

SCRUTINY COMMENTS ON THE REVIEW AND UPDATION OF MINING PLAN IN RESPECT OF FERROZABAD LIMESTONE MINE, OVER AN EXTENT OF 765.22 HA, SUBMITTED BY M/S.GULBARGA CEMENT LIMITED, SITUATED IN FERROZABAD, KIRANI AND SOMNATHAHALLIVILLAGE,GULBARGATALUK, KALABURAGI DISTRICT OF KARNATAKA STATE

The final submission of Text, Annexures and Plates both in soft and hard copies are to be done specifically in accordance with IBM Circular no. 1/2021 and FAQ on the Mining plan template published at IBM website following both in toto. The final copies submitted should be digitally signed by the Qualified person and the Nominated owner.

1. During scrutiny of the submitted document and this office records, it is observed that the transfer deed of Mining Lease for an extent of 989.89 ha from "M/s. Chambal Fertilizers & Chemicals Limited" to "M/s Gulbarga Cement Limited" is executed on 8th Aug,2008. The Department of Mines & Geology, Government of Karnataka vide order no DMG/MLS/ML No. 2558/2015-16 dated 30.11.2015 further deleted 224.67 ha out of 989.89 ha of the sanctioned Mining Lease area. The lease deed execution on the revised sanctioned area of 765.22 ha along with the State Govt. approved DGPS Lease sketch/Plan of the revised sanctioned area with boundary pillar co-ordinates have not been submitted. The same needs to be submitted with the document.

2. **Refer Minerals (Other than Atomic and Hydro Carbons Energy Mineral) Concession (Fourth Amendment) Rules, 2021 published vide Ministry of Mines, Gazette Notification G.S.R. 775(E) dated 2nd November 2021. In accordance with Sub-Rule (2) of Rule 17 of MCR, 2021 lessee has to submit the Draft RUMP 180 days before expiry of the plan period. The document has not been submitted in stipulated time. Hence, lessee needs to pay Rs.2,000/- per day penalty for late submission.**

-In the instant case, the complete soft copy along with the processing fee is submitted to this office online on 08/02/2022 and it is 98 days late from the date of said Notification. You are therefore advised to pay penalty @ Rs2,000/- per day X 98 days i.e., Rs 1,96,000/- (Rupees One lakh, Ninety-Six thousand Only). The penalty may be paid by Demand Draft drawn in favour of Drawing & Disbursing Officer, Indian Bureau of Mines, Bangalore.

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3. Part-B with heading "Annexures" should be added and the specific annexure details and page no to be provided. Part-C with heading "Plans & Sections" to be also added and the specific plate no details to be provided. The Excel format of FAQ may be referred.

CHAPTER-1-GENERAL INFORMATION(Pg. 1-5)

4. i) Para-1.1- Lease details-(Pg-1)- Under the row "Name of associated minerals"- "Nil" may be mentioned instead of leaving it blank.

ii) Para 1.1.1-Initial/ Subsequent lease grant details-(Pg-1)- The details have not been provided correctly. All the lease deeds from initial grant to be enclosed in annexure and details under the relevant column to be given accordingly. The transfer deed of Mining Lease from "M/s Chambal Fertilizers & Chemicals Limited" to "M/s. Gulbarga Cement Limited" have not been enclosed. The same to be enclosed in Annexure and reference to be given under the Para. The State Govt. notification of the revised sanctioned area of 765.22 ha along with the executed lease deed to be also enclosed as annexure and reference to be given under the para.

iii) Para 1.2: Land ownership details-(Pg-2)- All the details related to Khasra no, to be mentioned under the relevant column w.r.t the State Govt. Approved lease sketch.

iv) Para 1.3.1- Approval of earlier mining plan & its subsequent review (Pg-2)- The DMG letter number has been mentioned under the para which is not relevant. All IBM approval letters for Mining plan to be enclosed as Annexure and reference to be given under the Para. The details, under "from" and "to" column 'have not been provided. The same is to be provided as per the approved document.

v) Para 1.3.2- Partial Surrendered Area (Pg-2)- As mentioned above in scrutiny comment no. 1 the mining lease area has been reduced from 989.89 ha to 765.22 ha by the State Govt. All the details related to State Govt. order date, Supplementary surrender order Letter number, Supplementary Lease deed date, Final retained area over which the current mining plan is prepared etc. details to be given as per the format and relevant documents to be added in enclosure and reference to be given under the Para.

vi) Para 1.3.3-Transfer of lease area (Pg-2)- The Transfer lease deed to be enclosed as annexure and reference to be given under the para. The details regarding transfer of lease deed number, Name of Transferor to be given correctly.

vii) Para 1.3.4.1-Environmental Clearance-(Pg-3)- The reference of the annexure to be given under the para. The validity details to be also given as per the format

viii) Para 1.3.4.2-SPCB Approvals-(Pg-3)- The Consent order annexure reference to be also given.

ix) Para 1.3.4.4-Land Acquisition details-(Pg-3)- The land acquisition details to be provided as per the format. The area to be mentioned in hectares.

x) Para 1.3.5- Mine Location Details- (Pg-3)- The Key plan have not been prepared, the same is to be prepared and plate reference to be given under the para.

xi) Para 1.3.5.1- Location of Boundary Pillars-(Pg-3)- There is no State Govt. approved DGPS lease sketch/plan with boundary pillar co-ordinates submitted with the document as mentioned above in scrutiny comment no 1. The same should be submitted with list of plates and Boundary Pillar co-ordinates to be provided in the Para accordingly.

xii) Para-1.3.6- Owner/Nominated Owner Details-(Pg.5)- The Board Resolution nominating the Owner attached with the document (Annex-4) is of 23rd March 2015. 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 Board of Directors list attached is as on 1.12.2016. The updated list of members of Board of Directors should be enclosed and annexure reference to be given.

xiii) Para-1.3.7-Qualified Persons Details-(Pg-5)- The Experience years of QP have not been mentioned correctly. It should be mentioned as per the enclosed experience certificate. The annexure reference of Qualification & Experience certificate of QP, in accordance with Rule 15 of M(OAHCEM) concession Rule 2016 should also be mentioned. The PAN of QP to be also enclosed as annexure and reference to be given under this Para.

CHAPTER-2-GEOLOGY AND EXPLORATION (Pg. 7-47).

