

SCRUNITY COMMENTS ON THE DRAFT MODIFICATION TO THE APPROVED MINING PLAN IN RESPECT OF BHADRA IRON ORE MINE, OVER AN EXTENT OF 130.53 HA, SUBMITTED BY M/S JSW STEEL LIMITED, SITUATED IN ITTANAHALLI, VILLAGE SANDUR TALUK, BELLARY DISTRICT OF KARNATAKA STATE

The draft submission has not been done in excel sheet as per the new mine plan template notified by IBM vide Circular no. 1/2021 dated 07.06.2021. The soft copy of the mine plan template in "excel" as per the format, with all details needs to be submitted. The final submission of Text, Annexures and Plates both in soft and hard copies (Excel Format) in accordance with IBM Circular no. 1/2021 to be followed in toto.

COVER PAGE

1. The Period of proposal should be corrected as "2021-22(From Aug-2021 to March-22) to 2023-24.

INDEX

2. i) The heading "List of Contents" to be corrected as "Index" as per the format. The subheading "Mineral Beneficiation/Processing" to be corrected as "Mineral Processing".
ii) Part-B to be mentioned in List of Annexures and Part-C in List of Plates. The complete heading, subheading serial no and contents in the index to be corrected as per the format.
3. Introduction (Pg-1-2)- The portion may be deleted as it is not required as per the new mine plan format.

CHAPTER-1-GENERAL INFORMATION(Pg. 3-6)

4. Para- 1.1-Lease details-(Pg-3)- In type of Lessee, the appropriate selection should be made from available options- Individual/Private/PSUs as given in the format.
5. Para 1.1.2-Mining Plan submission Criteria details-(Pg-3-4)- i) The abstract of Hon'ble Supreme Court guidelines which has been referred may be enclosed and the annexure number reference of the same should be given. Also, the statutory permission/documents from the related Statutory authorities for installation of Down Hill Pipe Conveyor(DHPC) at the proposed location may be enclosed with reference of these annexures under this Para.
ii) The permission from PESO for HSD bunk proposal along with the approved plan for the proposed area, may be enclosed in Annexure and Plate and reference of the same should be given in this Para.
iii) It was observed during site inspection that the exploratory drilling of the area has not been completed till date as per the last approved proposals. Accordingly, there will not be major changes in the upgradation of the G-2/G-3 area and corresponding Reserve/Resource estimation. Therefore, Geological parameters & Reserve/Resource up- dation should be removed from the reasons for modification.
iv) Also, it was observed during site inspection that portion of development for Block-2(Southern side) and Temporary dump extent at Block-3 was not as per the proposal. The same needs to be updated as per the latest survey and proposals for balance period needs to be proposed accordingly and may be included in reasons for modification. All the three blocks nomenclature to be kept uniformly as mentioned in the State Govt. approved Lease Sketch i.e., Block 1,2 & 3.
v) The period from which modification is proposed to be corrected as 2021-22(From Aug-21 to March-22) to 2023-24.
6. Para-1.2-Land Ownership details-(Pg.4)- Area in Ha to be given correctly under the table.
7. Para- 1.3.1- Approval of Earlier Mining Plan & its subsequent review in chronological order-(Pg.4)- The date under the table should be corrected as "06/07/2017".
8. Para-1.3.4-Statutory Compliances- The heading under this para may be corrected as "Statutory Compliances". The details of the permissible annual production as per the CEC Approval letter should also be given under this Para. Also, the details of the CEC approval Letter no, date, Permissible annual production etc. to be given under this Para. The related documents to be attached as Annexure and reference to be given.
9. Para-1.3.6- Owner/Nominated Owner Details-(Pg. 6)- The Board Resolution nominating the Owner attached with the document is of 19th July 2009. The latest copy of the resolution of Board of Directors nominating the Owner under the Mines Act 1952 /The Occupational safety, health and working conditions code 2020 and Mines and Minerals (development and Regulation) Act 1957 and rules made there in should be enclosed and details in this section should be given accordingly. Also, a copy of the PAN of the nominated owner to be enclosed and reference to be given. The List of members of Board of Directors should also be enclosed and reference to be given in this Para.
10. Para-1.3.7-Qualified Person details as per M(OAHCEM)CR,2016 -(Pg.6)- The Pan no of Qualified Person may be enclosed and annexure reference to be given. The Qualification certificate of QP in accordance with Rule 15 of M(OAHCEM) concession Rule 2016 should be enclosed. The enclosed Qualification document of QP is not as per the above.

CHAPTER-2-GEOLOGY AND EXPLORATION (Pg. 7-26)

11. Para- 2.1.1-Topography- (Pg. 7)- The Para mentions minimum distance of stream from lease area as 0.65 km. The same should be clearly demarcated on the enclosed Key Plan.
12. Para- 2.14.3- Lithology, Petrographic & Mineralogical Description for Major, Associated & Indicator Minerals-(Pg.11-13)-i) Pg-12- Block 1 & 2 to be corrected as "Block-2". It is mentioned " *The ore is occurring in the*

form of lumps and fines with the ratio 70:30 is observed in many places”. As per the Schedule-C of the executed Lease deed by the State Government, the average percentage of lumps to fines is defined as 37.38: 62.62. Accordingly, it should be corrected as **‘The average percentage of lumps to fines present in Run off mine is 37.38:62.62**. The related text in both Block 2 & Block-3 to be corrected accordingly.

