in the website.
3. The Surface Plan has not been properly updated with the existing surficial features(Waterbody, Working benches etc) and similarly Surface Geological Plan and other Plans also need to be updated.
4. Brief history of the ML be spelled out with relevant documents (Memo/Gos etc).
5. Annexures have not been properly addressed in the Text.
6. The latest Photographs of the mine workings along with the boundary pillars be appended.
7. The Lessee does not possess any other ML except subject ML and the information (Table) furnished thereof is uncalled for. The Purpose and Rule under which the document submitted be clearly spelled out. The sentence '**submitted for your kind approval**' be deleted.
8. Para 2 C) : Details of lease area with location map: The Ownership occupancy be properly referred (either Govt waste land or Private land). The existence of public road/railway---, the access upto the ML area be spelled out. This para should have been 2 b) instead of 2 c
9. Para 2 C): Attach a general location map---): The authenticated Geo coordinates of boundary pillars be furnished.
10. Para 3.1(Date and reference earlier approved MP/SOM) details of approved MP/SOM): The Scheme period has been wrongly furnished. .
11. Para 3.3(Review of earlier approved proposals-----): All the approved proposals against the actual be justified with valid reasons instead mentioning 'nil'.
12. Para 3.4(Status of compliance of the Violations-----): The violations and compliance thereof during the review period be furnished in Tabular form. The copies of relevant violations and replies be furnished in Annexure form.

### PART-A

13. Para 1.0 a (Briefly describe the topography-----): Instead of furnishing topographical information under this para, irrelevant information has been furnished.
14. Para 1.0 b (Regional Geology-----): The formation occurring in the area has not been properly equated with Regional Geological setup.
15. Para 1.0 c In the detailed description of Geology, the incidence of Manganese has not been spelled out. A proper formation wise local geological setup based on the exposures in the working pit be given. Manganiferous Laterite be properly indexed in Geological Plan as well as in Geological Sections and it has been often wrongly referred as float ore.
16. Para 1.0 d Name of prospecting/exploration agency: The Technical person name under whom, the exploration has been carried out be given.
17. Para 1.0 e) (No of boreholes- Table-7): Instead of 'dimension', Grid interval be given. The exploration has been carried out in two different spells with the different series of Borehole nos. but in Plan there is no such differentiation and they have been serially numbered. Even in text the borehole nos. differ from PCD-11 – PCD-32 to CDH-11 – CDH-32. The details of CDH-15, CDH-27 and CDH-30 are missing. Please maintain uniformity. The coordinates of Boreholes viz BH-1 to 10 have not been furnished. The proper run wise litho logs be given.
18. Para 1 e) iii) (Details of sample analysis-----): No details of Core samples have been spelled out. Further the analytical Report of Core samples of the Laboratory is missing.
19. Para 1 I) (Broadly indicate the future programme of exploration---): As per the ministries guide lines and under Rule 12(4) of MCDR, 2017, in case of existing mining leases, detailed exploration (G1 level) over the entire potentially mineralised area under the mining lease shall be carried out within a period of five years from the date of commencement of these rules. Accordingly, a purpose oriented exploration be proposed
20. Para 1.0 J) (Reserves and Resources-----):
  - (A) Category of the deposit as per the UNFC guide lines): There is no sense in classifying the deposit under A OTFM . The deposit need to be classified based on its occurrences and characteristics into one amongst the four types of the deposits as given under Minerals (Evidence of Mineral Contents) Rules, 2015.
    - 1) The Field Test Report with regards to bulk density and Recovery test which was carried out by Andhra University has not been enclosed for the reference purpose.
    - 2) The FG axes have been designated as '2' but in details of reserve estimation these axes have been designated as '1'. The EFG axes be properly defined. Under Feasibility axis, the mine is said to be

'fully mechanised'. It is not quite understood how the Manganese ore is consumed in Cement Industry.

