

Scrutiny comments on examination of Modified Mining Plan including PMCP of Anjani Iron Ore and Laterite Mine over an area of 208.300 Hect. of M/s Anjani Mines and Minerals situated in Chabali and Thummalur Village, Pendlimarri Mandal, Y.S.R. Kadapa District of Andhra Pradesh State inspected by Shri S. Kartikeya, Senior Mining Geologist on 15/07/2021

- 1) **General oversight & Cover Page:** (a) Complete name of the lessee, mining lease period, five years block period, proposal period, complete address of the lessee including phone number, fax number, email id, pin code, IBM Registration number along with the Mine Code etc. should be mentioned clearly. (b) During study of the document it has been found that the entire planning for the development and production of mineral/ore has been proposed in the DGPS map. It has also been found that after the DGPS Survey, shape, size and locations of all the boundary pillars have been changed and shifted to the new locations as well as at some extent working and dumps are present beyond mining lease boundary. Hence, a revised Government Order for changing the shape and size of the mining lease area should be submitted. (c) Survey of the mine has been done on 12/07/2019, therefore, surface plan is not updated. Several small heaps/stocks of iron ore fines and stacking of waste/overburden along the 7.5 m barrier zone, water logged quarries etc; are not marked. Hence, a fresh survey of the mining lease area is required with updated features. All these stocks of iron ore fine should be quantified and reflected in the monthly as well as annual returns. (d) Regarding the changes in shape and locations of the lease boundary pillars after the DGPS Survey, misleading and incorrect information about the lease area has been submitted to the Inspecting Officer as well as to the Approving Authority in draft Modified Mining Plan. (e) Since, the Progressive Mine Closure Plan is the additional part of the Mining Plan; hence, same should be mentioned in the cover page along with the relevant rule of PMCP. (f) Professional experience of five years of working in a supervisory capacity in the field of mining after obtaining the degree as specified under Rule 15 of Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016 along with the qualification certificate/degree of the qualified person should be enclosed. (g) Annexure numbers are not matching with submitted annexure. (h) While referring supporting annexure, page no. of the referred annexure may also be mentioned within bracket. (i) All the pages of the document along with the annexure should be numbered and duly signed by the Qualified Person. (j) Consent Letter/ Undertaking should be signed by the lessee or by the nominated owner. Name, DIN no. etc. to be given for the authorised signatory. (k) Copy of the Partnership Deed has not been given. Further, Resolution for the Nominated Owner should be enclosed. (l) Typographical errors in the document should be corrected all over the document. (m) As per the office records, Deed of Reconstitution of Partnership made in 28/06/2016 and has been submitted to this office, wherein, all three old partners of M/s Anjani Mines and Minerals have been replaced with the three new partners. In the submitted draft, name of partners mentioned are different. To be clarified with the valid registered partnership deed. (n) Every new chapter should start with a new page. (o) Feasibility study report has not been prepared and enclosed.

- 2) The following gist to be given before the introduction chapter:

MINING PLAN/REVIEW OF MINING PLAN AT GLANCE	
1	Name of the Applicant /lessee
2	IBM Registration no
3	Address of Applicant
4	Name of Mine
5	Mine code
6	Lease area in hectcs.
7	Forest area
8	Name of Mineral

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9	Lease period from to	
10	Plan proposal period-	
11	Mineral Reserve (111, 121 & 122) in tonnes	
12	Mineral Resources (211, 221,222, 331, 332, 333 & 334) in tonnes	
13	Production proposal 2021-2022 (3rd yr) in tonnes	
14	Production proposal 2021-2022 (4th yr) in tonnes	
15	Production proposal 2021-2022 (5th yr) in tonnes	
16	OB/Waste handling proposal 3rd yr in CuM	
17	OB/Waste handling proposal 4th yr in CuM	
18	OB/Waste handling proposal 5th yr in CuM	
15	Present EC permission in tonnes	
16	Plantation proposal in five years in numbers	
17	Plantation area proposal in five years (ha).	
18	Back filling proposal in hectares in five years	
19	Check Dams numbers in five year	
20	Garland drain in meters five years	
21	Settling ponds (Numbers)	
22	Area put to use at end of five year in ha.	
23	Bank Guarantee Amount Rs	
24	Validity of BG upto	
25	Any other important information	

Chapter: Introduction

- 3) Page no. 1: The mining operations are suspended by the Indian Bureau of Mine vide Order of Suspension of Mining Operations dated 10/12/2009 and later on revoked on 30/08/2010. Hence, the complete and the correct information should be given. Further, incorrect copy of the Order of Suspension of Mining Operations dated 26/11/2014 has been enclosed.