13. Para-2.1.4.4 & 2.1.4.5- Mode of Occurrence & Control of Mineralization- i)The Mode of occurrence whether Igneous, Sedimentary or Metamorphic to be given, along with control of mineralization whether stratigraphically, structurally, Chemically, geologically under this Para 2.1.4.4.
ii)Extent of Weathering/Alteration-(Pg. 13)- The heading to be corrected as per the format. The type and depth of weathering zone if any to be detailed in this Para
14. Para-2.1.4.6-Nature/Form of Mineral-(Pg. 13)- It is to be added in the text “The average percentage of lumps to fines present in Run off mine is 37.38:62.62”.
15. Para- 2.1.4.7- Extent of Mineralization- (Pg. 14)- The text to be corrected as “All the materials analyzing equal or more than 45 % and above have been considered as ore”. The no of ore bands inside the lease area with physical and chemical characteristics details to be also given.
16. Para- 2.1.4.8- Deposit Type (as per MEMC Rule)- (Pg. 14)- The strike/Trend of the ore body to be defined from the dropdown list given in the template. The dip of the ore body has not been provided correctly and is not matching with the information provided in Para 2.1.4.3(Pg. 11-12) for Block 2 & 3. The dip direction to be also corrected.
17. Para- 2.2.1- Summary of the Previous Exploration (For Fresh Grant)/During Last Plan Period (for existing leases)- (Pg. 14- 17)- i) In this Para (2.2.1) and sub-para (2.2.1.1 to 2.2.1.14) the information of previous drilled boreholes by MECL as mentioned in the last approved document only needs to be given. The information related to the exploratory borehole drilled by the Lessee for the year 2019-20 is not relevant to this para and should be deleted. The name of the agency to be corrected accordingly
ii)Para 2.2.1.1-Geological Mapping (Pg-15)- Geological Mapping information as per the Geological report carried out M/s MECL to be given.
iii) Para 2.2.1.7-Exploratory Drilling (Core/Non-Core)- (Pg. 16) The information for all the previous MECL drilled boreholes as per the last approved document needs to be given in the table as per the format. The exploratory drilling data for the year 2019-20 to be deleted. Form-J for all the MECL Exploratory boreholes with lithologs and chemical analysis as per the last approved document to be enclosed as annexure and reference to be given.
iv) Para 2.2.1.9-Sampling- (Pg. 16) The sampling details of the MECL exploratory boreholes as per the format like Type of sample (Core/Non-core), No of samples collected. No of samples analyzed, Location of sample in Latitude and Longitude (Borehole extent location) to be given in the table.
v) Para 2.2.1.10- Chemical analysis-(Pg. 17)- The Chemical analysis details for all the MECL drilled exploratory boreholes should be provided as per the format. The chemical analysis data for the boreholes drilled during the year 2019-20 to be deleted.
vi) Para 2.2.1.13- Bulk density-(Pg. 17)- The bulk density details as per the last approved mine plan to be mentioned here. Also, the method adopted for calculating bulk density of ore and waste section to be added under this Para as per the format and details to be given. The bulk density study report from NABL accredited laboratory/Govt. lab to be enclosed. The NABL certification of the laboratory along with the scope of test works for the lab, which includes Bulk density testing may be enclosed in annexure.
vii) Para 2.2.1.14- Area Covered under Exploration-(Pg. 17-25)- The area covered under exploration under G-1, G-2, G-3, G-4, Area proved as non-mineralized area etc. information to be given in the table under this Para.
18. Para-2.2.2-i) Summary of the Previous Exploration (Before Last Plan Period)- (Pg.17- It was observed during site visit that the Exploratory drilling has not been carried out till date as per the approved proposals of the present plan period. Accordingly, there is no major change in the area under different exploration Limits (G-1/G-2/G-3 etc.). and up dation of Reserve/resource estimation. The Reserve/Resource figure should be reported as on 1.04.2021 as per the last approved document after depleting actual production for the year 2019-20 & 2020-21 and as reported in Annual Return 2020-21.Also, the Last plan period is not applicable as the mine is an auctioned mine and has commenced operation during the year 2019-20. The related paras under this to be corrected accordingly.
ii) Para 2.2.2.7, 2.2.2.10, 2.2.2.13: Exploratory drilling, Chemical analysis, Bulk density-(Pg-19)-It should be mentioned ‘Nil’ under this Para as Last plan period is not applicable.