5. The surface plan has not been prepared properly. It is to be updated as per the latest survey and all the features to be incorporated in surface plan as per Rule 32(1)(a) of MCDR 2017. It is found that Electric Power line, Public Road, Places of worship etc. are present within the lease area but the features along with the safety zone as per the statutory norms have not been demarcated on the surface plan. The 7.5 m safety Zone all along the Mine Lease boundary should also be prominently demarcated on surface plan and all other related plates. The other safety zone for Nala/Road/Villages/Electric power line etc. inside the ML area as per the statutory norms should also be demarcated prominently along with the details of all the safety zone, in the index. All the boundary pillars position and co-ordinates should be as per the DGPS lease sketch duly certified by the State Government. The Boundary Pillar co-ordinated as approved by State Govt. to be also provided in surface plan in tabular format. It is also observed that contours and other features are also shown beyond the lease boundary which is not required and may be deleted. The surface plan to be corrected accordingly and replicated in all other plates.
6. i) **It was observed during examination of the Geology Chapter that the exploration for the entire potentially mineralized area have not been completed at detailed G-1 level, both laterally and vertically in accordance with Rule 12(4) of MCDR 2017.** At all the sections A-A', B-B', C-C', D-D', E-E', F-F', G-G', H-H', I-I', J-J', K-K', L-L', M-M', O-O', P-P', Q-Q', R-R', S-S', T-T', U-U', V-V', W-W', X-X', Y-Y' & Z-Z' all the boreholes have been stopped in the mineralized zone itself (Shaly/Marginal/Limestone, BH-37 closed at 46 % CaO, BH-54 closed at 48 % CaO, BH-65 closed at 45 % CaO, BH-72 closed at 44 % CaO, BH-73 closed at 41 % CaO and so on) which clearly indicates the vertical continuity of the deposit have not been explored. Further there are also number of sections where the boreholes have not been drilled within 200m or closer in accordance with Minerals (Evidence of Mineral Contents) Rules, 2015. As per the last approved document 165.18 ha G-3 area and 272.35 ha G-2 area are to be upgraded to G-1 level of Exploration.
ii) Accordingly, no exploration proposal in the current submitted document is not acceptable. **Since exploration has not been done over the entire lease area in accordance with Rule 12(4) of MCDR 2017 to bring the entire mineralized area to detailed G-1 level of exploration, the same needs to be done in the current plan period.** Further boreholes have not been drilled to establish the ore body at depth w.r.t the threshold value notification of IBM i.e., CaO-34 % (Min) & MgO-5%(Max) for Limestone since maximum boreholes have been stopped at the ore zone itself. As per the IBM notification no. C-284/3/CMG/2017 dated 25th April, 2018 for threshold value **"All resources shall be assessed up to the threshold value and the resources between the threshold value and the cut-off grade shall be reported separately.**
iii) **The Geological sections have not been prepared as per the guidelines of the Minerals (Evidence of Mineral Contents) Rules 2015.** The Geological section should be specifically prepared w.r.t to the borehole logs for the drilled exploratory boreholes. For G-1 stages of exploration the depth continuity of mineralization may be considered limited to the depth up to which direct evidence of mineralization is established and lateral extension to be considered for Resource assessment in any case shall not be more than 50 % of the grid spacing of the probe points in accordance with Minerals (Evidence of Mineral Contents) Rules, 2015. The sections should distinctly show the ML Boundary, 7.5 m safety zone from ML Boundary, Safety Barrier for Nala/Road/Village/Power line/Railway line, UPL (Ultimate pit limit), current pit profile (as per the latest survey) Boreholes as per lithologs etc.
iv) The complete lithologs of 146 (90 core+ 56 DTH/RC) numbers of previous drilled boreholes have not been provided in Annexure-10. The details of all the 146 boreholes to be enclosed as annexure in Form-J format.
v) **The Lessee is required to submit the State Government and the Indian Bureau of Mines, a Geological Study Report prepared in the manner specified in the Minerals (Evidence of Mineral Contents) Rules, 2015, within three months after the completion of the exploration work as per Rule 12(4B) of Mineral Conservation and Development (Amendment) Rules, 2021, accordingly all the pending exploration required to be completed in the plan period and all the above-mentioned errors in the Geology are to be rectified. The area under different exploration limits to be reviewed both laterally and vertically and the exploratory drilling required to convert the entire mineralized area to G-1 to be worked out and proposed in the balance plan period.**
7. Para 2.1.2-Details of Physiographic features-(Pg-8)- i) Certain details under the para have not been provided correctly. There are Power transmission line, public road present inside the lease area. The corrections to be incorporated in the table accordingly. Also, all the safety zones within the lease to be prominently demarcated as per statutory norms as mentioned above in scrutiny comment no 5. Also, the details of River/Nallah (Bhima River) and other features within 5 km to be also given as per the format.
ii) The details of the "nearby village", "Distance of SH/NH from Lease" with distance from the lease boundary in Kms to be given as per the format.
8. i) Para-2.1.4.1-(Pg-8)- Local Geological set up- The Sl. No & heading of the para to be corrected. Excel sheet format may be referred. The water table mentioned under the Para should be given as per the Environmental Clearance (EC).
ii) Para 2.1.4.3-Lithology(Pg-8)&Para 2.1.4.4- Mode of Occurrence (Pg-9)- It is mentioned "*Gudur Massive/Sedam flaggy/siliceous/shaly limestone*" which is irrelevant. All the limestone having CaO-34 % (Min) and MgO-5%(Max) are to be considered as "Limestone" in accordance with the threshold value notification. The Mode of occurrence whether Igneous, Sedimentary or Metamorphic to be given, along with control of mineralization whether stratigraphically, structurally, Chemically, geologically to be also detailed under the Para 2.1.4.4.
iii) Para- 2.1.4.7- Extent of Mineralization-(Pg-9)- It should be mentioned in the text **"All the materials analysing equal or more than CaO-34 %(Min) and MgO-5%(Max) above have been considered as Limestone"** as per IBM notification no. C-284/3/CMG/2017 dated 25th April, 2018 for threshold value of Limestone. The physical and chemical characteristics details to be also given specifically under the para. As already mentioned above in Scrutiny comment no 6, the vertical continuity of the limestone has not been established accordingly it is to be mentioned **"the extent of limestone within the ML area is established up to average depth of ___ mRL as per the current exploration data"**.

9. i) Para-2.2.1-Summary of Previous Exploration-(Pg-9)- Exploratory Drilling has commenced in the year 2021-22(20.9.2021) as per Form-I submitted to this office, the details of the Exploration agency to be given accordingly.
- ii) Para-2.2.1.2-Geological Mapping-(Pg-9)-Each year detail to be given for the ongoing plan period 2017-18 to 2021-22.The scale may be corrected as "1:2000" as per the provisions of Rule 31 of MCDR 2017.
- iii) Para-2.2.1.5- Pitting- (Pg-10)- There are no exploratory trial pits carried out in the ongoing plan period. Accordingly,under each year 2017-18 to 2021-22, it may be mentioned "Nil".
- iv) Para-2.2.1.7-Exploratory Drilling (Core/Non-core) -(Pg-11)-a Each year details from 2017-18 to 2021-22 to be given as per the format. The Year in which no drilling has been carried out, it is to be specifically mentioned "NIL". The details of the boreholes drilled during the year 2021-22(till Jan-22) to be given and the log sheet along with the chemical analysis of the boreholes as per Form-J format of MCDR 2017 to be enclosed as annexure and reference to be given under the Para.
- b) Also, the log sheet of boreholes in CSV Excel format to be enclosed as per the mine plant format. The annexure reference of same to be provided.
- v) Para-2.2.1.9-Sampling-(Pg-11)- The sampling details of all the exploratory boreholes in the ongoing plan period as per the format like type of sample (Core/Rock chip), No of samples, Location of sample in Latitude and Longitude (Borehole extent location) to be given in the table.The excel sheet format of FAQ may be referred. The reference of Form -J to be given under this Para. The corrections to be incorporated in the table accordingly.
- vi) Para-2.2.1.10-Chemical Analysis-(Pg-11)- The sample id's to be given under the Para as per the Chemical analysis report. The chemical and Mineralogical analysis report to be enclosed and reference to be given under para. The NABL accreditation certificate of the lab to be also enclosed and reference to be given under this Para
- vii) Para- 2.2.1.13- Bulk density-(Pg-12)-The Bulk density test report for limestone & OB from NABL accredited lab to be enclosed in Annexure and details to be given accordingly for limestone & OB as per the format. The NABL certification of the laboratory along with the scope of test works for the lab, which includes Bulk density testing has to be enclosed as Annexure and reference to be given under this Para.
- viii) Para-2.2.1.14- Area Covered under Exploration-(Pg-12)- "Nil" is mentioned under the para which is not correct. The last approved document mentions G-1-327.59 ha, G-2-272.45 ha, G-3-165.18 ha. (Pg-36). The details under the table of para to be given accordingly. The corrections to be incorporated under this Para and related annexures and plates.
10. i) Para-2.2.2.1-Geological Mapping- (Pg-13)-The financial year may be mentioned under the column "Year". The Scale may be corrected as "1:2000".
- ii) Para-2.2.2.7.1-Core/Non-core drilling-(Pg-13)-The Litho-log and chemical analysis details of all the previous drilled 146boreholes as per Form-J format of MCDR 2017 may be enclosed and reference to be given under the para. The borehole database enclosed as Annexure-10 to be updated/corrected accordingly.Also, under the column "Attach log sheet of each borehole in CSV/Excel Format, the CSVExcel sheet of all the previous drilled boreholes to be prepared and enclosed as Annexure and reference to be given under the column.
- iii) Para-2.2.2.9- Sampling-(Pg-14)-The sampling details of all the previous drilled exploratory boreholes as per the format like type of sample (Core/Rock chip), No of samples, Location of sample in Latitude and Longitude (Borehole extent location in UTM co-ordinates) to be given in the table. The type of samples for DTH drilling may be mentioned as "Rock Chip" sample. The excel sheet format of FAQ may be referred. The reference of Form -J to be given under this Para. The corrections to be incorporated in the table accordingly.
- iv) Para-2.2.2.10-Chemical Analysis-(Pg-14)-Both CaO & MgO radical analysis details to be given. The sample id's to be given correctly under the Para as per the Chemical analysis report.The chemical and Mineralogical analysis report to be enclosed with all additions/corrections as mentioned above, as per the format and reference to be given under para. The NABL accreditation certificate of the lab to be also enclosed and reference to be given under this Para.
- v) Para-2.2.2.13- Bulk Density-(Pg-14)- The corrections to be incorporated as per the above scrutiny comment no 9(vii) for Para 2.2.1.13.
- vi) Para-2.2.2.14-Area Covered under Exploration(Pg-14-15)-a The entire details under 2nd table of the para are given incorrect. In this table the area upgraded under different exploration limits in percentage in current plan period to be reviewed w.r.t the last plan period. Year 1,2,3,4 & 5 to be corrected as 2017-18, 2018-19, 2019-20, 2020-21 & 2021-22(till Jan-22). The details to be given accordingly as per the format. **Further area to be upgraded from G-3 & G-2 to G-1 at depth, to be also specifically calculated and same should be mentioned under Remaining area in G-2 & G-3 along with the calculated average depth. The exploration area limits need to be also reviewed thoroughly as errors are found in the Geology as mentioned above in scrutiny comment no 6 and the balance area under G-2 & G-3 to be calculated in accordance with Minerals (Evidence of Mineral Contents) Rules, 2015.**
- b) Under heading "Potentially Mineralized area(Ha)"- The potentially mineralized area is mentioned as 600.04 ha which is not correct. As per the last approved document it arrives to 765.22 ha(327.59(G-1)+ 272.45(G-2)+165.18(G-3) based on the current exploration data.
11. Para-2.2.3-Ore Geometry Grade (Pg-15)- Both Cao & MgO Min, Max and average grade details to be given as per the format.". The other technical details may also be checked w.r.t the above scrutiny comments and corrections if any to be incorporated.
12. i) Para-2.2.4.2- Resource calculation- (Pg-15-22)-a**The calculation has not been carried out as per the format in the table.**The Resource calculation is to be done in the table of this para, specifically as per format. A single table with all the details (Cross section, sectional area, influence, depth, volume, Bulk density, resource qty, Level of Exploration, Grade %, etc.) as per the format to be provided.