Chapter 1.0 General

- 4) Page no. 3: (a) Name of the nominated owner/Managing Partner, Pin Code of corresponding address and Fax no. are to be written. (b) Self attested copy of the PAN Card as well as Aadhar Card of all the Partners should be enclosed for reference.

Chapter No. 2.0 Location and Accessibility of the Area/Mine

- 5) Location of Mining Lease should be elaborated in respect of any important public works, national parks, buildings/monuments etc.
- 6) Page no. 4: Range of the latitude and longitude obtained from the GPS/DGPS co-ordinate From to To may be given.

Chapter No. 3.0 Details of Approved Mining Plan / Scheme of Mining (if any)

- 7) Page no. 6: (a) Heading of the Chapter should be written according to the IBM Manual on Appraisal of Mining Plan 2014. (b) Details of the earlier approved document including their proposal period and its validity should be given in tabular form.
- 8) Page no. 7: (a) The mine does not have a valid approved document during the financial year 2018-19. Whereas, proposal for exploration of 12 nos. of core boreholes and 57 nos. of DTH boreholes with blank space for its achievement have been given. Same should be justified and corrected accordingly. Further, total meterage proposed for drilling and type of drilling along with its achievement should be given. (b) Review chapter should be updated up to June 2021. In this chapter, year wise proposal and its achievement for (i) Number of pits proposed for production, (ii) Location of Development (Range in UTM Co-ordinates), (iii) Overall Stripping ratio or Ore to OB ratio in five years period. (T/m³), (iv) Height of benches in Overburden (mts), (v) Height of benches in Ore (mts) (vi) Location of topsoil dumps, OB & mineral reject dumps, (vii) Length of the Retaining wall or garland drain all along dump, (viii) Area under backfilling of mined out area, (viii)

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Area proposed for put to use in last Mining Plan/Review of Mining proposals at end of five year period-				
	Item details	Proposed area in last document (ha.)	Actual area as on date (ha.)	Remark
i)	Area under mining			
ii)	Storage for top soil			
iii)	Waste dump site			
iv)	Mineral storage			
v)	Infrastructure –workshop, Administrative building etc.			
vi)	Roads			
vii)	Railways			
viii)	Tailing pond			
ix)	Effluent Treatment Plant			
x)	Mineral Separation Plant			
xi)	Township area			
xii)	Others (to specify)			
xiii)	Total in ha			

Details of earlier submitted Financial Assurance	
a) Amount of Financial Assurance	
b) Validity of Financial Assurance-	
c) Details of Performance security, if any	

- 9) Page no. 11; Para 3.4: Whether the compliance of the violation letter dated 28/03/2017 has been submitted to IBM or not, should be mentioned.

Part A; 1.0 Geology and Exploration

- 10) In this chapter, dimension of the deposit/belt (describing strike length, width, depth, thickness of the deposit, etc.) should be given along with the length (in Km), Minimum, Maximum and Average Width (in Meters).
- 11) Page no. 13; (a) Regional Geology: Source of the Regional Geological Succession should be mentioned for reference. (b) Different modes of occurrence of iron ore within mining lease area should be discussed in this chapter.
- 12) Page no. 23: Based on the exploration data and the analytical results of the boreholes and surface/grab samples, minimum, maximum and the average range of all the analysed radicals should be given.
- 13) Page no. 24: Surface Plan, Surface Geological Plan and Sections may not be considered in 1:4000 scale, hence, same should be drawn in 1:2000 scale with enhanced features.

2.0 Mining

- 14) Year wise range of the UTM co-ordinates should be given for proposed development during financial year 2021-22 to 2023-24.
- 15) Page no. 39: (a) Calculation for the year wise development and production of iron ore and laterite should be given separately for better assessment. (b) Unit for topsoil and OB/SB/IB should be mentioned in the table. (c) Year wise generation of waste in CuM should be given. (d) Incorrect stripping ratio has been calculated, thus may be corrected the same. (e) Year wise production of mineral/ore may also be given in metric tonnes including their bulk density.
- 16) Page no. 43 to 45: (a) Instead of single RL, RL different for the year wise development and production should be mentioned. (b) It has been found that the development and mineral/ore production have been proposed from different pits during review period and the existing pits have been developed in an irregular and unscientific manner without forming any sustainable benches. In view of the Scientific, Systematic and Sustainable mining, the development and mineral production may be proposed from one or two pits instead of 4 nos. of pits at different locations. (c) Proposal for sprinkling water for the dust suppression through the water tanker

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may also be given. (d) Composite details of the machinery utilized during mining operations along with their rated capacity should be given in tabular form.

- 17) Page no. 46: For calculation of the life of mine, average rate of production of iron ore and laterite may be considered.