- iii) Para 2.2.2.14: Area Covered under Exploration-(Pg-20)- As already mentioned above since there is no major change in the area under different exploration limits, it will remain same as in Para 2.2.1.14. The corrections to be incorporated accordingly.
19. Para 2.2.3-Ore Body geometry & Grade- (Pg. 20)- The name of the band to be maintained as Block 2 & 3 uniformly and other details like general strike, dip, avg strike length, avg width, average depth, chemical parameters to be given correctly. The related information which is given earlier in Para 2.1.4.3, 2.1.4.8 & in the current para are not matching. The corrections to be incorporated in all relevant Para/section accordingly.
20. Para 2.2.4-Reserve/Resource Estimation method- (Pg-20-21)-i) Para 2.2.4.1-Methodology-(Pg-20)- Appropriate selection should be made from available options- Sectional area method/Plan area method/Software used as given in the format.
 ii)Para 2.2.4.2-Resource Calculation-(Pg-21)- All headings under the column of the table should be as per the format. The method used for Resource estimation may be mentioned as sectional area method. The Resource calculation under the table of this para should be corrected as per the above scrutiny comment no 18.Also, Annexure-XVIII to be corrected accordingly.
21. Para 2.2.5: Reserve/Resource Estimation method-(Pg-22-24)- i) Para 2.2.5.1-Mineral resources estimate for conversion to Mineral Reserve-(Pg-22)- The mineral reserves are not upgraded as already mentioned above in scrutiny comment no 18. The text under this Para to be corrected accordingly and relevant details as per the last approved document to be given.
 ii)Para 2.2.5.2, 2.2.5.3,2.2.5.4,2.2.5.5,2.2.5.6,2.2.5.7,2.2.5.8- (Pg. 22)- Threshold Value & Cut off parameters, Mining Factors or assumptions, Metallurgical factors or assumptions, Cost & Revenue factors, Market assessment, Other Modifying factors details should be given as per the last approved document.
 iii)Para 2.2.5.9-Calculation of Blocked Resources- (Pg. 23)- The details under this table to be given as per the last approved document as already mentioned above in scrutiny comment no 18. Annexure-XIX to be also corrected accordingly.
 iv)Para 2.2.5.10 & 2.2.5.11-Calculation of Reserves-(Pg. 24-25)- The table under this Paras to be corrected as per the above scrutiny comment no 18. Annexure XX to be also corrected accordingly.
22. Para 2.2.6-Future Exploration Proposal-(Pg-25-26)-i) It is mentioned under this para ‘*No exploration is proposed in future as entire mineralized area in lease is explored under G-1 level of exploration*’ which is not correct and acceptable. As already mentioned in scrutiny comment no. 18 exploration has not been carried out inside the lease area as per the approved proposals for the current plan period. Accordingly, the exploratory proposals of the last approved document and the boreholes required for upgrading the G-3/G-2 area to G-1 as mentioned above in Para 2.2.1.14 & 2.2.2.14 to be worked out thoroughly and exploratory boreholes should be proposed so that G-1 level of detailed exploration over the entire lease area is completed in the plan period in accordance with Rule 12(4) of MCDR 2017 and additional condition(Clause 11) of Lease deed. The exploratory boreholes should be worked out and proposed accordingly in the current plan period,so that Reserve/Resource review and re-assessment can be done for the entire lease in the upcoming plan period in accordance with **Minerals (evidence of Mineral contents) Rules 2015**.
 ii)Para 2.2.6.5.1-Core drilling & non-core drilling-(Pg. 26)Core Exploratory drilling in mineralized zone and non-core in other area to be proposed accordingly under this para as per above scrutiny comment.
 iii)Para 2.2.6.7-Sampling-(Pg. 26)- The sampling details of the proposed exploratory boreholes in accordance with Minerals (evidence of Mineral contents) Rules 2015 should be given under this Para as per the format. The sample location extent may be given under Latitude and Longitude column of the table.
- CHAPTER-3-MINERAL BENEFICIATION/PROCESSING (Pg. 27-32)**
23. Para 3.3- Crushing Section-(Pg. 27)- i) As per the specific conditions of EC clause A(v), ‘*Installation of One mobile crusher(Jaw Crusher) cum screen (Tripple deck Vibrating Screen of 200 TPH capacity) and two mobile screening plants (Singly Deck Vibrating Screen of 250 TPH each) only will be allowed. No further installation of crusher and screening plants are allowed*’.
 ii)Para 3.3.2 & 3.3.3- Secondary Crushing & Tertiary Crushing- (Pg-27)- ‘Not Applicable’ option to be selected as per the EC condition mentioned above.
 iii)Para 3.4-Grinding Section-(Pg-27-28)- ‘Not applicable’ option to be selected under Para 3.4, 3.4.1 & 3.4.2.
 iv)Para 3.5.1-Screening and Classification-(Pg-28-29)- The Screening unit details under this Para should be proposed as per the above EC condition.

v) Para 3.5.2, 3.5.3- Other operation, Product Quality-(Pg-29)- ‘Not Applicable’ option to be selected under this Para.

vi) Para 3.6- Wet Processing-(Pg-29-31)- ‘Not Applicable’ operation to be selected under this Para and related Para 3.6.1, 3.6.2, 3.6.3, 3.6.4, 3.6.5, 3.6.6 & 3.6.7.

vii) Para 3.7- Overall Product Quality (Dry Cum wet Processing) -(Pg-31-32)- ‘Not Applicable’ option to be selected under this Para.

viii) Para 3.9-Overall water requirement of mining and mineral processing- (Pg-32)- The quantity of water required in Cum/day for mining & allied activities process like dust suppression, drilling, plantation, domestic purpose like washing, drinking etc. details to be given under this Para. The details regarding source of supply of water, disposal of water, extent of recycling, chemical analysis of water should be given under this Para. The Water balance chart to be prepared accordingly and may be added in annexure and reference to be given under this Para. The water requirement should be within the EC & CFO permissible limits.

ix) Para 3.10- Flow sheets and Charts-(Pg.32)- Annexure XXI to be corrected as per the above Scrutiny comment of Para 3.3.1, 3.3.2 & 3.3.3. The Crushing plant and the Screening plant capacity and configuration should be as per the EC condition. No Secondary and tertiary crushing is permissible as per the EC condition. Also, ‘The average percentage of lumps to fines is to be kept as 37.38:62.62. The flowsheet enclosed under Annexure-XXI to be corrected accordingly.

CHAPTER-4-MINING OPERATIONS (Pg. 33-43)

24. Para 4.2-Operational Parameters-(Pg-33-37)-i) Para 4.2.1.1-Pits- 2.0- (Pg. 33)- The area covered under pits for Block-2 & 3 mentioned under this Para and the area reported under mining in AR 2020-21 are different. This is to be checked and corrected as per the latest survey data.

ii) Para 4.2.1.2.1-Dump details-(Pg-33-34)-i) In all portion of this Para and the other related Paras, annexures & Plates, AD-2 nomenclature to be kept as Proposed temporary dump (PTD) as per R& R plan. Inactive dump, ID-6 to be also included under this table as portion of it is present inside the lease in Block no 3 as shown in surface plan (Plate no 3) of the last approved document. The Area covered by dump, Height of the dump etc. for inactive dumps have not been given correctly. This should be given as per Pg. no 87-89 of the last approved document. For active dumps(AD-1 & Temporary dump), relevant details should be given as per the latest survey data and total area should be in line with the waste disposal area of AR 2020-21. The details mentioned under ‘remarks’ to be also corrected accordingly.