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- 3) Besides, Manganiferous Laterite, there are three lenses/bands of Manganese ore as observed/noted during the site inspection. This has to be brought on to Geological Plan and be correlated with the borehole intercepts in the Geological Cross sections and the band wise reserve estimation be attempted. The Scale of the exploration be properly marked on the Geological Plan excluding waterlogged portion based on the Surficial exposures and Borehole intercepts of Manganese Ore. Accordingly the categorization and reserve estimate be attempted. The depth of the ore zone is varying from section to section and Borehole to Borehole and it is not universal. The deepest intersection of the ore zone reported in two sections is at 66.50 MRL. The pit dimension with regards to width be checked once.
21. Para 1.0 k)(Furnish detailed calculation of reserve -----): All Reserve/Resource need to be reassessed as per the comment vide para 1.0 J). The cut off grade furnished is of Limestone. At places it is mentioned to be Fully Mechanised mine.
22. Para 2 a (Briefly describe the existing as well as proposed method-----): Present status of working should be submitted incorporating, dimension of quarry, grid lines, top RL, bottom RL, No. of benches in ore & waste, bench height & width etc. The approved quantity of ROM by the EC be mentioned and copy of the same be appended. The deployment of wagon drill with regards to drilling and blasting be reviewed depending the bench parameters proposed. The production schedule be reviewed as per the comment vide para 1.0 J
23. Para 2 b (Insitu tentative excavation----): The area demarcated for the year wise tentative excavation be proposed as per the G1 scale of exploration as demarcated vide para 1.0 J. with well defined grids. The development be proposed either on the South western side or North Eastern(NE) side of the existing pit.
24. Para 2 c (Individual Year wise ----): The year wise layout of mine working should be discussed in the text part as required in the prescribed format. The ROM: Waste ratio figures be restricted to two decimal place.
25. Para 2f(Conceptual Plan----): This para be reviewed as per the outcome of the para 1.0 k)
26. Para 3 a (Mine Drainage): The depth of minimum and maximum depth of workings be checked once with working sections. The existing water logged pit be reviewed under sub head of quantity and quality of water likely to be encountered------. The location of proposed garland and retaining wall be spelled out.
27. Para 4.0 Stacking of Mineral reject/subgrade mineral-----: This para be reviewed as per the comment vide para 2 b.
28. Para 8.3.1 Mined out land: The mineral is yet to exhaust at depth and thus there is no mined out land and there is only degraded land. The extent of such land at the end of 2022-23 is given to be 7.59 ha which has exceeded the lease extent. Pl. check ? The year wise Environmental protective measures be given.
29. Para 8.6( Financial Assurance): In view of the above comments, the F.A. should be re-assessed and submitted as per Rule 27 of MCDR,2017 along with final copies.

Annexures:

The Form-K be properly labeled and duly signed by the Geologist.

**PLATES**

1. Plate-I Key plan is illegible. It should be as per the provision of rule 28 of MCDR,2017, the area of 5 KMs around the lease area should be considered and all the details within this area as per statute should be incorporate. The existing mines with in 5km radius be shown. The extremities of the coordinates have not been drawn.
2. Plate-2 Lease Sketch: The boundary pillar nos mentioned in the other plans should be in confirmation with pillar nos given in the lease sketch. The outline of the lease sketch is blur. The coordinates given in map are illegible.
3. Plate-III(Surface Plan): The Surface Plan be updated with the latest workings and water logged pit/benches
4. Plate-IV Geological plan: Manganeses ore body(three lenses) has not been shown.The Plan be updated as per the comment vide para 1.0 J. The Scale of the exploration be marked. UPL be redrawn.
5. Plate-V Geological Sections: The Sections be redrawn as per the Geological Plan and comment vide para 1.0 J. The scale of the exploration be marked as per the Minerals (Evidence of Mineral Contents) Rules, 2015.
6. Plate-VI A to VI E: Year wise development plans and sections, Plate VII: Reclamation and Rehabilitation Plan, Plate-IX: Conceptual Plan and Plate-X : Progressive Mine Closure Plan : These Plates be modified as per the comment vide para 1.0 J.

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