Scrutiny comments on examination of Modifications in Approved Modified Mining Plan with PMCP in respect of Mainatil Mordi (Kalay) Iron Ore Mine (T.C.No.12 of 1952) of Late N.S.Narveka through his legal heirs represented by M/s.N.S.Narvekar Minerals through its Partner Smt. Maya Shrikrishna Pokle, over an area of 77.4696 Ha. situated in Santona Village, Sanguem Taluka, South Goa District of Goa State submitted under Rule 17(3) of MCR'2016 for enhancement of production.

Text:

GENERAL

- 1. As mentioned, Lessee is an individual Late N.S. Narvekar. However, further it is mentioned that the lessee is represented through his legal heirs, represented by one firm/company M/s N.S. Narvekar Minerals, through its partner Smt. Maya S. Pokle. Hence, present status of lessee is not clear whether it an individual, firm or company. The same to be clarified and copy of lessee's legal heirs certificate to be enclosed.
- **2.** If present lessee is a firm or company. Its copy of incorporation with directors and/or Partnership deed to be enclosed.
- **3.** Copy of resolution of directors/partners regarding authorization of one partner as nominated owner of the mine to be enclosed.
- **4.** Undertaking/certificate/consent etc. should be signed by the nominated owner/authorized partner only, alternatively by all partners/Directors. Photo id of the authorized partner /nominated owner to be enclosed.
- **5.** In introduction/Preamble: Detailed reasons of earlier approved MP & modification of MPs are not required to be given here. Only brief lease details with Status of all statutory clearance obtained and Surface right acquired should be given along with documentary proof as enclosure wherever possible.
- **6.** Chapter-3: Para 3.3: last MMP was approved on 31.08.2016, and review up to year 2015-16 was already carried out in the same. Hence, the same should not be repeated. Review of year 2016-17 till date to be given.
- 7. Chapter-3: Para 3.4: last MMP was approved on 31.08.2016, and review up to year 2015-16 was already carried out in the same. Hence, Status of compliance of violations pointed recently, if any, in 2016-17 to be given here.
- **8.** Chapter-3: Para 3.5: Details of any suspension/ closure/ prohibitory order, which has already been given in last MMP, is not required to be repeated again.
- **9.** Chapter-3: Para 3.6: Justification for submitting this modification of approved MP to be given in detail w.r.t. last approved quantity and proposed quantity along with reserve position and systematic, scientific and environmentally friendly mining.
- **10.** PART A 1.0.: Page 42: Latest updating of Resource under UNFC should be mentioned in million te.

MINING

- **11.** Para a): In proposed Mine workings, only brief Sequence of different mining operations should be described. Detailed proposed Mine workings to described in subsequent Para c) & d).
- **12.** Para b) i): As per guideline of "IBM manual on appraisal of Mining Plan-2014", a NOTE to be added below the proposed year wise excavation summary Table (given in Cubic m), before arriving the year-wise tentative tonnage, considering recovery % and Bulk-Density based on time series data and few samples test.

- **13.** Para b) ii): If there is no proposal of recovery of ore from Dump re-handling, then this Para is not applicable.
- **14.** Conceptual Plan: Proposal of exploration/exploitation/ rehabilitation etc. after year 2017-18 (2018-19 onward) to be discussed.

MINE DRAINAGE

15. Existing arrangement and proposal for protective measures to control wash-off from mine discharged water should be given in quantified terms.

STACKING OF MINERALS REJECT/ SUB-GRADE AND DISPOSAL OF WASTE

- **16.** In mining Chapter, generation of Mineral reject is not planned/envisaged; however in this chapter blending of Mineral reject is planned. This needs to be corrected or clarified.
- 17. Details of existing Waste Dumps, Sub-grade/mineral rejects stocks, Back-filing carried out etc. within the lease area should be given in text vis-à-vis that is actually available on the site.
- **18.** During inspection it was observed that waste back-filling being carried out in unsystematic manner. Hence, Configuration and sequence of back-filling & its year-wise build up to be described in detail with manner of disposal of waste (whether in advancing or retreating manner) at each stages/terraces. Proposed Temporary backfilling to be shown in stages of 12mtrs.
- **19.** Protective measures already taken and proposed of to be carried out around the surface waste dumps, like retaining wall, check dams, garland drainages, settling pits and geotextiling/plantation etc. should be given in quantified terms in tabular form.
- 20. Adequate proposals of plantation to be given over the existing inactive waste dump no.-1.