iii) Para 4.2.1.3- Details of Stabilized dumps-(Pg-34)- Inactive dump, ID-6 to be included in the table. The no of terraces, average height of terraces to be given as per Pg. 65-67 of the last approved document.

iv) Para 4.2.2.1- Bench Parameters-(Pg-35)- a) **Since there is no major change in the Geological parameters within the lease area as mentioned above in Scrutiny comment no 18, the working proposals for the plan period should be as per the last approved document. As already mentioned above in Scrutiny comment no 5(iv), that portion of development for Block-2(Southern side) and Temporary dump extent at Block-3 was not as per the approved proposal. The same needs to be updated as per the latest survey and proposals for the balance period needs to be proposed accordingly incorporating the above development for Block-2 and correction of temporary dump extent of Block-3.** For the year 2021-22, the details to be given for the period, from Aug-21 to March-22.

b) The slope of the Bench in Overburden to be given correctly. As per the last approved document the slope of the bench for both OB & mineral is 80 degrees.

c) Overall slope of Pit(degree) to be given year-wise as per the year-wise production & development section and should not be more than 45 degrees in any case.

d) The no of benches in OB & mineral year-wise to be checked as per the above scrutiny comment and corrections to be incorporated in the table.

e) The max depth of working year-wise should be given in metre. Also, the depth of water table to be given in metre.

f) The individual Year-wise production and development plan & section should be prepared with all aforementioned corrections and plate reference to be given in the column of the table. The ‘Year-wise development & production section should be added in the table of this Para as per the format.

v) Para 4.2.2.2- Year wise opencast development-(Pg-36)-a) **For the year 2021-22, production may be proposed on pro-rata basis from Aug-2021 to March-2022 after depleting the actual production for the month of April, May June & July-21 from the proposed per annum annual production. Also, the proposed per**

annum Annual production should be within the CEC permissible limits as mentioned above in scrutiny comment no 8. The corrections to be incorporated in all relevant portion of text, tables, annexure and plates.

b) Ore to OB Ratio(ton/Cum) column to be added in the table as per the format.

c)The Bench ID has not been given correctly in the table of above para. The Annexure number reference is also not given correctly. Annexure XXII-Production and development calculation sheet, should also indicate the bench mRL and ID details on which the production and development section wise is proposed for the corresponding year. Annexure XXII to be also corrected as per the above scrutiny comments for Geology Chapter (3) and Mining Operations Chapter (4). The Bench details to be given in the table, accordingly as per corrected Annexure-XXII.

d) The total ROM production proposed during the plan period 2021-22(From Aug-21 to March-22) to 2023-24 to be calculated and it is to be mentioned that the average percentage of lumps is to fines production in the proposed ROM quantity will be in the ratio 37.38:62.62.

e) The corrections to be incorporated in table under this para and related annexures & Plans & section accordingly.

25. Para 4.3-Material Handling Summary-(Pg-37-38)-i)The 106 (2) (b) permission from DGMS as per MMR 1961 should also be enclosed as Annexure and reference to be given under this Para. The relevant Slope stability report & 106(2) (b) permission of the mines may be attached as Annexure and reference to be given in this Para.

ii)Para 4.3.2-Insitu Mining-(Pg-37)- The corrections to be incorporated in the table under this Para as per the above scrutiny comment no 24(v) for Para 4.2.2. Under the Grade column average grade for the respective year to be given as per the Geological Reserve estimation in the Geology Chapter(2).

iii) The corrections to be made in all year-wise production & development plans & sections.

iv)Para 4.3.4-Calculation Summary-(Pg-38)- The corrections to be made in the table as mentioned above. For the year 2021-22, the related figures to be given for Aug-21 to March-22. **“Total” Column to be added in the table as per the format.**

26. Para 4.4-Machine Calculation-(Pg-38-40)-i)Para 4.4.1-Machine requirement Summary(Pg-38)- No of shifts per day to be given correctly in the table and calculations to be done accordingly taking the maximum handling quantity per annum (ore + waste) as per Para 4.3.2. The handling required per hour has not been calculated correctly.

ii)Para 4.4.2- Shovel/Excavator Requirement (Pg-39)- The shovel bucket capacity selection should be made as per the available equipment in the mine and the machinery details as given in AR 2020-21. The tonnage factor to be taken in ton/cum for Ore & OB as per Para 4.2.2.2. The (G)TPH formula to be corrected as $((3600*A*B*C*D*E*U)/F)$. The Stand by excavator(L) should be calculated mentioning the availability percentage. The calculation for Shovel/Excavator requirement for Ore and OB to be calculated separately accordingly. The nos. of shovel/Excavator requirement should be in line with the last approved document and machinery details as reported in AR 2020-21.

iii)Para 4.4.3- Dumper Requirement (Pg-39)- The ‘Total Hours have not been calculated correctly. The capacity of the dumper to be selected as per the available equipment in the mine and the machinery details as given in AR 2020-21. The column ‘no of trips /hr. (vii)=(60/vi) and calculation to be done accordingly. The column ‘Total transportation per hour (TPH)= (B*vii)’ and calculation to be done accordingly. The Stand by dumper(xii) should be calculated mentioning the availability percentage. The nos. of dumper requirement should be in line with the last approved document and machinery details as reported in AR 2020-21.

iv)Para 4.4.4-Drill Machine Requirement(Pg-39)- Depth of hole and subgrade drilling break up to be given. The spacing and burden in the last approved document is given as 3 & 2.5 m respectively. This should be checked as per the field conditions and details to be given accordingly. The yield per hole to be calculated correctly (Spacing*Burden*Depth of hole* Bulk density). The yield per meter to be corrected accordingly. Annual target to be assumed mentioning the percentage of tonnage of material requiring drilling & blasting. As per the nature of deposit the last approved document mentions 50 %. The rate of drilling per hours to be corrected accordingly. The Stand by drill should be calculated mentioning the availability percentage. The nos. of drill requirement should be in line with the last approved document and machinery details as reported in AR 2020-21.

v) Para 4.4.5-Machine Deployment details (Pg-40)- The details of the machinery (nos. & capacity) given under Para 4.4.5.1; 4.4.5.2 & 4.4.5.3 is not matching with the details of machineries as reported in AR 2020-21. This is to be checked and corrected.

