

Scrutiny Comments on Examination of Draft Review and Updation of Mining Plan in respect of Kallhalli Iron Ore Mine (MI No.2538) over an area of 19.29 Ha located in Kallhalli Village, Hosapete Taluk, Ballari District, Karnataka State, Submitted by Shri H.N. Prem Kumar for Approval Under Rule 17(1) of MCR, 2016.

GENERAL

1. 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 soft copy along with the processing fee is submitted to this office online on 22/12/2021 and it is 50 days late from the date of said Notification. You are therefore advised to pay penalty @ Rs2,000/- per day X 50 days i.e. Rs1,00,000/- (Rupees One Lakh Only). The penalty may be paid by Demand Draft drawn in favour of Drawing & Disbursing Officer, Indian Bureau of Mines, Bangalore.
2. No cells may be left blank. Either “Nil” or “Not applicable” may be furnished.
3. Soft copy of the Excel sheet/word format may be filled in & submitted while submitting the final copy.
4. If any relevant information pertaining to the ‘calculation’ or ‘supporting information’ or ‘clarification’ may be provided as foot note in the respective table/para.
5. Wherever additional information or supporting document is given in Annexure, Annexure no may be specified in respective paras.
6. Undertaking/Consent letter from the lessee may be digitally signed by the lessee.
7. Serial Numbers of all the chapters and sub paras should be as per the prescribed format. This may be verified and maintained as per the formats issued on FAQ on New Mining Plan format vide letter No.R-11011/1/IBM-M-A-MP/2012-CCOM-Vol-II dated 08/09/2021.
8. On the cover page the extent of Mining lease area as per the CEC and revised extent as per the Forest clearance may also be mentioned.

Chapter 1: GENERAL INFORMATION

9. **Para 1.1: Lease Details:** The Name of the Associated Mineral is mentioned as ‘BHQ & Shale’ which are not in lease deed, hence same may be deleted
10. **Para 1.1.1: Initial/subsequent Lease grant details:** As per the lease deed, the lease is valid for 30 years i.e. up to 27-02-2037, accordingly details given under this para may be corrected.
11. **Para 1.1.2:** Details given under para Period for which modification is proposed may be deleted and may be mentioned as ‘Not Applicable’.
12. **Para 1.2: Land Ownership Details:** Details of Nature of Land may be provided.

13. **Para 1.3.1:** Approval letters of earlier approved Mining Plan/Scheme/RMP may be enclosed as Annexure and Annexure no. may be specified under this para.
14. **Para 1.3.4: Statutory Compliances:** (i) The details of permissible Annual Production as per CEC approval letter along with CEC approval letter number and date may be given as para 1.3.4.5 and supporting document may be provided as Annexure. EC is only for 0.01MTPA as per the enclosed annexure and also the reference of letter number is not tallying with the enclosed annexure.
15. **Para 1.3.4.1: Environment Clearance:** The information given in this para is not tallying with the enclosed EC (Annexure 3a). The same may be reviewed and valid EC may be Annexed.
16. **Para 1.3.4.2:** SPCB Approvals is valid till 31/03/2022 the same needs to be renewed. The letter number is not quoted here is tallying with the enclosed annexure. The quantity mentioned in the annexure is different from the approved quantity mentioned in the letter which may be verified and corrected.
17. **Para 1.3.4.7: Explosive license:** All the details of explosive license may be provided as per the format supported with the copy of the same vide annexure. Annexure number may be provided in the foot note.
18. The details of permissible Annual Production as per CEC approval letter along with CEC approval letter number and date. may be given as Para 1.3.4.5 and supporting document may be provided as Annexure (Repetition of point No.13)
19. **Para 1.3.5.1: Location of Boundary Pillars:** The enclosed CEC sketch does not contain the State Government lease boundary pillar co-ordinates. The lease boundary sketch along with boundary pillar co-ordinates authenticated by State Government should be provided.
20. **Para 1.3.6: Owner/Nominated Owner Details:** Copy of the PAN CARD of the owner may be enclosed as Annexure and proper details of what is enclosed as Annexure 6a may be verified and given.
21. **Para 1.3.7:** (i) The copy of the pan card of the Qualified Person should be enclosed and annexure reference be given. (ii) The consent letter issued by lessee and certificate of Qualified Person are not digitally signed. The same needs to be digitally signed.