The Level of Exploration(G-1/G-2/G-3) along with other details to be added section wise and section wise calculation to be done in the table as per the format.**The Resource calculation is to be done as on 1.04.2021.** All the corrections to be incorporated as mentioned above in scrutiny comment no 6.

b) The Resource calculation is to be done for all Limestone with threshold value of 34 % CaO(Min) & 5 % MgO (Max) in accordance with IBM threshold value notification 2018 and in accordance with Minerals (Evidence of Mineral Contents) Rules, 2015

c)No major exploration is carried out after approval of the last document. Accordingly, the total Resource figure as reported in AR 2020-21 & the last approved document should be in line.The complete table under this Para along with calculations to be corrected accordingly.

ii)Para-2.2.4.3- Mineral Resource estimate for conversion to Mineral Reserve- (Pg-23)-a) It is to be specifically mentioned **"The Mineral reserve are estimated from the geological resources by deducting the blocked resources"**. Further it is mentioned under the Para, "ground water intersection is expected" which is not permissible as per the EC conditions. **As per the current EC condition, ultimate working depth of mine will be till 40 m bgl only. Accordingly, the current ultimate pit depth till conceptual stage is to be considered only till 40m bgl. Below 40 m bgl the resources will be under "Blocked Resource" category as per the existing EC condition.**

b) Also, the Resources under different safety zone like Electric line, public road etc. are to be considered under the blocked Resource.

iii)Para 2.2.4.4- Threshold value & cut off parameters-(Pg-23)- a) Under this Para it is to be specifically mentioned **"Threshold value for Limestone is 34 % CaO (Min)& 5 % MgO (Max) as per IBM notification no. C-284/3/CMG/2017 dated 25th April, 2018.**

b) **The specific Cut-off grade of the limestone (CaO-___% & MgO-___%) irrespective of whether it is Flaggy/Limestone/Marginal/Shaly limestone for the mine is to be arrived based on the feasibility report and this should be supported with detailed calculation in the feasibility report as per the Minerals (Evidence of Minerals Contents) Rules 2015.** The reference of the feasibility report to be mentioned under the para. The para and related annexures to be corrected accordingly.

c)The feasibility study report enclosed as Annexure-13 mentions Reserve/Resource estimated considering CaO>35 % & MgO<4 % for limestone which is not as per the IBM threshold value guidelines. It is to be remembered that all limestone having CaO-34%(Min) & MgO-5%(max) is to be considered for Reserve/resource estimation irrespective of whether it is Flaggy/Marginal/Shaly or siliceous. There will be only one cut-off grade for the limestone of the mine which will be arrived through detailed calculation in the feasibility study. The same is to be specifically mentioned under the para.

iv)Para 2.2.4.5- Mining Factor or assumptions-(Pg-23)- "No irrelevant write up are required under the para". The recovery factor considered for resource calculation is to be written specifically as taken in calculation under Para 2.2.4.2.The para to be corrected accordingly. The supporting **"Recovery study report"** may be enclosed.

v)Para 2.2.4.6-Metallurgical factor or assumptions-(Pg-23)- There are no metallurgical factors assumed accordingly it should be specifically mentioned **"NIL"**.

vi)Para 2.2.4.7- Cost & Revenue factors (Pg-23)- All the corrections to be incorporated in the feasibility study as per the above scrutiny comment no 12(iii). Detailed costing is to be done w.r.t the cost of production, average sale price, cash inflow & outflow to be done. Cost of production should also include Royalty & taxes (DMF, NMET) etc.The feasibility report should be signed by QP. The corrections to be incorporated under this Para and feasibility study report(Annexure-13) accordingly. The Cost of production/ton arrived and the sale price/ton considered in the feasibility study to be specifically mentioned under the Para.

vii)Para 2.2.4.9-Other modifying factors (Pg-23)- "No other modifying factors have been considered, accordingly **"NIL"** should be mentioned specifically. The other write up what is given in para is irrelevant and to be deleted.

viii)Para 2.2.4.10- Classification (Pg-23-24)- Specific information regarding estimation done for Reserve/Resource under different UNFC codew.r.t the geologic, feasibility and economic viability axis as per UNFC & the Minerals (Evidence of Minerals Contents) Rules 2015 to be mentioned under para.

ix)Para 2.2.4.11- Calculation of blocked resources (Pg-25-33)- **The calculation has not been carried out as per the format in the table under this para.** The blocked Resource calculation for limestone is to be done in the table of this para, as per format. The UNFC code along with other details to be added section wise and section wise calculation to be done in single table as per the format. The reserve blocked below the ultimate pit limit, different statutory safety zones or due to economic constraints assigning the relevant UNFC code to be calculated and given under the para. MEMC Rule 2015 may be referred. There is no point calculating Flaggy/Marginal etc. limestone separately. The calculation of blocked resource under this para to be corrected accordingly... Also, corrections to be incorporated as mentioned in above scrutiny comments of Geology chapter.

x)Para 2.2.4.12-Calculation of Reserves(Pg-33-44)- The Reserve calculation have not been carried out as per the format. The section wise calculation with relevant UNFC code along with other details to be carried out and to be mentioned under the table.**The Reserves/resource estimation to be done as on 1.04.2021.** The excel format in FAQ may be referred and calculation to be done in single table with relevant UNFC code as per format.Also as already mentioned in above scrutiny comment, the Reserve/Resource estimation to be as per the IBM threshold value.No major exploration is carried out after approval of the last document, accordingly the total Reserve figure as reported in AR 2020-21 & the last approved document should be in line after depletion of the production for subsequent month/years. Under the grade column **average grade** is to be specifically given. The complete table under this Para along with calculations to be corrected accordingly.

xi)Para 2.2.4.13-(Pg-45)- All the corrections to be incorporated under tables in this Para as mentioned above. The Quantity under different UNFC code is given in million tonnes which is not acceptable. The Reserve & Resource estimation to be given as on 1.04.2021 as per the format.The Quantity under different UNFC code to be given in **"Tonnes"** only as per the format. The **Average grade** to be specifically mentioned under "non-Forest" column for different UNFC codes. **The total Reserve & Resource figures under different UNFC code in this para should exactly match with the total resource figure and blocked Resource figure as calculated and arrived in para 2.2.4.2(Resource Calculation) & 2.2.4.11(Calculation of blocked Resources).** The corrections to be incorporated in related paras of text, annexures, and plates accordingly.