27. Para 4.6- Manpower deployment (Pg-40-41): -i) Para 4.6.1- Managerial (Pg-40)- Under managerial Manpower-First Class/second Class Mine Manager, Mining Engineer, Geologist, Mechanical/Electrical engineer etc. details

to be given in ‘Particular’ column. The number of persons in each shift and number of persons in General shift may be given accordingly.

ii) Para 4.6.2-Supervisory(Pg-40)- The details of Mining/Electrical/Mechanical foremen, Mining Mate, Surveyor etc. may be given in ‘Particular’ column. The number of persons in each shift and number of persons in General shift may be given accordingly

iii) Para 4.6.3-Skilled Workers/Operators (Pg-41)- The details of HEMM operator, Maintenance staff, office staff etc. may be given in ‘Particular’ column. The number of persons in each shift and number of persons in General shift may be given accordingly

iv) Para 4.6.4-Semi-Skilled workers/Operators (Pg-41)- The details of drivers, helpers may be given in ‘Particular’ column. The number of persons in each shift and number of persons in General shift may be given accordingly.

v) Para 4.6.4-Un-Skilled workers/Operators (Pg-41)- The details of unskilled workers may be given in ‘Particular’ column. The number of persons in each shift and number of persons in General shift may be given accordingly.

vi) Para 4.6.6- No of persons Engaged per day-(Pg-41)- Total no of persons each shift and General shift to be calculated adding details given in Para 4.6.1, 4.6.2, 4.6.3, 4.6.4, 4.6.5 & 4.6.6. No of shifts per day(A), Material to be handled per shift(C) to be given as per Para 4.4.1.

vii) Para 4.6.7- Supervision (Pg-41)- The Requirement/proposed strength to be reviewed w.r.t the in position/Existing strength as per Para 4.6.6 and shortage/Excess if any to be mentioned, and action to be taken if any shortage to be given in remarks column.

28. Para 4.7-Waste Management (Pg-42)- i) Para 4.7.1-Existing Dump (Pg-42)- ID-6 dump details to be also given. All corrections to be incorporated in the table as per above scrutiny comment no 24(ii).

ii) Para 4.7.2-New Dump(Para 42)- The total dump quantity, proposed area & Height for both AD-1 & Temporary Dump for the plan period 2021-22(From Aug-21 to March-22) to 2023-24, should be reviewed w.r.t the above scrutiny comments of Mining Chapter and corrections to be incorporated in related text, annexures and plates. As per the standard EC condition (35), the slope stability study needs to be carried out if the dump height exceeds 30m.

CHAPTER-5-SUSTAINABLE MINING (Pg. 44-48)

29. Para 5.1- Sustainable Mining and SDF Implementations in compliance of Rule 35 of MCDR 2017(Pg-44)- It should be specifically mentioned under this Para ‘Sustainable Mining and SDF implementations during the plan period 2021-22(Aug-21 to March-22) to 2023-24 will be carried out in accordance with Rule 35 of MCDR 2017’.

30. Para 5.2- CSR Initiatives (Pg-44-48)- i) Para 5.2.1- The year 2021-22 to be mentioned as 2021-22(From Aug-21 to March-22). Under cumulative work done for this year, it should be mentioned nil. The details under Para 5.2.1.13-Green energy consumption percentage have not been given correctly.

ii) Para 5.2.2, 5.2.3- Year 2022-23 & 2023-24 (Pg-45-48)- Under cumulative column year on year proposals to be added taking 2021-22(From Aug-21 to March-22) as the base year. The green Energy consumption % has not been proposed correctly. It is to be corrected for each year.

CHAPTER-6-PROGRESSIVE MINE CLOSURE PLAN (Pg. 49-54)

31. Para 6.1-Status of Land-(Pg. 49)- i) The Area under dumps (in hect.), Area under utility services is not as per land use reported in AR 2020-21. This is to be checked and corrected. Also, in the column ‘Other Areas Reclaimed and Rehabilitated’ it should be mentioned ‘Nil’ under both ‘stabilized waste dump rehabilitated’ and ‘virgin area under green belt’.

32. Para 6.2-Progressive Reclamation and Rehabilitation Plan-(Pg-49-54)-i) Para 6.2.2.1(Pg-49)-Preparation for Ground water Recharging- The Year 2019-20 & 2020-21 to be omitted from the table. For the year 2021-22 it should be mentioned from Aug-21 to March-22.

ii) Para 6.2.2.2-Protective Measures-(Pg-50)- The Year 2019-20 & 2020-21 to be omitted from the table. For the year 2021-22 it should be mentioned from Aug-21 to March-22. All the protective measures like Retaining Wall, Garland drain etc. for both active and inactive dumps inside the lease area for Block-1,2 & 3 should be reviewed w.r.t the R & R plan and the portion which has not been completed should be proposed in the Plan period. During inspection it was found that TW-8 & GD-8 Retaining wall and Garland drain for Temporary dump at Block-3 has not been constructed. The same should be proposed in this plan period as per the R&R plan. The Location co-ordinates for Retaining wall and Garland drain should also be given as per the format. ‘Fencing’ to be corrected

as ‘bund’ as per the format in the table. All the Protective measures should be clearly demarcated on the PMCP plan & also year-wise production and development plan