MINERAL PROCESSING

21. Dry Processing carried out/to be carried within the lease area to be discussed briefly.

PMCP

- **22.** Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are to be elaborated. Specially to mitigate air pollution, arrangement of fixed/semi permanent type water sprinkle to be proposed over the permanent haul road stretch.
- **23.** In summary of PMCP table for Item No. 8.3, Cumulative actual achievement as on date to be given in quantified terms and proposal from 2016-17 onward only to be given. Under heading 'others', environment monitoring to be carried out should be given.
- **24.** Para 8.6 : F.A. to be given as per the guideline of "MCDR-2017".

Enclosure:-

- **25.** Annexure given are not paged and also along with Annexure nos., page nos. are not mentioned in the Index. All the annexure to be properly indexed, numbered & paged and signed by the TQPs.
- **26.** Copy of relevant pages of ML deed indicating leases area, expiry date, name of lessee etc. to be enclosed

PLATES:

- 27. 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 and certified by the qualified person.
- **28.** 7.5 m statutory barrier along the ML boundary should be marked clearly over all the plans.
- **29.** Except Environment Plan, over all the plans surface features and proposals within the lease area only to be shown.
- **30.** On Surface plan, weighbridges to be highlighted.
- **31.** Area Demarcation line for proposed temporary backfilling to be shown over the development & reclamation plan.
- **32.** Drainage pattern should be clearly marked on reclamation plan.
- **33.** Existing and proposed plantation on Dump No. 2 to be clearly marked with different colours over the plans.
- **34.** Protective Measures to be made prominent in Reclamation plan.
 - Para.3.3:- 20 No of Boreholes has been proposed for the year 2016-2017, as on date not a single borehole has been drilled. Now the same of boreholes has been proposed for the year 2017-2018.
 - There is a proposal of 148000 tons of Production & 781000 tons of development for the year 2016-2017 from Section line M2 to M12 from RL 41 to 83m. Actually bench has moved from Section line M0 to M12 from RL 41 to 85m and produced 148000 tons of production and 382576 tons of development. Its need to explain 100m excess bench movement has been done with same RL, but there is no excess production or development.
 - 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 for Reserves & Resources estimation. Additional exploration has to be proposed working pit also to know the existence of mineral as well as its UNFC compliance. Core boreholes have to be planned based on type of deposit and various intrusion etc. Beyond & below the depth of boreholes, it should be considered as resources as per above said rule.
 - As on 01.04.2016, the 111 category reserve is 74,50,615 tons. Even after removal of 148000 tons of production during 2016-2017. The 111 category reserve has increased to 77,25,555 tons without any exploration. It is need to be explained.
 - 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.
 - Geological study of Eastern part of lease is not carried out and additional exploration
 has to be planned and carried out to know the existence of mineral as well as its
 UNFC compliance.

Plates:-

- All boreholes should be marked with type, diameter, inclination, collar level and depth. Boreholes above pit bottom must be shown by hatched lines in sections and old boreholes hanging in air above the pit bottom are not required.
- An attempt may be made to prepare slice plans for estimation of reserves and resources due to complex deposit with intrusion and shape of mineralized zone etc.

- Refer sub para –K of part-Geology & Exploration of universal format for Mining Plan.
- Geological sections should enclose for regular interval of 50m interval to cover complete lease area. Merely 7 sections are drawn over working pit only.
- Geological plan and section has to show only the present lithology and UNFC code can't be given as separate lithology intend of that UNFC code may show. UPL line is not matching with plan and section.