Chapter 2: GEOLOGY & EXPLORATION

22. **Para 2.1.2:** (i) Some of the features/infrastructures located more than 5km range also provided. The same may be deleted and only Physiographic features and Infrastructures if existing outside the lease/block area and within 5.00 kms range may be provided. (ii) From the environment plan it is observed that, there are 08 villages present within 5km radius range. Details of all the villages may be provided in 'Human Settlements'. There is on tower block existing within the Mining Lease area and details of the same need to be given under relevant description. Name of the villages, Railway station etc., may be provided for clarity. Also Kallahalli village is given as 2.5 km in one table and in the next table nearby village is mentioned as 4.00 kms from the lease boundary. May be checked and proper details need to be given.

23. **Para 2.1.3:** (i) Regional Stratigraphy and regional geological map of the area may be provided as an Annexure and the Annexure number may be referred in the Text or this may also be provided by inserting table in word file.
24. **Para 2.1.4: Local Geology & Structure:** Local lithological sequence and occurrence of different type of lithologies and iron ore may be explained in detail.
25. **Para 2.1.4.5: Extent of Weathering/ Alteration:** It is mentioned as iron ore is very hard and less weathering. However, during the field visit it is observed that, the iron ore is completely weathered and undergone deformation and iron ore is of friable nature. Hence the given information may be reviewed and suitably corrected.
26. **Para 2.1.4.6: Nature/Form of Mineral:** Lumps and fines ratio may be given in this para along with the information provided.
27. **Para 2.1.4.7:** Extent of Mineralization of all the iron ore bands, float ore (if any) may be provided in this para.
28. **Para 2.2.1.2 to 2.2.1.4:** If particular exploration activity is not proposed in the plan period, the same may be specified as 'No proposal & Not carried out'.
29. **Para 2.2.1.5:** (i) Pitting activity carried out Year may be specified. Average grade (Fe) may be specified for each pit. (iii) Litho unit details at Sl. No. 9 may be corrected.
30. **Para 2.2.1.7:** Details of drilling activity carried out during the Year 2014 has been provided in this para. In this para, only exploration activity carried out during the Last Plan Period should be provided.
31. **Para 2.2.1.9: SAMPLING:** Only samples generated during last plan period may be provided in this para.
32. **Para 2.2.1.10: Chemical Analysis:** No information is provided in this para. Details of samples analyzed may be provided as per the format. Further, the bore hole samples information may be provided in CSV/excel file which shall normally include Five files namely (a) collar file, (b) survey file and (c) Geology log file, (d) Assay file and (e) RQD File. The file formats are given below. All the bore hole data may be submitted in the below given format.

(a) Collar file

| Hole_id* | Latitude | Longitude | Altitude | Max_depth | Hole_path (linear/angular) | Date of drilling |
|----------|----------|-----------|----------|-----------|-------------------------------|------------------|
| | | | | | | |

(b) Survey file for drill holes

| Hole_id | Depth | Dip | Azimuth |
|---------|-------|-----|---------|
| | | | |

(c) Assay file

| | | | radicals analysed | | | | |
|---------|------------|----------|---|------------------|--------------------------------|-----|---|
| | | | (specify name of radical as an example given below) | | | | |
| Hole_id | Depth_from | Depth_to | Fe | SiO ₂ | Al ₂ O ₃ | LOI | P |
| | | | | | | | |

(d) Geology file

| Hole_id | Depth_from | Depth_to | Litholoical Description |
|---------|------------|----------|-------------------------|
| | | | |

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

(e) Rock Quality Designation (RQD) File

| Hole_id | Depth_from | Depth_to | RQD% |
|---------|------------|----------|------|
| | | | |

**Hole ID should tally with the surface geological plan as available in the latest approved mining plan*

Along with the above information, Form J and graphical litho log details for all the boreholes may also be provided in plate.