33. Para 6.2.3-Greenbelt development-(Pg-50-51)-i) Para 6.2.3.2-Year wise Proposal (Pg-50)- As per Standard Conditions of EC(41 & 42)- **‘7.5 m wide safety zone all along the mine lease boundary shall be developed within first 5 years starting from wind ward side of the active mining area’**. The density of the trees should be around 2500 saplings per Hectare. Also, adequate budget provision should be made for protection and care of trees. The Year-wise proposal for the plan period 2021-22(Aug-21 to March-22) to 2023-24 to be given accordingly and should be clearly demarcated on the Reclamation & Rehabilitation plan & also year-wise production and development plan
34. Para 6.2.6-Recreational Facility-(Pg-52)- i) Para 6.2.6.3-Yearwise proposal- Year 2019-20 & 2020-21 to be omitted.
35. Para 6.2.7-Dump area stabilization & Development-(Pg-52)- Year 2021-22 to be mentioned as ‘Aug-21 to March-22.- Details to be given under this para as per scrutiny comment no 32 for the previous para 6.2.2.2. The Dump id, no of terraces and average height of terraces details to be given.
36. Para 6.2.8.2-Year wise proposal- (Pg-53)- The year-wise proposals for protective measures and plantation like Retaining wall, garland drain, plantation etc. details should be given under ‘work proposal’ column and corresponding ‘Estimated expenditure’ should be given. The year-wise proposals for Environmental parameters monitoring along with the estimated cost to be also included.
37. Para 6.2.11- Land use of Lease area at the expiry of Lease period (Conceptual stage)- (Pg-54)-i) As already mentioned in Geology chapter since there is no major change in Geological parameters, the conceptual plan should be as per the last approved mining plan. Backfilling to be proposed in the mined-out pit for Block-2 & 3 at conceptual stage as per the R&R plan and last approved mining plan. Overall pit slope to be considered as 45 degrees.
- ii) The DHPC (Downhill Pipe Conveyor) and other infrastructures to be dismantled at the Conceptual stage and grassing/plantation to be proposed in the area in conceptual stage.
- iii)The conceptual plan should also include undertaking of re-grassing of the mining area and any other area which may have been disturbed due to mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. in accordance with the order of Hon’ble Supreme Court dated 08.01.2020.
- iv) The Land use under this Para at Conceptual stage to be corrected accordingly. Total area degraded including Mined out area, area under dumps, area under utility services and area undisturbed till conceptual stage should be calculated accordingly. The total mined out area reclaimed and rehabilitated should include the backfilled area in Block-2 & 3 in conceptual stage with grassing & plantation. The other areas reclaimed and rehabilitated area should include stabilized waste dump area with coir matting, plantation etc., Virgin area under Green belt(It is mentioned nil under this column which is not correct), Rehabilitated area under utility services after dismantling of infrastructure including DHPC with grassing, plantation etc. The complete land-use table in conceptual stage under table 6.2.11 should be corrected accordingly.
- vi) All the above corrections should be incorporated in Conceptual plan & Section.

CHAPTER-7-FINANCIAL ASSURANCE/PERFORMANCE SURETY (Pg. 55-56)

38. i)The table in this para for each year of the plan period 2021-22(from Aug-22 to March-22) to 2023-24 regarding ‘area put to use at start of year’, ‘additional requirement’ and ‘total’ to be recalculated after incorporating all corrections for General information (1.0), Geology & Exploration chapter (2.0), Mineral processing (3.0), Mining operations(4.0), Sustainable Mining(5.0), &Progressive Mine Closure PlanChapter(6.0).
- ii) The existing land use for the period 2021-22 should be as per the latest survey, and as updated in the surface plan. **The surface plan submitted,already shows DHPC area which is not correct. Only the existing features as per the latest survey to be shown on the surface plan. DHPC to be removed from the surface plan of Block 1 & 2, also portion of inactive dump ID-6 in Block-2 to be demarcated. The existing land use and the land use as reported on 1.04.2021 in AR 2020-21 should be in line. The DHPC land use area should be given in the additional area requirement year on year in the plan period as per the installation plan schedule and same should be demarcated accordingly in the year-wise production and development plan.**
- iii)The land use for all the years to be corrected incorporating all the above corrections. It is an auctioned lease hence Financial Assurance is ‘Not Applicable’. ‘90.69 ha’ and ‘31/03/2024’ given under the column of Financial Assurance should be deleted.

iv) Performance Security is applicable for the auctioned Lease. Under copy of existing performance security, a copy of Performance security as submitted to the State Govt. as per Mineral Auction Rule 2015 under Rule 12(2), Schedule-III format to be enclosed as Annexure and reference to be given.

CHAPTER-8-REVIEW OF PREVIOUS PROPOSALS (Pg. 58-65)

39. i) Para 8.1.1-Lease area utilization (Pg-58)- The Area at the beginning of the proposal period should be as per the FA table of the last approved plan. The "area proposed under activity" should be as per the last approved document. The Actual area utilized in the proposal period should be corrected as per the above scrutiny comment no 38. The actual area under "infrastructure" have not been mentioned correctly. The table under this Para to be corrected accordingly.

ii) Para 8.1.2-SDF and CSR Expenditures- Since the last approved document didn't have SDF proposals, accordingly it should be mentioned "Not applicable" under this para.

iii) Para 8.2.1-Exploration-(Pg-59)- In this table additional sub rows to be added Year-wise i.e., 2019-20, 2020-21 & 2021-22(till July-21(31.07.2021)) under each row and details to be reviewed w.r.t the corresponding year proposal. Also, corrections to be incorporated as per the Geology & Exploration Chapter (1.0) scrutiny comments.