4.0 Stacking of Mineral Reject/ Sub Grade Material and Disposal of Waste

- 18) Page no. 47: (a) Incorrect quantity for the topsoil generation has been given. (b) In the mining chapter, it has been mentioned that no mineral reject will be generated during this review period, whereas, quantity of the year wise generation of mineral rejects have been mentioned in this chapter. Same should be clarified. (c) During inspection it has been found that the mineral and overburden have been stacked in several locations. Hence, all these dumps should be shifted in the earmarked locations over the non-mineralised zone and suitable protective measures should be taken around to prevent wash off from the dumps.

5.0 Use of Mineral and Mineral Reject

- 19) Page no. 48: (a) In this chapter, it has been mentioned that the ROM Ore will be crushed and washed to improve the quality. Whereas, nowhere in this document, process flow sheet and the details of the crushing and washing unit has been given. (b) Number of active/alive, dead and stabilized dumps present in the lease area, should be mentioned. (c) UTM co-ordinates for the proposed dumping area should be given.

8.0 Progressive Mine Closure Plan

- 20) Page no. 50: Proposal for regular monitoring of the quality of the Ambient Air, Water and Noise Vibration are to be given.
- 21) (a) During inspection it has been observed that certain pits have been kept abandoned after exploitation of the mineral/ore. A systematic proposal has to be given for the reclamation and rehabilitation in the earlier mined out pits during this Review period. Further, suitable protective measures around all the old quarries should be taken. (b) During inspection, it has also been observed that the topography of the area is undulating and a lot of space is available for construction of check dams to reduce the surface runoff. Hence, suitable locations for construction of check dams should be marked in the relevant plans.
- 22) Page no. 55: Year wise plantation proposal should be given along with the area utilized in the plantation may also be given in hectares.

Enclosures:

- 1) Most of the enclosed annexures are not clear & visible and are not emplaced in their referred locations.
- 2) Mining lease deed has not been enclosed.
- 3) Partnership deed has not been enclosed.
- 4) All the enclosed Form J should be signed by the statutory Geologist and the Manager (Mines).
- 5) Copy of the financial assurance should be enclosed.

Plates:

- 1) **General:** (a) Shape file/KML file of all the mining lease may be submitted. (b) Shape file/KML file of the surface plan, proposed year wise development, working pit dimension, dump position and afforestation are to be submitted. (c) A separate Location Plan should be drawn to know how to reach the mining lease area. (d) Original lease map should be enclosed. (e) All the plans and section should be prepared and drawn according to the Rule 31 and 32 of MCDR 2017 and the scale of plans and section should be maintained as specified thereunder. (f) The entire planning should be proposed over the original lease map. Further, proposed planning over the DGPS may not be considered until the respective State Government at the Directorate Level may issue an order for revised lease map.

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- 2) **Plate I; Key Cum Location Plan:** Range of the latitude and longitude of the mining lease area may be marked in the plan.
- 3) **Plate III; Surface Plan:** (a) Surface plan should be updated as on date with features like, iron ore heaps, number of small trenches, connecting haul road up to the waste dump and mineral stock yard, waterlogged quarries etc. (b) Approach road beyond mining lease area may not be accepted. Hence, this may be constructed within mining lease area.
- 4) **Plate IVA; Surface Geological Plan:** (a) No structural features has been marked in the plan. (b) Incomplete Index has been shown. Such as, public road with 50 meter barrier zone has not been marked in the plan. (c) Area explored under G1, G2, G3, G4 and Non-mineralised has not been marked in the plan.
- 5) **Plate V; Geological Cross Sections:** (a) Incorrect UNFC codification has been shown in all the sections. (b) In the text part, reserve has been codified under (111), whereas, in all the sections the same has been codified as (121). (c) Collar RL of each borehole should be mentioned. (d) UNFC codification for the mineral resource has not been done. (e) Bench RL should be given in all the relevant sections. (f) Symbol/Pattern of iron has not been shown in the index. (g) Haul roads, Dumps, Tranches and Statutory barriers have not been shown. (g) In all the sections, the resources has been codified under (333), whereas, the estimation for the mineral resources under category (333) has not been done in the text.
- 6) **Plate VIA and VIC; Production and Development Plan and Sections:** (a) Production and development plan does not reflect the actual working proposed during Review period. (b) Advancement of the benches, Subsequent changes in the RL of Topsoil, Waste and Reject dumps should be marked in all the plans and sections for better identification. (c) Earlier drilled borehole locations should be marked in all the sections.
- 7) **Plate VII; Reclamation Plan:** Since the backfilling has been shown along 7.5 m barrier zone. Hence, the area considered for backfilling up to certain extent should be mentioned in the text.
- 8) **Plate IX; Financial Assurance Plan:** For identification, net area considered for the calculation of the financial assurance should be marked in the plan with the different pattern.