33. **Para 2.2.1.13:** Bulk Density Study mentioned as assumed based on the experience. The Bulk Density study may be conducted as per M (EMC) Rules, 2016 and SOP of CGPB and study report may be enclosed.
34. **Para 2.2.1.14: Area Covered under Exploration:** (i) Northern part of eastern iron ore band is not fully covered under G1 level of exploration and drilling is proposed in this area. Hence, it is advised to review the area explored under different level of exploration and suitably modify the information given under this para. The modifications also to be done on the Geological map and cross-sections (ii) There is a non-mineralized area in the lease which essentially consists of shale, the area of non-mineralized area may be given.
35. **Para 2.2.2.1:** The total lease area is 19.29 Ha, however area under Geological Mapping mentioned as 42.13Ha, which is not correct. The same may be corrected.
36. **Para 2.2.2.2 to 2.2.2.4:** If particular exploration activity is not proposed in the plan period, the same may be specified as 'No proposal & Not carried out'.
37. **Para 2.2.2.5: Pitting:** The information given under this para is already provided in Para 2.2.1.5. If pitting activity is not carried out during the Plan period, the given information may be suitably corrected.
38. **Para 2.2.2.7.1:** Exploratory drilling carried out during Plan period is also given under this para, the same may be deleted.
39. **Para 2.2.2.9:** Co-ordinates (UTM-WGS84) may be provided in location column of the samples. Number of samples collected before plan period only given under this para.
40. **Para 2.2.2.10: Chemical Analysis:** The comment given under para 2.2.1.10 is also applicable to this para.
41. **Para 2.2.2.14:** Details given in this para may be corrected. (i) Area Covered under Exploration before plan period may be provided. (ii) In the 2nd Table, Area converted to G1 from G2, G3 & G4 and percentage of increase in the G1 area during the plan period may be provided.
42. **Para 2.2.3: Ore Body Geometry & Grade:** Average Grade mentioned as Fe 45%, which is not correct, the same may be reviewed and appropriate Avg. grade of each iron ore band may be given.
43. **Para 2.2.4.2: RESOURCE CALCULATION:** (i) As per the comments at 2.2.1.14 Resource calculation for different level of exploration may be revised. (ii) Grade for Hematitic Iron ore and Hematitic Iron ore-float ore may be mentioned as Fe 45 % and above and for Hematitic Siliceous Iron ore may be mentioned as Fe 35% to <45%. This comment is applicable to all the paras and plates where grade of iron ore is specified.

- 44. Para 2.2.5.1: Mineral Resource Estimate for Conversion to Mineral Reserve:** The information given under this para may be simplified by deleting the irrelevant information.
- 45. Para 2.2.5.3: Mining Factors or Assumptions:** The information given under this para may be simplified by deleting the irrelevant information. The recovery factor considered for different type of ore (Hematitic iron ore, HSIO and Iron ore –float) may be specified.
- 46. Para 2.2.5.4: Metallurgical Factors or Assumptions:** The grade of iron ore given may be corrected
- 47. Para 2.2.5.5: Cost & Revenue Factors:** Summary of cost of Production, Market Price and Profit/loss details may be provided. Copy of Feasibility Report may be enclosed as Annexure and Annexure no. may be specified in this para.
- 48. Para 2.2.5.8:** Reserves/Resources classification as per UNFC Proved Mineral Reserves (111), Probable Mineral Reserves (122) and Feasibility Mineral Resources (211) may be explained under this para.
- 49.** (i) Calculation of Blocked Resources and Reserves may be reviewed; the details of total Geological Resources are not tallying with the Reserves and Resources calculated as per UNFC norms. (ii) Reserves/ Resources estimated as on 01/12/2021 are not tallying with sectional area calculation; the same may be reviewed and corrected. (iii) Reserve/resources as on 01/04/2021 as per Annual Return may be provided by adding an additional table. (iv) The grade mentioned may be corrected as per comment given in para 2.2.4.2 (v) Table titles of calculation for float iron ore reserves are not tallying with the information provided, the same may be corrected.
- 50. Para 2.2.6.1: Geological Mapping:** At the foot note it may be mentioned as ‘update of Geological map based on mining & exploration data’.
- 51. Para 2.2.6.5: EXPLORATORY Drilling:** (i) Financial year given may be corrected, (ii) From the litho logs it is observed that some of the bore holes have ended in the mineralized zone, hence it is advised to propose additional deeper boreholes adjacent to bore holes to prove the ore body 3-dimensionally. (iii) Ore body is dipping 70-to-75-degree south-west direction, it is more appropriate to propose the angular bore holes than vertical boreholes for better delineation of the ore body and dimension also to understand variation of grade. (iv) RC/DTH drilling (non core) drilling is proposed, core drilling may be proposed in place of RC/DTH for less contamination of sample and better understanding of ore body.
- 52. Para 2.2.6.7: SAMPLING:** No information provided in this para. Tentative no. of samples going to be generated in the drilling programme may be proposed.