iv) Para 8.2.2-Mine Development-(Pg-59)- In this table additional sub rows to be added Year-wise i.e., 2019-20, 2020-21 & 2021-22(till July-21(31.07.2021)) under each row and details to be reviewed w.r.t the corresponding year proposal. Also, corrections to be incorporated as per the Mining operations Chapter (4.0) scrutiny comments. The actual figures should be as reported in Annual return and Monthly Return of the corresponding year/period.

v) Para 8.2.6-Production of Minerals-(Pg-60)- In this table additional sub rows to be added Year-wise i.e., 2019-20, 2020-21 & 2021-22(till July-21(31.07.2021)) under each row and details to be reviewed w.r.t the corresponding year proposal. Also, corrections to be incorporated as per the Mining operations Chapter (4.0) scrutiny comments. The actual figures should be as reported in Annual return and Monthly Return of the corresponding year/period.

vi) Para 8.2.6-Production of Minerals-(Pg-60)- In this table additional sub rows to be added Year-wise i.e., 2019-20, 2020-21 & 2021-22(till July-21(31.07.2021)) under each row and details to be reviewed w.r.t the corresponding year proposal. Also, corrections to be incorporated as per the Mining operations Chapter (4.0) scrutiny comments. The actual figures should be as reported in Annual return and Monthly Return of the corresponding year/period.

Para 8.2.8-Environmental Compliances-(Pg-61-62)- The review of proposals year-wise i.e., 2019-20, 2020-21 & 2021-22(till July-21(31.07.2021)) to be done for Afforestation (Dumps/Benches/Backfilled Area etc.), Afforestation (Green belt) etc. The actual figures should be as reported in PMCP report and Annual Return for the corresponding year. The latest environmental monitoring report to be enclosed and reference to be given under this para.

Para 8.3-Socio Economic Review-(Pg-62-65)- Since there were no proposals in the last approved plan period under Socio-Economic, accordingly under para 8.3.1, 8.3.2, 8.3.3.1, 8.3.3.2, 8.3.3.3, 8.3.3.4 & 8.3.3.5 it should be mentioned "Not applicable".

CHAPTER-9-IMPACT ASSESSMENT (FOR FRESH GRANT) (Pg. 66-82)

40. This chapter is only applicable for fresh grant. Accordingly, the details under this chapter to be deleted and should be mentioned "Not applicable".

41. CONSENT LETTER/UNDERTAKING/CERTIFICATE FROM THE APPLICANT

i) Consent Letter/undertaking/certificate from the applicant: The first Para to be corrected as "The Modification to the approved mining plan in respect of Bhadra iron ore Mine (ML no 007) over an area of 130.53 ha in Ittanahalli Village, Po-_____, Sandur Taluk, Ballari District, Karnataka State under Rule 17(3) of MCR 2016 has been prepared by D.r. D.N Gulhane.".

ii) Certificate- The Para to be corrected as "The provisions of the Mineral Conservation and Development Rules 2017 have been observed in the preparation of the Modification to the approved Mining plan including.....". It is mentioned "Review and updation of Mining Plan" which should be corrected as "Modification to the approved Mining Plan".

42. PART-C, PLANS & SECTIONS:

a) **All plan submission should be output of GIS in SHP format.** All sections submission should be in dwg. Format (Auto-cad output). The numbering of plates has not been sequentially maintained as per the format. Numbering of plates to be specifically maintained as per the format. Any additional plates enclosed may be followed after plate no 11 with corresponding details

- b) All the plans & sections to be prepared in UTM grid and Northing & Easting gridlines should be clearly demarcated throughout the plan. The scale of the plan to be mentioned. The Mine Lease boundary along with 7.5 m safety zone should be prominently demarcated in all related plans & section. The other safety zone for Nala/Road/Villages/Electric power line etc. if any inside the ML area as per the statutory norms should also be demarcated along with the details of the safety zone, in the index.
- c) It should be ensured that all attached plans & sections are prepared as per the content & scale specifications, of Rule 31 (General requirement about Plan & Sections) of MCDR 2017 & IBM Circular no. 1/2021. All plans and sections should be signed with date by certified surveyor, Qualified Person, Geologist, Mining Engineer as per provisions of MCDR 2017.
- d) Key Plan (Plate No. 1A): All requirements as per rule 32(5) of MCDR 2017 should be incorporated and the plate should be corrected accordingly. The plan should show distinctly Natural drainage system such as rivers, nullahs, stream etc., roadways, boundary of all villages and towns with their population, places of historical & archaeological importance, forest with tree density, predominant wind direction etc. as per the provision of aforementioned rule. The index to be updated accordingly.
- e) Surface Plan (Plate No-3A & 3B): The downhill pipe conveyor area should be removed as mentioned above in scrutiny comment no 38. The other features like working, dumps, infrastructure, stockyard etc. to be updated as per the latest survey. The plate should incorporate all the details as per Rule 32(1)(a) of MCDR 2017 with index. The other corrections to be incorporated as per the scrutiny comments of different chapters. The Plan should be submitted showing different colour codes for i) Active pits & Excavation area ii) Active dumps iii) Stabilized & Rehabilitated dump area iv) Green belt v) Mineral stacks vi) Utilities such as plant, buildings etc. vii) Lease boundary along with other details
- f) Geological Plan (Plate no. 4A & 4B): 1) The plates should be checked and all corrections to be specifically incorporated as per the aforementioned scrutiny comments of Geology and Exploration chapter (2.0). The plate should incorporate all the details as per Rule 32(1)(b) of MCDR 2017 like all lithological units in the area, already drilled boreholes, proposed boreholes for the plan period, structural details like dip, fold, fault etc. if any, contour interval not more than 10m, the area covered under different explorations limits G1, G2, G3 to be clearly demarcated and area to be mentioned in plate. The section lines at regular interval from one boundary of the lease to the other based on which Geological sections are prepared. The Plan should be submitted showing different colour codes for i) Lithological/Geological occurrence ii) Area under G1, G2, G3 iii) Active pits & Excavation area iv) Dump area v) Mineral stacks vi) Lease boundary along with other details
- 2) Geological Section (Plate No. 5A & 5B)-The plates should be checked and all corrections to be specifically incorporated as per the aforementioned scrutiny comments of Geology and Exploration chapter (2.0). The section should be submitted with different colour code depicting all the features as shown in surface geological plan.
- g) Production & Development Plan (Plate No. 6C-6E): 1) These plates should be corrected as per the aforementioned scrutiny comments for Geology & Exploration (2.0), Mineral processing (3.0), Mining operations (4.0), Progressive Mine Closure plan (6.0) & Financial Assurance/Performance security (7.0) chapters. The Year-wise production and development plan should be as per the corrected Year-wise Production and development sheet enclosed as Annexure-XXII.
- 2) The Plan should be submitted showing different colour coding for: i) Active pit and Excavation area, ii) Year-wise excavation proposal for plan period iii) Active dump and year-wise dump proposal for plan period iv) Lease boundary with reference to mining operations (Chapter 4.0) along with other details.
- 3) The lithology as given in the geological plan should also be given in all the production & Development plans.
- 4) The environmental protective work proposed year wise should also be demarcated year-wise along with index as per the PMCP chapter (6.0).
- h) Production & Development section (Plate No 7A & 7B)- Individual Year wise section should be prepared for both block 1&2, 3 and furnished separately. The sections should be submitted showing year-wise excavation and dumping proposals with different colour coding depicting all the features as shown in the year-wise production and development plan.
- i) Conceptual Plan (Plate No 8)-All the corrections to be incorporated as per the aforementioned scrutiny comment no 37. The plan should depict the status of lease area as envisaged at the end of life of mine showing all the details. Status of land use shall be depicted by different colour coding.