13. i) Para 2.2.5.1-Geological Mapping-(Pg-45)- The Geological mapping proposal in the scale 1:2000 to be given year-wise for the upcoming plan period i.e., 2022-23, 2023-24, 2024-25, 2025-26 & 2026-27.
- ii) Para-2.2.5.3- Pitting- (Pg-46)- Irrelevant details are given under the Para. The same may be deleted and "Nil" may be mentioned.
- iii) Para 2.2.5.5.1- Core/Non-core drilling-(Pg-46-47)-aThe Para number to be corrected. **'NIL" exploratory proposals are not acceptable due to reasons mentioned above in scrutiny comment no 6.**
- b) The remaining area under G-2/G-3 as per above scrutiny comment no 10 (vi) for Para 2.2.2.14 needs to be calculated thoroughly. Also, it should be reviewed w.r.t the above scrutiny comment. no 6 where there are number of sections where the exploration has not been completed laterally and vertically in accordance with Rule 12(4) of MCDR 2017. The complete exploratory proposals to be worked out thoroughly to upgrade the entire potentially mineralized area to G-1 both at lateral and vertical extent in accordance with Minerals (Evidence of Mineral Contents) Rules, 2015 & IBM notification no. C-284/3/CMG/2017 dated 25th April, 2018. The depth of exploration should be up to the discontinuance of the ore body and no borehole should be stopped at mineralized zone. The borehole assessment may be done accordingly and the borehole proposals for the upcoming plan period (2022-23 to 2026-27) to be given accordingly.
- c) Core Exploratory drilling to be proposed in mineralized zone for maximum recovery and proper borehole logging and chemical analysis in accordance with Minerals (evidence of Mineral contents) Rules 2015.
- d) Individual proposed Boreholes details to be also given as per the below mention table.

YEAR -							
Sl. No	BH ID	Collar level (m)	Angle	Co-ordinates in UTM		Depth (m)	Section
				Easting	Northing		
				TOTAL			

- e) Tables under Para 2.2.5.5.1 should be corrected accordingly. The corrections to be also incorporated in all related plates and annexures.
- iv) Para 2.2.5.7-Sampling-(Pg.47)- The type of sample, no of sample, area covered details year wise etc., for each year as per the proposed exploratory boreholes in accordance with Minerals (evidence of Mineral contents) Rules 2015 to be calculated and given here after incorporating corrections as mentioned above. The sample location extent may also be given under Latitude and Longitude column of the table.
- v) The Sl. No under heading Petrology & Mineralogical studies to be corrected as 2.2.5.8.
- CHAPTER-3-MINERAL BENEFICIATION/PROCESSING (Pg. 48-51)**
14. i) Para 3.2-Complete Chemical analysis of ROM ore-(Pg-48)- The ROM chemical analysis report from NABL accredited lab to be enclosed as annexure and details under the Para to be given accordingly as per the analysis report. The annexure reference of Chemical analysis Report to be mentioned. Also, the NABL certification of the lab to be enclosed as annexure.
15. i) Para 3.3-Crushing Section-(Pg-48)- Irrelevant information is given under the Para. Jaw crusher doesn't come under tertiary crushing and cone crusher requirement for tertiary crushing may be checked since plant requirement size is +/- 80 mm as per the last approved document (Pg-59). Also, no feed size and product size are mentioned. Para 3.3.1, 3.3.2 & 3.3.3 needs to be rechecked and filled correctly with all relevant details as per the format. The detailed proposed crushing flow sheet to be also prepared accordingly and to be enclosed as annexure. The crushing flow sheet existing inside the lease area is to be given and should have all details in the flowsheet as mentioned under para like type, make, capacity, feed size, product size etc. The area needs to be demarcated on all relevant plans.
- ii) Para 3.5.1-Dry Processing-Screening and Classification-(Pg-49)-a The screen if any used in the existing crushing circuit and if shown in flowsheet, the details of the same may be given. The feed size and the product size and the screen aperture size may be mentioned correctly as per the flow sheet.
- iii) Para-3.9-Overall water requirement-(Pg-51)- The complete details have not been provided as per format. 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 water supply, disposal of water, extent of recycling and chemical analysis of water should also be given under this Para as per the format. The Water balance chart to be prepared accordingly and to be added in annexure and reference to be given under this Para. The overall water requirement should be within the CFO permissible limits. Also, the latest chemical analysis report of water to be enclosed as annexure and reference to be given under Para.
- iv) Para 3.10- Flow sheets and charts-(Pg-51)- i) Under Material balance chart" row the reference of the crushing flowsheet inside the lease area to be given incorporating all corrections as mentioned above. The reference of water balance chart & chemical analysis report of water enclosed as annexure to be given under the row " **Any other data**".

CHAPTER-4-MINING OPERATIONS (Pg. 52-68)

16. In accordance with Rule 34(A)(3) of MCDR Amendment Rules, 2021 the lessee is required to submit processed output [digital elevation model (DEM) and Orthomosaic] images obtained from drone survey of the mine lease area and up to hundred metres outside the lease boundary within six months, before submission of any mining plan document. The same may be submitted in accordance with the provision of the above rule immediate after notification of the SOP by IBM.
17. As already mentioned above in scrutiny comment no 1, the DGPS Lease sketch plan with boundary pillar co-ordinates for the revised sanctioned area of 765.22 ha have not been submitted and also safety zones have not been demarcated. All the plans

- & sections to be prepared accordingly, with boundary pillar nomenclatures and co-ordinates as per the State Govt. approved DGPS Lease sketch with 7.5 safety zone and all other safety zones (Electric line/Public Road etc) and it is to be ensured that no proposals are given beyond 7.5 m safety zone of the lease boundary and the other safety zones as per statutory norms.
18. Major errors are found in the year wise development and production proposals. The complete calculations in tables under this Para (Para 4.2.2, Para 4.3.2, Para 4.3.3, Para 4.3.4 are haphazard with no detailed calculation for total Section wise & Bench wise calculation with total topsoil, Overburden, ROM Quantity, Recovery (%), Mineral reject quantity, Production main Quantity etc.
19. i) Para 4.2.1.1-Pits-(Pg-52)- Survey date has not been mentioned on the submitted Surface plan. The existing pit details to be given as per the latest survey and should be in line with the land-use as reported in AR 2020-21. The same should be accordingly demarcated on surface plan.
- ii) Para 4.2.1.2.1-Dump details-(Pg-52)-The dump nomenclature as given in the surface plan and as mentioned in the text are not matching. All the dumps both active/inactive which is inside the lease area details are to be given under the para. The same should be demarcated accordingly with nomenclature on the surface plan. The respective UTM coordinates of the dump to be furnished under the Location column.
- iii) Para 4.2.2.1- Bench Parameters-(Pg-54)-a) The bench height, width, Slope angle of haul roads etc. should be checked w.r.t 106(2)(b) permission of DGMS and mine design parameters to be proposed accordingly. The 106(2)(b) permission of DGMS to be enclosed and reference to be given under this para.
- b) **As per the EC condition the mine working will not intersect the ground water and ultimate working depth of the mine will be 40 m bgl. The proposals for the plan period to be proposed accordingly in line with the existing EC conditions and at no point the workings to be proposed 40 m below ground level.**
- c) Overall slope of Pit (degree) to be given year-wise as per the year-wise development & production sections accordingly.
- d) Year 1,2,3,4 & 5 to be corrected as 2022-23, 2023-24, 2024-25, 2025-26 & 2026-27. Pit 1 & Pit 2 details to be given separately under the respective year as per the format.
- e) The Max depth of working year-wise in mRL as per the respective production & development section to be also mentioned under the column "Max depth of working". Also, the depth of water table to be mentioned in mRL under the column "Depth of Water table".
- f) The above- mentioned corrections to be incorporated in text of this para & individual Year-wise development & production plan & sections.
- iv) Para 4.2.2.2- Year wise opencast development-(Pg-55-57)-a) **The calculations under the table have not been given correctly as per the format.** As per the pit id, all the information to be provided for the respective year, under one row as discussed during site visit. The detailed section wise calculation to be provided in annexure and respective data for the year is to be mentioned in the text as arrived in calculations in annexure. The development and production calculation excel sheet to be enclosed as annexure and reference to be given under the para. The Plan period year to be mentioned as mentioned above.
- b) For the "bulk density of mineral" average bulk density of Limestone, and avg. bulk density of OB as per para 2.2.1.13 to be mentioned. Recovery is to be given in percentage as per the format. **The Recovery percentage depends on the cut-off grade arrived as mentioned above in scrutiny comment no 12(iii) for para 2.2.4.4.** If the cut-off grade is same as threshold value i.e., 34 % CaO(min) and 5% MgO(max) all the ore is saleable/useable without any Mineral Reject generation, in such case Recovery is 100 % (w.r.t ROM).
- c) If the Cut-off grade arrived is above threshold value, then in such case the limestone generated between threshold value and cut-off grade is not used by the lessee and same may be included in mineral reject and recovery percentage to be arrived accordingly w.r.t ROM. In such case complete detail may be given in subsequent paras as per the format for stacking of mineral reject, Grade of the mineral rejects generated etc.
- d) The top Bench mRL and Bottom bench mRL for the respective working year to be mentioned under the column "Benches" as per the respective year development & production plan & section. Also, the "direction" and "location of advancement" for the respective pit year-wise to be given correctly as per format.
- e) The stripping ratio to be calculated" in tons". Under foot Note it may be specifically mentioned that stripping ratio have been calculated "in ton/ton". The topsoil generated quantity is to be included in OB while calculating the stripping ratio and the Bulk density of Topsoil to be also mentioned in the footnote.
- f) Between N-1892300 to 1892700, E-695000 to 695400, an excavation is proposed which will be used for water storage for plant, the excavation is overlapping the 7.5 m safety zone lease boundary, the same may be planned maintaining sufficient distance from 7.5 m safety zone. It should also be checked w.r.t the existing dump and upcoming dump proposals and other statutory infrastructures (Proposed Magazine area etc.) and to be planned accordingly maintaining sufficient distance as per the statutory requirements.
- g) It is observed that proposals have also been given for Pit-2 and also a dump is proposed between N-1891900 to 1892100, E-692200 to 692800. The dump nomenclature has not been given. However, during inspection, it was observed that no access road was available for the proposed location. Also, the dump location is shown overlapping with the 7.5 m safety zone which is not acceptable. This may be reviewed and proposals to be worked out accordingly. The year-wise proposed excavation should be in-line with the conceptual plan.
- h) **The detailed year-wise development and production calculation sheet (Excel format) bench & section wise should be prepared with all details as mentioned above and enclosed as annexure and reference to be given under para.** The corrections to be also incorporated in all relevant para of the text, annexures and plates.