Chapter 3: MINERAL BENEFICIATION / PROCESSING

- 53. Para 3.1: Mineralogy of the ROM ore:** Name of the Mineral may be corrected as ‘Hematitic Iron Ore’.
- 54. Para 3.2: Complete Chemical Analysis of the ROM Ore:** Chemical Analysis of HSIO may also be provided.
- 55. Para 3.3: Crushing Section:** Crushing (Primary & Secondary) is proposed in ‘PDF’ file submitted, however, there are no proposal of crushing in the excel format of the document submitted. Same may be re-examined and suitably modified. Flow-chart attached does not contain crushing activity, the flow chart be suitably modified showing crushing activity, feeder size, screening and output product size.

- 56. Para 3.5.1: Screening and Classification:** Screening is proposed in other operations, same may be proposed in this para and may be deleted in other operations.
- 57. Para 3.9: Overall water requirement of mining and mineral processing:** There is no information of daily requirement of water for Mining, domestic usage, dust suppression etc., and source of water. This para needs to be re-written providing all the details of water usage, quality and quantity of water and source of water. Note, the water requirement should be in line with the quantity of water mentioned in the EC.

Chapter 4: MINING OPERATIONS

- 58. Para 4.2.1.2.1: DUMP DETAILS:** Location details of TD-1 dump may be corrected.
- 59. Para 4.2.2.1: Bench Parameters:** (i) Max Depth of Workings may be provided in m RL. (ii) Width of the benches should be more than the height, accordingly proposed width of the bench may be modified.
- 60. Para 4.2.2.2: Year wise Opencast Development:** (i) Bench nos. information is not provided, the same may be provided along with Top mRL and Bottom mRL of the benches. (ii) Proposal for the year 2022-23 should be in continuity with the ongoing development (Year 2021-22) for continuity of the benches smoothly with less deviation. Accordingly, proposed development locations may be reviewed and suitably modified. (iii) The proposed production ROM quantity is exceeding capping fixed by CEC. The ROM quantity should include the Production of Main Mineral, Mineral Reject & Production Associated; total quantity of ROM should not exceed the Capping fixed by CEC. (iv) Ore to OB ratio is provided; the OB to Ore Ratio needs to be given (v) All the mining and allied activities proposed within the lease area as per the statutory norms. No Mining or allied activity should be proposed in 7.5m safety zone, except plantation. (vi) There is no associated mineral production; hence the details given in the footnote may be deleted. (vii) Area of overlapping with M/s. Kaviraj to be marked as per the recommendation of the concerned authority.
- 61. Para 4.3: Material Handling Summary:** (i) Slope Stability study of the Mine pit/benches and dump may be undertaken and study report may be enclosed. (ii) Recovery percentage is considered for calculation of ROM Production; Recovery Study Report may be enclosed. (iii) Hydrological Study undertaken if any, its report may be enclosed. (iv) Bulk Density Study may be undertaken and Report may be enclosed.
- 62. Para 4.3.2: INSITU MINING:** (i) The given information may be modified as per the comments given in para 4.2.2.2 at sl. no. (iii). (ii) The calculation may be made with OB to Ore Ratio.
- 63. Para 4.4.3: Dumper Requirement:** Number of Trips / hour details may be provided.
- 64. Para 4.4.4: Drill Machine Requirement:** Effective Shift hours should be specified. Since the proposals are for working in one shift, the rate of drilling per day and per shift remains same. All the details submitted may be rechecked and proper calculation may be arrived at.
- 65. Para 4.5:** No information is provided on blasting requirement, this para may be reviewed and all the information pertaining to blasting as per the format may be proposed.
- 66. Para 4.4.5.3: Drilling details:** Under this para capacity of the wagon drill is mentioned as 10m/h. However it is mentioned as 2m/h under para 4.4.4. May be checked and corrected by giving details uniformly wherever applicable.
- 67. Para 4.6.6: No. of persons Engaged per Day:** The total no. of persons to be engaged per day is not tallying with the details provide in all the tables under this chapter.
- 68. Para 4.6.7: Supervision:** No information is provided in this para. Details as per the format may be provided