- ii) Conceptual Sections (Plate no 9A & 9B) may be corrected and furnished separately accordingly.
 - j) Environment Plan (Plate No 10): The corrections to be incorporated as mentioned above in scrutiny comments of different chapters. All features to be included as mentioned in Rule 32(5) (b) of MCDR 2017. All the Air, Noise, Water monitoring stations should be demarcated clearly and indexed.
 - k) Progressive mine closure plan (Plate no 12): a) The heading of the plate to be corrected as per the format. All corrections to be incorporated as per the PMCP Chapter (6.0) and related scrutiny comments of other chapters. The plan should be submitted showing different color coding for i) Year wise dump area to be stabilized and dump area to be rehabilitated for the plan period ii) Year wise green belt/afforestation area proposed for the plan period iii) Any other Reclamation & Rehabilitation measures proposed iv) Lease boundary with reference to PMCP Chapter(6.0) & other details.
b) Progressive Mine Closure Sections- The same has not been prepared. Year wise progressive mine closure sections showing all the year wise reclamation, rehabilitation proposals as depicted in the progressive mine closure plan to be prepared and submitted.
 - l) Financial Area Assurance Plan (Plate no. 11): This plate should be corrected in accordance with the comments for Financial Assurance/Performance Surety Chapter (7.0) (Scrutiny comment no 38). The Financial assurance table given in plate should also be corrected accordingly and all the area shown in the table should be clearly demarcated on plate and indexed.
 - m) All the Plans & Sections should be placed serially in a proper bound folder with heading ‘‘Part-C’’ as per the format. The list of plates should be checked and mentioned accordingly in the text and the cover page of the folder.
 - n) The KML file of all the plans to be also submitted in soft copy.
43. **PART- B, ANNEXURE:**
- a) The numbering of annexures has not been sequentially maintained as per the format. Numbering of annexures to be specifically maintained as per the format. Any additional annexures enclosed may be followed after annexure no 18 with corresponding details. All the annexures as mentioned in above scrutiny comments of different chapters to be enclosed. Also, corrections in the annexures, as mentioned above in scrutiny comments of different chapters to be incorporated and corrected annexure to be enclosed.
 - b) The CEC approval letter for permissible annual production should be enclosed.
 - c) The copy of Consent to establish and consent to operate to be enclosed. The valid Consent to operate for total permissible production quantity to be enclosed.
 - d) The latest copy of the resolution of Board of Directors nominating the owner should be enclosed as per above scrutiny comment no 9. The updated list of members of Board of Directors to be enclosed.
 - e) The Qualification certificate of QP to be enclosed as mentioned above in scrutiny comment no 10.
 - f) The 106(2)(b) permission from DGMS for working with Deep hole drilling and blasting with use of heavy machineries under MMR 1961 as mentioned above in scrutiny comment no 25 may be enclosed.
 - g) Annexure-XVIII, XIX, XX- The corrections to be incorporated in these annexures as per above scrutiny comment of Geology & Exploration (2.0) chapter.
 - h) Annexure- XIII, XIV, XV, XVI, XVII- The corrections to be incorporated in these annexures as per above scrutiny comment of Geology & Exploration (2.0) chapter.
 - i) Annexure-XXII-Calculations of Production & Development-The corrections to be incorporated in this annexure as per above scrutiny comment of Geology & Exploration (2.0) & Mining Operations (4.0) chapters.
 - j) Annexure-XXI-Flowsheet of Mobile Crushing & Screening Plant-The corrections to be incorporated in this annexure as per above scrutiny comment no 23 of Mineral Processing (3.0) chapter.
 - k) The feasibility report has not been enclosed. The same should be prepared in accordance with the Minerals (Evidence of Minerals Contents) Rules 2015 and enclosed. It should be signed by QP.
 - l) Copy of Performance surety to be enclosed as mentioned above in scrutiny comment no 38(iv).
 - m) All the annexure to be properly numbered/paged and relevant annexure to be signed by QP. The Page no range should be accordingly given in list of Annexures. All the annexures should be legible.