- h) All corrections in the related calculations, plan sections, annexures to be also made as per the above scrutiny comments of the Geology Chapter (1.0).
- v) Para 4.2.2.3-Transportation & Hauling Equipment- (Pg-58)- The details under the Para have not been given as per format. "Four -wheel drive Car", "Workshop & Garage" etc. details are given which is irrelevant. Also make, capacity etc. details have not been provided. The details provided under the table is not as reported in AR 2020-21. This should be checked and corrected.
20. i) Para 4.3-Material Handling-(Pg-58)-Para-4.3.1- a) The Bulk Density study report to be enclosed as mentioned above in scrutiny comment no 9(vii).
 b) The 106 (2) (b) permission from DGMS as per MMR 1961 annexure reference to be given under "Any other Study Report".
 ii) Para 4.3.2-In-situ Mining-(Pg-59)-The corrections to be incorporated in the table under this Para as per the above scrutiny comment no 19(iv) for Para 4.2.2.2. Under Grade Range- CaO & MgO percentage both to be given. Year to be mentioned correctly (2022-23, 2023-24, 2024-25, 2025-26 & 2026-27).
 iii) Para 4.3.4-Calculation Summary-(Pg-60)-a) **The total ROM quantity under row "A " year-wise in this table to be arrived from "ROM Quantity" column in Para 4.2.2 (Year wise opencast development) & Para 4.3.2 (In-situ Mining).**
b) The "Saleable ore from ROM" under row B year-wise to be arrived from "Production Main" quantity of Para 4.2.2.2 (Year wise opencast development) & "ROM Quantity Saleable Mineral" for Para 4.3.2 (In-situ Mining).
c) The "Total Saleable Ore(t) under Row(E) to be calculated and provided as per the format.
d) Year to be mentioned correctly as mentioned above. The corrections to be made in the table as mentioned above and also in all other related portion of text, annexures and plates.
21. Para 4.4-Machine Calculation (Pg-60)- i) Para 4.4.1-Machine requirement Summary (Pg-60)- The calculations to be done correctly under the table taking maximum "total handling" quantity of In-situ Mining (Para 4.3.2). The Handling required per hour to be corrected as "F=E/Effective shift time".
 ii) Para 4.4.2- Shovel/Excavator Requirement (Pg-61)-The calculations have not been done correctly. The Bulk density for OB & Limestone to be considered in the "Tonnage factor". Since tonnage factor for Limestone & OB are different, the maximum handling quantity as per scrutiny comment (i) to be considered and number of shovels to be calculated separately for OB & Limestone. The TPH, yearly handling etc. to be calculated incorporating all corrections as mentioned above and number of excavators to be calculated accordingly. The Stand by excavator (L) should be calculated mentioning the availability percentage. The number of excavators to be rounded and not to be kept in decimals.
 iii) Para 4.4.3- Dumper Requirement (Pg-62)-. The "maximum handling of material" quantity to be checked w.r.t the above scrutiny comments and corrections to be incorporated. and corrections if any to be incorporated. The Stand by dumper (xii) is to be calculated mentioning the availability percentage. The number of dumpers arrived are to be rounded.
 iv) Para 4.4.4-Drill Machine Requirement (Pg-62)- The calculations under the table have not been done correctly. Depth of hole and subgrade drilling break up to be given. The depth of hole as proposed is not as per the bench Height. The yield per hole to be calculated correctly (Spacing*Burden*Depth of hole* Bulk density). The yield per meter is to be calculated correctly excluding the subgrade drilling meterage i.e., taking the depth of hole only. The Annual target to be assumed considering the maximum handling quantity of limestone. The number of drills required to be calculated accordingly. The Stand by drill should be calculated mentioning the availability percentage.
 v) Para 4.4.5-Machine Deployment details (Pg-63)-The complete details like "Make" etc. have not been furnished. The details of the machinery (nos. & capacity) given under Para 4.4.5.1; 4.4.5.2 & 4.4.5.3 should match with the details of machineries as reported in AR 2020-21.
22. Para 4.5-Blasting Requirement (Pg-63-64)-Para 4.5.2-(Pg-63)-The "type of explosive" details to be furnished correctly. Under the column "Total ROM proposed to be handled in Cum/annum" – to be considered, as same as it has been considered for drilling in previous Para 4.4.4. The other parameters like spacing, burden etc. yield/hole (cum) etc. to be calculated correctly accordingly as mentioned above and in previous paras.
23. Para 4.6- Manpower deployment (Pg-64-66): -i) The manpower deployment proposal has not been given as per the maximum handling quantity. The same needs to be re-assessed.
 ii) Para 4.6.4 (Semi-skilled workers), 4.6.5 (Unskilled workers)- The break-up of the persons deployed shift wise to be given as per the format.
 iii) After Para 4.6.5, Para 4.6.6-(Others Specify) to be added as heading. Accordingly, S.I. no of Para 4.6.6 & 4.6.7 to be corrected as 4.6.7 & 4.6.8. The excel template as published in FAQ may be referred. The manpower related to "Security" etc. may also be included in Para 4.6.6-Others.
 iv) The no of person engaged per day in Para 4.6.7 (Pg-66) to be recalculated incorporating all above corrections. The shift wise details to be also given as per the format. The Material handled per shift to be checked as per previous para 4.4 (Scrutiny comment 21(i)).
 iii) Para 4.6.8-Supervision-(Pg-66)-The details have not been provided as per format. The complete manpower Requirement (Managerial/Supervisory/Skilled workers/Semi skilled workers/unskilled workers/others) to be reviewed w.r.t the in position/Existing strength as per Para 4.6.7 and shortage/Excess if any to be mentioned, and action to be taken in case of shortage are to be given in remarks column.

