

**Scrutiny Comments on examination of Mining plan (MP) of Santonachi Upri Iron Ore Mine over 92.5842 ha. (T. C. No. 34 of 1955) of Sociedade Zarapkar & Parkar Ltda. in South Goa District of Goa state**

**Text:**

**GENERAL**

1. As per copy of deemed extension of mining lease deed executed on 11.02.2017, two power of attorney holders are there i.e. S/Shri J. G. Parker & S. J. Zarapkar on behalf of lessee - Sociedade Zarapkar & Parkar Ltda. However, Enclosed Undertaking/certificate/consent in respect of preparation of this MP is signed by only one power of attorney holder and partner. The same should be signed by both the power of attorney holders. Further e-mail id of both P.O.A's should be mentioned.
2. Last Scheme of mining of Mining Plan approved on 15.12.2001, having proposal up to 2006-07 itself. Now Mining Plan is submitted. Reason for non-submitting (not having) Mining Plan/Scheme of mining documents for gap period (2007 onward) is not given properly. Some unrealistic/unclear statements are given/mentioned in this regard. Further ,as per MM(DR) Amendment Act 2015,renewal of Mining Lease is not possible .Therefore ,statement that MP is prepared for Renewal of ML should be removed wherever it appears.
3. Chapter-3: Para 3.3: In review, misleading statements are given. It is mentioned that Mining Plan is not yet approved and no mining activity were carried out. However, as per record of this office, Mining operations/production were carried out from year 2007-08 to 2011-12. After that mine was suspended by IBM.Review should be given in 5 years Block period ,even if it is Nil.
4. Chapter-3: Para 3.4 & 3.5: Status of compliance of violations pointed out by IBM and details of any suspension/ closure/ prohibitory order etc. are not mentioned properly, some unclear statements are given/mentioned in this regard. Whereas, as per record of this office, mine is still under suspension; suspension order of mine issued by IBM on dtd. 10.08.2011, is not revoked till date.
5. Further, as mentioned in the text, "An arbitration and conciliation application was file in District & Session Court by one Shri Anil V. Salgaonkar (Partner as per partnership deed dtd. 10.04.1986) Vs Sociedade Zarapkar & Parkar Ltda. (Lessee) regarding dispute among partners of the partnership firm and issues related to raising contractor etc. The matter is still sub-judice. Hence, Lessee/partners to be clarified and the same to be corroborated with adequate documentary evidence.

**Geology:**

- Highest and Lowest RL as mentioned in text part is not matching with plans. Contours are not in uniform, i.e, nearer to Section line-17P, contour line 30m is passing whereas immediately pit profile of 37m is present.
- Village Road & Electrical Line is passing through the Lease area, safety barrier zone has been given but mentioned in text & plan. Ore below this safety barrier zone has been considered as reserves instead of Resources. UPL, UNFC code & reserves has to re-estimate and re-draw.
- Borehole are not plotted as per their logs and co-ordinates, i.e, Borehole-55 has been shown in two sections-12 & 13 with different lithology.
- It was observed that mining lease area has 80m RL difference after DGPS survey and newly changed RL are not having uniform difference at different locations in the lease area. Boreholes location is differ from previous approved plan. Boreholes lithology also changes when compare to previous approved plan.
- As per 2000 approved plan, the mineable reserve is 4.60 million tons. From 2000 to 2007 the production of about 1.18 million tons has been removed. There is no exploration has been carried out after 2000. But in the present mining plan, reserves of about 5.471 million tons have been mentioned. It is need to be explained.
- Additional exploration is to be proposed to know the continuity of ore in depths as well as to complete the exploration as per UNFC norms. Many sections are not having sufficient Boreholes

and many boreholes are incomplete to find out the contact zone.

