

SCRUTINY COMMENTS ON DRAFT MODIFICATION & REVIEW OF MINING PLAN OF SANKALAPURAM IRON ORE MINE (ML.NO.2682) OF M/S RAI BAHADUR SETH SHREERAM NARASINGDAS PRIVATE LIMITED.(M/S RBSSN PVT LTD), SITUATED IN HOSPET TALUK OF BELLARY-DISTT OVER AN OF AREA OF 111.09 HA (AMALGAMATED), SUBMITTED FOR APPROVAL UNDER RULE 17(3) OF MCR, 2016. NON-FOREST, NON-CAPTIVE, A(FM-FULLY MECHANIZED METHOD).

COVER PAGE

1. The present modification period 2017-18 to 2019-20 along with the previously approved five years period 2015-16 to 2019-20 may also be indicated for easy reference.

2. Introduction:--- (i) The details of others MLs and PLs held by the lessee in the country has not been furnished. (ii) Reasons for present modifications should be clearly mentioned with appending the related correspondence with IBM. (ii) Page No-9 & 10: The reasons for non-applicability of some items of approved R & R plan may be clearly mentioned. (iii). The quantity of sub grade stacks depleted/ removed from the old stack, after the last approved document dated 13/01/2016, out of the 5lakhs tonnes permitted by the CEC may be brought out in the review chapter and other relevant places of the text for reference. (iv). Page-1,2 & 13.-2nd renewal under MMDR Act 2015 is not correct. It should be under MMDR Act 1957.

3. Para 1(f):--- The experience certificate of QP as under Rule 15 of MCR 2016 has not been enclosed.

4. Para 2(b) (page no 15):-- Latitude of BP nos R-9 & R-10 should be checked and corrected w.r.t. surface plan.

5. Para 3.3:-- (i) The copy of Form-J (regarding intimation for sinking of BHs) submitted to IBM should also be appended in support. (ii). Exploration review for the year 2016-17 may also be indicated even if it is Nil. (iii) The production achieved for the year 2015-16 & 2016-17 only (up to March-17) should be furnished. Rest should be discussed in the present modifications. Further, negative or positive sign of deviation may also be mentioned in table. (iv) The afforestation and other environmental protective measures carried out during year 2015-16 to 2016-17 have not been discussed. (v) The indicative cost summary table of approved R& R plan and actual expenditure incurred so far should also be mentioned.

Part-A

6. Para 1(b) page no-24:---Latitude and longitude range mentioned should be checked and corrected.

7. Para 1(c) page no-26:-- Dip direction of iron ore reef mentioned should be checked and corrected.

8. Para 1(e):-- (i) Page no-27:--The grid pattern of core boreholes drilled in float iron ore area to be less than 100 m X 100m. The same may be mentioned in all relevant paras of text. (ii) Page no-31:-- Few representative samples analysis report by NABL accredited Lab to be enclosed in support.

9. Para 1(i):- The lateral extent of area cover under G-1, G-2 and G-3 level of exploration has not been mentioned w.r.t. total mineralized area. As per rule 12 (4) of MCDR 2017, the G-1 level exploration should be proposed over the entire potentially mineralized area. Few trial pits may be proposed in float iron ore area to convert G-2 & G-3 resource into G-1 level. Further, the proposed expenditure on exploration should be mentioned. (ii). In page-33, the proposals drawn for the year 2018-19, indicated that the depth of the hole is up to down to the ore bottom is not the appropriate proposals. The depth of the bore holes should be indicated/ specified. Besides, it is given 98 bore holes were drilled in the float ore is also not appropriate and correct. (iii). In page-34, it is given 127 bore holes and 14 trial pits were carried out in the ML area, if it is so, sinking trial pits will not arise in the iron ore mine, were much deeper levels workings are carried out in the past.(iv). The text paras and the information must be attended and corrected suitably.

10. Para 1(j) and (k):-- (i) not applicability of common boundary working at present due to high level vertical difference may be discussed. (ii) Page no-44:---There is no 111 reserves based on exploration drilling at Geological cross-section KK' (iii) Page no-45:---(a) 211 resource assessment has been made twice at Geological cross-section NN' same be checked and corrected/clarified. (b) The resources blocked under Jambunatha Temple core zone may be classified under 222 or 333 based on level of exploration. The mineralized area at geological cross section HH' may be checked and corrected w.r.t. enclosed cross section.

Further irrelevant mentioning of data at SL No-5 of table may be checked and corrected. (iv) Page no-46:-
-- (a) Inferred resource assessment (333) and mineralized area at geological cross sections II' to KK' and MM' should be checked and corrected w.r.t. enclosed cross sections as 333 resources not marked on cross sections. (b) Inferred resource assessment (333) at geological cross sections AA' & BB' should be checked and reconciled w.r.t. enclosed cross sections area as these area falls under old dumps. (v). The detailed reserves / resources indicated as on 2/2/2017 and other tables must be brought out as on 1/4/2017 and all the tables in the text must be numbered, including the summary of reserves.