24. Para 4.7-Waste Management (Pg-66-67)- i) The details have not been provided correctly as per the format.If Waste dumping is proposed in the existing dump, then dumping proposals year-wise to be given as per format in Para-4.7.1(Existing Dump) whereas if it is proposed in the new dump than year-wise dumping proposals to be given in Para-4.7.2(New Dump).
- ii) Only Waste dump proposals are to be given. Top soil dumping proposal is to be given in subsequent PMCP Chapter. (Para 6.2.9).
- iii) Para 4.7.1-Existing dump-(Pg-66)- The details have not been provided as per the format. The Excel sheet format of FAQ may be referred. Irrelevant details are provided under the table of this Para. The Year wise OB dumping details to be provided under the Para as per the format for the year 2022-23, 2023-24, 2024-25, 2025-26 & 2026-27 and same to be demarcated on the development & production plates and other related plates accordingly as per the mentioned Dump-ID. The extent of the dump to be given in **UTM co-ordinates** for co-relating it with the respective UTM grid on plan. The reference of the plates to be given. **If the OB dumping is proposed on the existing OB dumps only, then the details is to be given under this para.**
- iv)Para 4.7.2-New Dump-(Pg-66-67)- If the OB dumping is proposed on the new dumps, then Year-wise details for the plan period 2022-23, 2023-24, 2024-25,2025-26 & 2026-27to be given under this para as per the format and same are to be demarcated as per the mentioned Dump-ID, on the development & production plates and other related plates accordingly. The extent of the dump to be given in **UTM co-ordinates** for co-relating with the respective plan.
- v)The Year wise OB Quantity under above Para 4.7.1& Para 4.7.2 should be, the year-wise total waste generated from In-situ Mining (Para 4.3.2).**
- vi)**The proposed waste dump positions are not clear on the production & development plan. Area has been randomly demarcatedon P&D plates. Specific condition A(ii) of EC mentions "The maximum height of dump shall not exceed 20m, each stage shall preferably be of 10 m and overall slope of the dump shall not exceed 28 degrees.'** The OB soil dumping should be specifically proposed stagewise accordingly as per the EC conditions.
- vii)Para 4.7.3-Existing Stack (Pg-67)- The details provided under the table of this Para is not as per format. If stacking is proposed on the existing stack itself, then Year wise Stack details to be provided under the Para as per the format for the year 2022-23, 2023-24, 2024-25, 2025-26& 2026-27 and same to be demarcated on the development & production plates and other related plates accordingly as per mentioned Stack-ID. The extent co-ordinates to be furnished in UTM.
- viii)Para 4.7.4-New Stack (Pg-67-68)-Top Soil Stack is not related to the Para and is to be deleted. Only Mineral stack details to be given.If stacking is proposed on the new stack, the Year wise Stack details to be provided under the Para as per the format and same to be demarcated as per the mentioned Stack-ID, on the development & production plates and other related plates accordingly. The extent co-ordinates to be furnished in UTM.
- If there is Mineral Reject generation proposed as mentioned above in Scrutiny comment no. 19(iv)(c) for Para 4.2.2.2 then stacking details of Mineral reject are to be given year-wise as per the generated year-wise quantity, as mentioned under Para 4.2.2.2(Year-wise opencast development). The grade of the such mineral rejects generatedyear wise to be also mentioned under the para.**
25. Para-4.9-(Pg-68)- Under "Proposed use of Mineral" column "**Captive use in Own Industry**" to be selected as per the options available. The excel sheet format may be referred.
- CHAPTER-5-SUSTAINABLE MINING (Pg. 69-76)**
26. i)Para 5.1- Sustainable Mining and SDF Implementations (Pg-69)-a)It should be specifically mentioned under this Para "*Sustainable Mining and SDF implementations during the plan period 2022-23 to 2026-27 will be carried out in accordance with Rule 35 of MCDR 2017*".
- b)Compliance of Vishakha Committee Guidelines- The Company guidelines for prevention of women harassment at work place to be detailed here and supporting document may be added in annexure and reference to be given under the para.
- ii)Para 5.2- CSR Initiatives (Pg-69-76)- a) The year to be corrected as 2022-23, 2023-24, 2024-25, 2025-26 & 2026-27.
- b) Para 5.2.1, 5.2.2, 5.2.3,5.2.4, 5.2.5-(Pg-69-76)- **The SDF proposals have not been given which is not acceptable.** Each year SDF proposals to be given separately as per the format. Under "cumulative" column year on year proposals to be added taking 2022-23 as the base year.
- CHAPTER-6- PROGRESSIVE MINE CLOSURE PLAN (Pg. 77-82)**
27. i)Para 6.1-Status of Land-(Pg.77)- a) The details have not been provided correctly under the para. It is mentioned 30.81 ha under "Area under mining operation" which is "5.88 ha" as per the AR 2020-21 submitted. There is no "Mined out area in the lease" whereas it is mentioned "5.88 ha. The Area under mining operation (in ha) and area under dumps (in ha) should be given as per the latest survey data as per the above scrutiny comment no 5 & 19. This may also be checked w.r.t the land use reported in AR 2020-21 and should be in line.
- ii) Para 6.2.2.1-Preparations for Ground water Recharging-(Pg-78)-Specific Year to be mentioned as per the submitted document rather than mentioning Year 1,2,3,4,5.
- iii)Para 6.2.2.1-Fencing-(Pg-78)-2021-22 to be corrected as 2021-22(From Dec-21 to Mar-22). It was observed during site inspection that no fencing has been carried along 7.5 m safety zone of the lease boundary. Accordingly, proposals may be worked out year-wise forcarrying out fencing along the 7.5 m safety zone of portion of the lease boundary. The proposed year wise fencing proposal to be

demarcated distinctly on the development & production plates & PMCP plan. Under Co-ordinates "From " & "To" Northing & Easting UTM co-ordinates to be given.

iv) Para 6.2.2.2.2-(Retaining wall) & Para 6.2.2.2.3 (Garland drain)- (Pg-78-79)-a) It was observed during site inspection that no Retaining wall construction has been carried out at the existing dump (D-1, D-2 & D-3) as per proposal. In the Year 2020-21 & 2021-22 total 1213 m(932 + 281 m) Retaining wall construction were to be carried out. Accordingly insufficient proposals have been given for the Retaining Wall & garland drain. This needs to be reviewed thoroughly w.r.t the pending construction and the future waste dump proposals and the Retaining wall & garland drain construction to be proposed all along the dump Year-wise. It is to be ensured that Retaining wall and Garland drain proposed should not overlap 7.5 m safety zone.

b) All the Protective measures (Retaining wall, garland drain, check dams etc) should also be reviewed w.r.t Specific conditions(A) & General conditions(B) of EC and incomplete portions to be proposed in the plan period year wise. Also, in Para 6.2.2.2.2- the heading "Proposed Bund Length(m)" to be corrected as "Proposed Wall length(m)"

c) **The above PMCP measures to be demarcated distinctly on the PMCP plan & also on year-wise development and production plan. Under Co-ordinates "From " & "To" Northing & Easting UTM co-ordinates to be given.**

v) Para 6.2.3.1-Cumulative work done-(Pg-79)- The cumulative figures to be as per the figures reported in Annual PMCP report 2020-21. A copy of the report may be enclosed as Annexure and reference to be given under para.

vi) Para 6.2.3.2- Year wise proposal-(Pg-79)-a) The plantation has not been proposed as per the EC conditions. Specific Conditions(A) (iv) of EC mentions "**Plantation shall be raised including greenbelt in an area of 178.89 ha by planting the native species around the ML area, roads, OB dump sites etc in consultation with local DFO/Agriculture Department. The density of trees shall be 2000 plants/ha**". The Year-wise proposal for the plan period to be given accordingly and should be clearly demarcated on the PMCP plan & also year-wise development and production plan.

b) Year-1,2,3,4,5 to be corrected as mentioned above and Under location column UTM co-ordinates may be given.

vii) Para 6.2.4.2, 6.2.5.3, 6.2.6.3(Pg-79-80)- Year 1,2,3,4,5 to be corrected as 2022-23, 2023-24, 2024-25, 2025-26 & 2026-27 and if no proposals are there "NIL" under the respective year to be mentioned specifically.

viii) Para 6.2.7-Dump area stabilization & Development-(Pg-80-81)- No information have been provided under the table. Details regarding toe wall, garland drain, check dams etc. year-wise for all the dumps to be reviewed and to be given under this para as per above scrutiny comment no (iv), of the previous para 6.2.2.2.2. Also, the details of the OB dump for the plan period w.r.t the Dump id, no of terraces, average height of terraces etc. to be given as per scrutiny comment no 24 for Para 4.7(Waste Management).

ix) Para 6.2.8.2- Year wise proposal-(Pg-81)-The other form of reclamation like Catch drains, Siltation ponds etc. may be reviewed wr.t the specific and General conditions of EC and year-wise proposals may be given accordingly. The same may be demarcated on the respective development & production plan and PMCP plan.