- Minerals (Evidence of Mineral Contents) Rules 2015 for exploration grid interval to be followed for reserves & resources estimation as per UNFC. As per rule 200-100m or closer interval of borehole spacing along strike for G-2 and 100m or closer interval of borehole spacing along strike for G-1 category of irregular bodies to be considered. Hence Geological section has to be drawn in closer interval.
- Detailed estimation table for reserves & resources as per UNFC has to be given in text. Minerals (Evidence of Mineral Contents) Rules 2015 has to be followed for exploration grid interval for UNFC reserves & resources estimation. Beyond & below the depth of boreholes, it should be considered as resources as per above said rule.
- Geological reserves & Resources have to be shown in table to compare as per previous approved plan and as of now. Addition or depletion of reserves/ resources to be explained.
- Many Sections having Boreholes grid intervals of more than 50m, hence it should consider as G-2 only. By using single Boreholes, Ore has been considered as G-1, its need to be changed to G-2/ G-3.

### **MINING**

6. Para a): Description of existing quarries/pits dimensions should be given with mRL & no. of benches in ore and OB etc. Tonnage of excavation is not given in Table at Page 51.
7. Para c):- Tonnage of Waste and Ore calculated is not in harmony with its Cum considered in Para b).
8. Para d):- Proposed method of working with Sequence of different mining operations to be described.
9. Para e):- Description of different mining machineries proposed to be deployed should be given with detailed calculation in respect of its adequacy and optimal utilization.
10. Para f):- Conceptual Plan : Proposal of exploration/exploitation/ rehabilitation etc. after year 2017-18 (2018-19 onward) only to be discussed.

### **MINE DRAINAGE**

11. Para 3.d):- Make of water, arrangement of de-watering of pit etc. needs to be calculated based on annual rain fall and catchments area. Manner of discharging mine water & related environmental concern to be discussed. Existing arrangement and proposal for protective measures to control wash-off from mine discharged water should be given in quantified terms.

### **HANDLING OF MINERALS REJECT/ SUB-GRADE AND DISPOSAL OF WASTE**

12. Description of existing waste/ mineral rejects dumps present within the lease area to be given in the text vis-à-vis that is actually available on the site.
13. Para c. : This Para needs to be re-casted, as back-filling/dumping of waste is not designed properly. Back-filling of pit of about 40 m in one year and again dumping over the existing waste dump upto 30m near to ML boundary even in to the 7.5m safety zone are not considered to be in the interest of systematic & scientific mining.
14. As around 20% ML area is covered under waste dumps, existing rehabilitation and protective measures taken around waste dumps like Retaining Wall, Garland Drain, Check Dams, Settling tanks, plantation/coir matting over dead end etc. should be given. Further, adequate proposal of plantation over dead slope of existing waste dumps and protective measures around the same like Retaining Wall, Garland Drain, along with Check Dams, Settling ponds etc. to be given to control wash-off material flowing outside. The same should be given in quantified terms in text and to be indicated over Environment Plan & Reclamation Plan.

## **PMCP**

15. In summary of PMCP table for Item No. 8.3, Cumulative actual achievement as on date and further proposal for 2017-18 to be given in quantified term. R & R by backfilling in year 2017-18 as proposed, to be indicated in the table.
16. Para 8.4: Disaster & risk assessment: risk analysis of different mining operations and Disaster management plan to be given.
17. The area covered under Road (1.5790) and Private Structure (1.1648) also needs to be included in the area put to use for calculation of financial assurance.

## **Enclosure:-**

18. All the annexure to be properly indexed, numbered, paged and signed by the TQP.

## **PLATES:**

19. Rule 31, 32 & 34 of MCDR,2017 to be followed for preparation of plans & sections.
20. All plans to be prepared based on recent and accurate survey and to be correct as per existing surface features & mine profile. Such plans should be prepared by the qualified Surveyor and certified by the mining engineer of the mine for its correctness.
21. 7.5 m statutory barrier along the ML boundary should be marked clearly over all the plans.
22. The surface details inside the lease area only to be shown on the plans except in environment plan.
23. Environmental protective measures to be shown clearly over environment plan & reclamation plan
24. Prominent surface features like villages, schools, and other infrastructures present at the site within the mining lease area are not shown over the surface plan & other relevant plans with Index.
25. RL of contours as shown over surface plan & other relevant plans enclosed with earlier approved PMCP dtd. 17.03.2006 don't match with RL as shown over the surface plan & other plans submitted this time. Substantial difference in RL of contours are there even in the untouched area (non-worked area).
26. In Financial Assurance plan, distinct color code for area degraded/to be degraded under different heads should be assigned for measuring/verification.

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