11. Para 1(l):--(i) Sub-paras (a) to (c) have not been discussed as per Universal format. (ii) Foot note as per universal format may be incorporated below final reserves/resources table.

Mining:--

12. Para 2A (a), the headings given in the format must be strictly followed for carrying out/ submitting correct information as per the universal format. (ii). Further, to the brief description, both in the existing and the proposed method of workings, it is expected to give the slope of faces, direction of advancement, approach to the faces & specification of roads, etc., to be indicated. (iii) Also, the existing dumps spread parameters, height, slope protective works etc., to be indicated in the proposed method of operations. (iv). Also, the year wise/ bench wise, mRL wise, opening reserve, exploitation & the closing balance may be tabulated for the remaining three years period. (v). The height of the bench and the width need to be specified, instead of indicating more than the height. (vi). Blasting is prohibited in the core & buffer zone as per the radius given in the Hon'ble Supreme Court order should be strictly adhered. (vii). In the light of the above remarks, the text and the plates may be attended, wherever applicable. (viii). Existing bottom RLs of pits of pits may also be indicated at page-50.

13. Para 2(b), the five years production and development details furnished in the table without table number need to be restricted to three years only and the previous two years proposed and actual may be dealt in the review chapter. The recovery factor given as 80% in float ore need to be reconciled. In the light of the above remarks, the text and the plates may be attended, wherever applicable.

14. Para 2(b) II, the low grade and the fines stacked in R1, R2 & R3 stacks as per surface plan, what is the quantity present in each stack separately as on date may be indicated for future reference. In the light of the above remarks, the text and the plates may be attended, wherever applicable.

15. Para 2(c), in page-57, the ore to waste ratio given under summary of year wise quantities, reveals 1:0.15, whereas in the previous para in page-54, it is given 1:0.20, this must be checked and corrected.

16. Para 2(d), under description given in page-57, the proposals should be drawn in such a way that the drilling and blasting will be undertaken in the ML area, other than core and buffer zone. In the light of the above remarks, the text paras and the plates need to be attended appropriately at relevant places.

17. Para 2(d), the method of working is proposed for A (FM), and not A (M), hence the proposed information need to be given correctly, everywhere in the text and in the plates too.

18. Para 2(d)(ii), under details of production & development(for the year 2017-18), the ore to waste ratio given as 1:0.20, whereas in other paras it is projected for 1:0.15, It may be ensured to give correct information.

19. Para 2(d)(ii), under details of production & development(for the year 2018-19), in addition to the remarks given above for the year 2017-18, in 2018-19, it is given R1 & R2 will be re-handled to produce the quantity of 500,000 tonnes of materials for beneficiation, whereas in the page-53, only R1 stack is indicated, which needs to be attended suitably/ correctly. In the light of the above remarks, the year 2019-20 proposals may be checked and reconciled.

20. Para 2(e):-- Concurrent backfilling in the float iron ore area if possible, the same may be discussed.

21. Para 2(f), in page-61, under the dump re-handling, i.e. low grade/ sub grade/ ROM stack @ 5lakhs tonne will moved out from the already accumulated quantity of 2.608 Million tonnes, whereas in page-53, it is given as 1.65 Million tonnes of low grade/sub grade/iron ore fines/ ROM (part of R1 & R3, reveals different figure

and contradictory datas. (ii) Increase in life of mine with common boundary agreements with the adjacent Mine owners in future may also be discussed. (iii) Generation and location of disposal of tailings from beneficiation plant have not been discussed.(iv) Implementation of approved R &R plan during conceptual period has not been discussed.

22. Page-63, it is mentioned that, after exhaustion of deposits from the proposed pits, the pits will be left as water reservoir. This may be re-examined as the pits are on the elevated area.

23. Para 3 (d):-- Annual rain water data has not been mentioned. Para 4(b):-- (i) Concurrent backfilling in float iron ore area has not been discussed. (ii) Year-wise generation and location of disposal of tailings from beneficiation plant have not been discussed.

24. Para 6:-- The location of beneficiation plant/mineral processing unit has not been discussed.

25. Para 8.1:-- Human settlement (Page no-87):--Long-form of column heading of table may also be indicated.

26. Para 8.3.1:-- Concurrent backfilling during plan period in float iron ore area has not been discussed and reflected. (ii). Under mined out land, it is given at the commencement of modification & review of mining plan period, the extent of mined out land present is 21.739ha, if it is so?, why this land is considered for back filling / reclamation & rehabilitation purposes or not shown as mined out in the document, this needs to be checked.