x) Para 6.2.9-Topsoil Management-(Pg-81)- The Year wise topsoil generation for the plan period 2022-23 to 2026-27 to be given in accordance with scrutiny comment no. 19(iv) of Para 4.2.2.2(Year-wise opencast development) and as mentioned above in scrutiny comment no 24(ii). The topsoil utilization details to be given under foot note of this Para. The top-soil storage area (ID & Co-ordinates) to be also mentioned under the Para and same to be also demarcated on the year-wise development and production plan, PMCP and other related plates.

xi) Para 6.2.11- (Conceptual stage)- (Pg-82)-a) The details under the table have not been given correctly. **The conceptual Land use to be given till expiry of the Lease period as per format.**

b) **The conceptual plan (Plate-12) shows excavation along the safety zone of electric line which is not permissible. It is to be ensured that no excavation is proposed till conceptual stage in any of the safety zone (Electric line/Village Road) etc. present within the lease area.**

c) **The conceptual plan also shows backfilling at a pit-1 which is not acceptable since exploration has not been completed to ascertain the vertical continuity of the limestone as already mentioned above in scrutiny comment no 6.**

d) **The mined pit bench wise and the Waste dump position till conceptual stage to be worked out specifically. It is to be ensured that no working is proposed below 40 m bgl (Ultimate working depth) as per the EC condition. The maximum height of dump shall also not exceed 20 m, each stage of 10 m and overall slope 28 degrees. Individual bench mRL, Dump mRL etc to be mentioned specifically on the conceptual plan with index.**

e) The plantation all along 7.5 m safety zone, other safety zones (Electric line, village road etc.), plantation on dumps to be completed till conceptual stage and to be shown accordingly on the conceptual plan.

f) The area under different headings to be furnished correctly as per the above comments.

g) **The conceptual plan should 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.** The benches which will reach its ultimate pit limit till conceptual stage and there will be no further advancement, such workings may be identified, the dismantled/decommissioned infrastructure area, area under dumps, etc. to be reviewed and plantation & re-grassing may be proposed in such area as per above.

h) All the above corrections should be incorporated in the text and Conceptual plan & Section.

CHAPTER-7- FINANCIAL ASSURANCE/PERFORMANCE SURETY (Pg. 83-85)

28. i) Para 7.1-(Pg-83-85)-a The "Area put to use at Start of the Year" under different headings as per the format should be given as per the latest survey, and as updated in the surface plan.

b) The tables in this para for each year of the plan period regarding "area put to use at start of year", "additional requirement" and "total" to be checked & recalculated after incorporating all corrections for Geology & Exploration chapter (2), Mineral processing (3), Mining operations (4), & Progressive Mine Closure Plan(6) Chapters. Under the row "Others to specify" heading Greenbelt & Engineering measures only to be included.

d) The corrections under this Para and Financial assurance plate to be corrected accordingly as per above points.

ii) Para 7.2-Financial assurance-(Pg-85)- The "total area proposed to be put to use in hectares" as arrived at the end of the final year of plan period(2026-27) should be calculated after incorporating all above corrections and the amount of bank guarantee to be calculated in accordance with Rule 27 of **Mineral Conservation and Development (Amendment) Rules, 2021(Five lakh rupees for Category 'A' mines per hectare of the mining lease area put to use for mining and allied activities)**. The bank guarantee validity should be till the end of plan period. Copies of the bank guarantee to be enclosed as annexure and reference to be given under Para. The table under this Para to be corrected accordingly.

CHAPTER-8- REVIEW OF PREVIOUS PROPOSALS (Pg. 86-91)

29. The "deviation", "Reasons for deviation" etc. have not been given in the chapter as per the format. The review of the proposals to be done specifically year-wise for the ongoing plan period 2017-18 & 2021-22(till Jan-22) as per the format. For all the paras under this chapter the deviation may be calculated in percentage and the specific reasons for deviation if any to be given.

30. i) Para 8.1.1-Lease area utilization (Pg-86)- a The "deviation" to be calculated in **percentage** and "reasons for deviation" if may be specified.

ii) Para 8.1.2-SDF and CSR Expenditures-(Pg-87)- Since the last approved document didn't have SDF proposals, accordingly it may be mentioned "Not applicable" under this para.

iii) Para 8.2.1-Exploration-(Pg-87)- In this table additional sub rows to be added Year-wise i.e., 2017-18, 2018-19, 2019-20, 2020-21 & 2021-22(till Jan-22) and under each row achievement to be reviewed w.r.t the corresponding year proposal. **It was observed during site inspection that there are major deviations in the exploratory proposals, the specific reasons for the same to be mentioned and measures proposed in the upcoming plan period for compliance of the same to be also mentioned.**

iv) Para 8.2.2.1-(Pg-87-88)-a In this table additional sub rows to be added Year-wise i.e., 2017-18, 2018-19, 2019-20, 2021-21 & 2021-22(till Jan-22) and year wise achievement to be reviewed w.r.t the corresponding year proposal as per last approved document. The unit to be also mentioned (tons/cum etc). All the IBM Violation letters & compliance submitted for the period 2017-18 to 2021-22 to be enclosed as Annexure and reference to be given. The actual figures should be as reported in Annual return and Monthly Return of the corresponding year/period.

b) Under the Row "Generated waste while ROM Recovery" the mineral Reject quantity year-wise proposed from ROM, may be mentioned as per the last approved document and the actual generation of Mineral reject year-wise to be reviewed.

c) Under the Row "Dumping Site for Surface- The area proposed for OB dumping for the year 2017-18 to 2021-22(till Jan-22) as per the last approved documents may be mentioned and actual area to be reviewed as per the land use reported in respective AR. **It was observed during site visit that there was deviation in the OB waste dump extent and it was not carried out within the proposed extent as per the proposal. The details may be given accordingly with specific reasons for deviation and measures proposed in the upcoming plan period for rectification of the same.**

v) Para 8.2.2.2-Excavation-(Pg.-88)- The year-wise Lateral and vertical extent to be reviewed w.r.t the proposal.

vi) Para 8.2.6-Production of Minerals-(Pg-88-89)- a The proposed vs actual review to be done year-wise (2017-18 to 2021-22(till Jan-22)) as mentioned above. The unit(tons) to be mentioned under each row. The details under the table to be corrected accordingly.

vii) Para 8.2.7- Handling of Mineral Rejects/subgrade- (Pg-89)- Year-wise proposals to be reviewed as per the mineral Reject generation quantity proposal from ROM, of the last approved document and the actual achievement.

viii) Para 8.2.8-Environmental Compliances-(Pg.89)- The topsoil generation proposal & dumping location to be reviewed year-wise. Under the Year row, the year to be mentioned 2017-18 to 2021-22(till Jan-22) & the afforestation proposals & achieved figures to be given correctly as per the previous/last approved document and as reported in respective year Annual Return. Also, the proposed figures for Retaining Wall and Garland drain have not been mentioned correctly. The last approved document mentions total 932 m of Retaining wall for the year 2020-21 & 281 m Retaining wall for the year 2021-22, 933 m garland drain for the year 2020-21 & 281 m garland drain for the year 2021-22(Pg-56). During inspection it was observed that construction of Retaining wall along the dump was not carried out as per the proposal. The deviation should be mentioned accordingly and the measures to rectify the same in the upcoming plan period to be also given. The actual figures in this para should be as reported in Annual PMCP report for the respective year. The latest environmental monitoring report to be also enclosed in annexure and reference to be given under this Para.

31. **CHAPTER-9- IMPACT ASSESSMENT (Pg. 92-98)-** Since this chapter is only applicable for fresh grant., it may be mentioned "**NOT APPLICABLE**" at the starting of the chapter keeping the contents of the chapter blank.

32. **CONSENT LETTER/UNDERTAKING/CERTIFICATE FROM THE APPLICANT**

- i) Consent letter /undertaking/certificate from the applicant- The Consent letter is to be enclosed with the "Text" and should be digitally signed by the Nominated Owner. The contents of the letter may be kept as per the earlier format.
- ii) Certificate from QP- The Certificate from QP is also to be enclosed with the "Text" and should be digitally signed by the Qualified Person. The contents of the letter may be kept as per the earlier format. The certificate enclosed as Annex-9 is not digitally signed by QP.
- iii) Every chapter of the text to be digitally signed by QP at starting and end of the chapter. All the soft copies of plates(dwg) & relevant annexures to be also digitally signed by QP.

33. **PART-C, PLANS & SECTIONS:**

- a) ***The Plates have not been prepared and submitted sequentially maintaining the plate number as per the format.***
- b) ***All the plans are to be prepared with boundary pillar nomenclatures and co-ordinates as per the State Govt. approved DGPS Lease sketch. No Contours or features outside the mine lease boundary are to be shown except the Key plan and Environment Plan. The mine lease boundary along with all safety zones to be prominently demarcated on all plans/sections.***
- c) ***All hard copy plan submission should be output of Auto-cad and soft copies submission should be output of KML/KMZ/SHP format. The soft copy of all the auto-cad plans (dwg. file), to be also be submitted. All sections submission should be in dwg. Format (Auto-cad output). The KML files to be also prepared correctly as per format and mine lease boundary with all pillars and 7.5 m safety zone all along the lease boundary, other safety zones (Electric power line, Public Road etc.) is to be specifically demarcated in all KML plans also. The individual KML to be prepared Layer wise as per the respective plan requirement and as detailed under the "List of plates" in excel format of FAQ.***
- d) 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) & Rule 32(Types of Plans & Sections) of MCDR 2017 & IBM Circular no. 1/2021. The plans have been prepared in different scale accordingly, **the Scale relaxation letter from the competent authority should be attached as per the provision of the Rule 31(d) of MCDR 2017.**
- e) All plans and sections should be signed with date by certified surveyor, Qualified Person, Geologist, Mining Engineer as per provisions of MCDR 2017. The submitted soft copies of the plates (dwg files) are to be digitally signed. **The plate number has not been maintained as per format. The same has to be maintained as per the format.**
- f) Lease Cadastral Plan (Scanned image) (Plate no-1)- The scanned copy of the original lease map issued by State Govt along with other details to be enclosed as per the format.
- g) Surface Plan (Plate No-2): The surface plan to be corrected and updated specifically as per above scrutiny comment no 5 and as mentioned in above points and also all related scrutiny comments of different chapters. The boundary pillar co-ordinates as per State Govt. approved DGPS sketch to be also provided. The date of survey to be also mentioned. The KML/SHP file of surface plan to be also prepared accordingly after incorporating all corrections. The colour codes for different features to be followed as per the format.
- h) Geological Plan (Plate no.-3): 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) & as mentioned in above points. The Lithological index to be provided correctly. The plate should incorporate all lithological units in the area, already drilled boreholes, proposed boreholes (separate colour code) for the plan period, the area covered under different explorations limits G1, G2, G3 to be clearly demarcated and area to be mentioned in plate. The Plan should be submitted showing different colour codes for i) Lithological/Geological occurrence ii) Area under G1, G2, G3 and other features as per format. All the features to be also replicated as per the corrected/updated surface plan including date of survey. The KML/SHP files of Geological plan to be also corrected accordingly.
2) Geological Section (Plate No. 4)-The plate should be checked and all corrections to be specifically incorporated as per the aforementioned scrutiny comments of Geology and Exploration chapter (2) and as, mentioned in above points. The existing pit profile should be in line with the surface plan and also indexed. The section should be submitted with different colour code depicting all the features as shown in surface geological plan.
- i) Production & Development Plan (Plate No.5, a, b, c, d, e): i) These plates should be corrected as per the aforementioned scrutiny comments for Geology & Exploration (2), Mining operations (4), Progressive Mine Closure plan (6) & Financial Assurance/Performance security (7) chapters. The Year-wise production and development plan should be as per the Year-wise development and production sheet as mentioned above in scrutiny comment no 19(iv). The existing pit profile, safety zones etc. should be replicated as per the corrected/updated surface plan and also to be mentioned in index
ii) **The lithology as given in the geological plan should also be depicted in all the production & Development plans with index.**
iii) **The proposal of bench development systematically mRL wise & connecting with the old benches as per bench mRL may be worked out. Also, the ramps/haul road for access to the mine pit and waste dump have to be demarcated on each year production & development plan.**
iv) The environmental protective work proposed year wise should also be demarcated year-wise along with index as per the PMCP chapter (6).
v) The KML/SHP files of each year production and development plan to be also corrected accordingly. The colour codes for different features to be followed as per the format.
- j) Production & Development section (Plate No 6a, b, c, d, e)- Individual year wise section as per the respective production & development plan have to be prepared correctly depicting the year-wise proposed excavation and dumping proposals. The corrections

should be incorporated in the individual year section as per the respective production & development plan as mentioned above in scrutiny comment no (i).The demarcated existing pit profile, safety zones etc. should be in line with the surface plan and also to be mentioned in index.**The year-wise excavation and dumping proposals with different colour depicting all the features as shown in respective P&D plan to be demarcated as per format.**

- k) Progressive mine closure plan (Plate no7): All corrections to be incorporated as per the PMCP Chapter (6.0) and related scrutiny comments of other chapters and above.Also, all the features such as existing pit, safety zones etc., to be replicated as per the updated/corrected surface plan.G-1/G-2/G-3 area demarcation is not required in this plan and may be removed.The year-wise proposed PMCP measures for the plan period should be demarcated with different color code as per the format. The KML/SHP files of PMCP plan to be also corrected accordingly.
 - l) Progressive mine Closure sections (Plate no 8)-The PMCP section to be prepared after incorporating all corrections in Progressive mine closure plan.
 - m) Conceptual Plan (Plate No 9)-i) All the corrections to be incorporated as per the above scrutiny comment no27(xi) for Para 6.2.11. The benches developments as proposed in the individual year-wise production and development plan should be in line with the benches development proposed till conceptual stage in the conceptual plan.The status of land use as mentioned in Para 6.2.11 of text, shall also be depicted by different colour code as per the format.The KML/SHP files of conceptual plan to be also corrected accordingly (to be prepared layer-wise with different colour code for different land use (Mining, dump, R&R etc.)
ii)The conceptual section (Plate no-9a) should depict sections along Pit, Waste dumps etc. at conceptual stage as per the conceptual plan.The sections to be furnished separately accordingly.
 - n) Ge Referenced Cadastral Plan (Plate no 10)- **The Geo referenced cadastral plan (DGPS lease Sketch/plan) duly certified by the State Govt. with boundary pillar co-ordinates as mentioned above in scrutiny comment no-1 to be submitted.**
 - o) Environment Plan (Plate No11): -The corrections to be incorporated as mentioned above and as mentioned in scrutiny comments of different chapters.The KML/SHP file of Environment plan to be also corrected accordingly.
 - p) Financial Area Assurance Plan(Plate No 12)- The plates should be corrected incorporating comments for Financial Assurance/Performance Surety Chapter (7) (Scrutiny comment no 28). The Financial assurance table may also be given in plate accordingly and all the area shown in the table should be distinctly demarcated on plate and indexed.
 - q) **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 mentioned accordingly in the text and the cover page of the folder maintaining the numbering & sequence specifically as per format. The excel template as published in FAQ may be referred.**
34. **PART- B, ANNEXURE:**
- a) **The annexure number and headings have not been maintained as per the format and are enclosed in random. The annexure number and headings to be specifically maintained as per the format and each annexure with number and heading to be prepared and submitted as soft copy as per format.The excel template as published in FAQ may be referred.**
 - b) 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.
 - c) The supplementary executed lease deed for the revised sanctioned area of 765.22 ha as mentioned above in Scrutiny comment no 1 to be enclosed
 - d) Annexure-4-The latest copy of the resolution of Board of Directors nominating the owner should be enclosed as per above scrutiny comment no 4(xii). The updated list of members of Board of Directors should also be enclosed.
 - e) Annexure-13-Feasibility Report- The corrections to be incorporated as per above scrutiny comment no12(iii),12(iv), 12(v)&12(vi).
 - f) Annexure-10--Exploration details- The corrections& additions to be incorporated as per above scrutiny comments of Geology & Exploration chapter (2)
 - g) Annexure-11-Chemical & Mineralogical Analysis report-The corrections/additions to be incorporated as per above scrutiny comments of Geology & Exploration chapter (2).
 - h) Copy of Study Reports to be enclosed as mentioned above in scrutiny comment no 20 for Para 4.3.1.
 - i) Mineral Processing flow sheet to be enclosed as mentioned above in scrutiny comment no 15(i) &(iv).
 - j) The copy of scale relaxation permission granted by the Competent authority to be enclosed.
 - k) The copies of Bank Guarantee to be submitted as per above scrutiny comment no 28(ii).
 - l) The detailed year-wise **Development & Production Excel** sheet to be enclosed as mentioned above in scrutiny comment no 19(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 Part-B Annexures in text. All the annexures should be legible.**