27. Para 8.3.5:-- Year wise PMCP tables :--(i) Actual column need not be necessary. (ii) Concurrent backfilling in float iron ore area and afforestation in backfilled area has not been discussed and reflected. (iii) Proposal of gap afforestation in dump management has not been reflected. (iv) Proposals of implementation and maintenance of approved R &R plan within ML may also be reflected.

Part-B:--

28. Certificate and undertaking from Lessee:--(i) An additional undertaking from lessee stating the time-bound implementation of CEC approved Reclamation & Rehabilitation Plan and monitoring / maintenance of protective measures already implemented, may also be incorporated under para 9.

Plates:--

29. Plate 1:(Key Plan):-- (i) Detail of adjacent village Kariganur has not been incorporated at table. (ii) The plan may be as per rule 32 (5) (a) of MCDR 2017.

30. Plate No 3(Surface Plan) : (i). The notations used for waste dumps, ROM, fines, low grade, subgrade old stacks should be given distinctly. Fresh ROM should be indicated without clubbing with the old fines/ subgrade/ ROM to avoid confusions.

31. Plate No 4(Geological Plan) :--(i) the existing bore holes should be marked specifically in red color as per standard notations of MMR,1961. The proposed one should be other than red color, both in the plan and in the sections. (ii). Lateral extent area covered under G-1, G-2 & G-3 level of exploration have not been marked. (iii) Iron ore and other litho-units have not been properly marked on plan and index. (iv) The existing & proposed trial pits have not been marked. (v) The projection of geological cross-sections CC' & HH' should be checked & corrected w.r.t. enclosed geological cross sections. (vi) The exploration should also be proposed in float iron ore area as per para 1(i). (vii) The plan may be as per rule 32 (1) (b) of MCDR 2017.

32. Plate No 5(Geological Cross sections):-- (i) Proposed BHs should be properly projected with dotted lines. (ii)The existing trial pits, proposed trial pits and drilled BHs should be properly reflected. (iii) The different categories of reserves and resources should be modified as per scrutiny comments at para 1(j) & (k). (iv)Index of the plan should be proper with drilled & proposed trial pits and BHs. (v) Litho-units below the float iron ore are should also properly projected based on outcome of drilled core boreholes. (vi) The iron ore body in core zone of Temple at cross-section HH' has not been projected. (vii) Exploration should not proposed in core zone of Temple at cross-section KK'

33. Plate No 5A (LS):-(i) Proposed BHs and exploration should be properly projected. (ii)The temple's core zone limit may also be marked.

34. Year-wise Production and developments Plan (Plate No -6A to 6B):-- Concurrent backfilling in float iron ore area and location of disposal of tailings from beneficiation plant if any have not been properly reflected. Proposed workings for 2017-18 indicated without marking the pit number, which ought to have been for clarity, when the other pits/ workings are designated.

35. Year-wise Production and developments sections (Plate No -7):-- Float iron ore mining and concurrent backfilling in float iron ore area should also be properly reflected. Further, year-wise build of dump section should be enclosed.

36. Plate Nos 8 and 9 (Conceptual plan and sections):-- (i) The plan and sections should be modified as per scrutiny comments at para 2A & 2(f). (ii) The concurrent backfilling in float iron ore should also be properly reflected. (iii) Table of existing Land-use pattern and land use pattern at end of conceptual may also be incorporated. (iv). The plan and sections should be attended to present what would be the position of workings at the conceptual stage.

37. Plate No-10 (Environmental plan):-- (i) Water monitoring station at water discharge point of ML area should also be proposed. (ii) Contour lines should be at five meter intervals. (iv) The plan should be as per rule 32 (5) (b) of MCDR 2017.

38. Plate No-11 (F.A Plan) :--(i)The F.A table should be incorporated (ii) Name of this plate may be corrected as “ Financial Assurance Plan”.

39. Reclamation Plan in 1:2000 scale has not been enclosed. Proposed environmental monitoring station at core-zone should be properly reflected in this plan. Water monitoring station at water discharge point of ML area should also be proposed. Further, the existing and proposed Year-wise afforestation and other environmental protection measures should properly highlighted in this plan.

Annexures:

40. Few latest chemical analysis reports of core sample done by NABL accredited lab have not been appended.

41. Feasibility study report :--(i) The reserves/resources, production schedule and mining method should be modified as per scrutiny comments as mentioned above. (ii) Economic Evaluation chapter: -- Proposed operation cost should also include royalty and payment to NMET (2 % of Royalty) & DMF (30 % of royalty). The items of proposed operation cost table should be as per Annan Return (G-1) under rule 45 (5) (c) of MCDR 2017. Accordingly, economic viability may be made w.r.t. present sale value of ore, NPV & IRR.

42. Copy of the valid bank guarantee should be enclosed.

43. Copies of CEC permission to mine 2.95 Lakhs TPA and 5 lakhs TPA of subgrade ore is to be enclosed.