69. **Para 4.7.2: New Dump:** if the proposed new dump location is temporary, the same may be specified in the foot note of the table.
70. **Para 4.9: Use of Minerals:** The Fe grade in fines given as +55-65 % and for lumps it is given as Fe +50-65 %. Generally, the Fe grade in lumps is more than fines, the given information may be reviewed and corrected.

Chapter 5: SUSTAINABLE MINING

71. Para 5.2.1.13: Efforts for green energy: It is advised to make some provision for consumption of green energy at the mine.
72. Para 5.2.1.14: Details of Water usage and recycled water use may be provided.

Chapter 6: PROGRESSIVE MINE CLOSURE PLAN

73. **Para 6.2.2.1.2:** Other information provided is not clear, the same may be reviewed and corrected.
74. **Para 6.2.2.2.2 and 6.2.2.2.3: Retaining Wall:** (i) Co-ordinates given should be from and to i.e. both Easting & Northing of the starting point may be provided at from column and both Easting & Northing of the end point may be provided at to column. (ii) Retaining wall and Garland drain are proposed only at north eastern part of the dump during the plan period, retaining wall and Garland drain may also be proposed on south-western part of the waste dump. Accordingly, Year-wise proposal may be corrected.
75. **Para 6.2.3.2: Year Wise Proposal:** Only 50 no. of plants per year proposed as gap plantation, the number of plants should be increased. In the PMCP plan, number of saplings proposed is 2000 nos. (Year 2022-23), 1250 nos. (Year 2023-24), 1000 nos. (Year 2024-25), 1000 nos. (2025-26) and 1250 nos. (2026-27) which is not tallying with the text. Further, safety zone area is not fully planted; location and area for plantation may be proposed. This para may be reviewed and suitably corrected.
76. **Para 6.2.7: Dump Area Stabilization & Development:** (i) Average height of the terrace proposed for the year 2025-26 is 18m, the average height of the terrace should be around 10-12m, accordingly the proposal may be revised. (ii) Length of the proposed retaining wall and garland drain should be increased as per the comments in para 6.2.2.2.2 and 6.2.2.2.3.
77. **Para 6.2.11: Land Use of Lease Area at the Expiry of Lease Period (Conceptual Stage):** (i) In the foot note of the table it is mentioned as rehabilitation and reclamation of mined out land has not been proposed due to existence of Mineral Resources at the conceptual stage. However, 9.6 Ha mined out area proposed in the Mined-out Area fully Reclaimed and Rehabilitated column. The same may be reviewed and suitably corrected. (ii) If no proposal of Reclamation and Rehabilitation of Mined out area, the foot note details may be revised as 'Mineral Resources in the Mining area will not get exhausted at the conceptual stage. Hence, no reclamation proposed, only top OB benches will be re-grassified. Existing infrastructure, Mineral processing plant will be dismantled at the conceptual stage and re-grassification will be done.

Chapter 7: FINANCIAL ASSURANCE/ PERFORMANCE SURETY

78. As per the Annual Return 2020-21, the area covered under current workings is 5.6Ha, the area proposed area under Mining for the Year 2022-23 is less than the area reported in 2020-21. The same may be reviewed and suitably corrected.

79. Overlapping area 3.02Ha of M/s Kaviraj is excluded from the area utilization. The same may be included in the area of utilization for calculation of Financial Assurance.
80. The format is not maintained, additional 03 rows added in the Financial Assurance area utilization Table. The same may be rectified. if any additional information to be provided, the same may be provided in Others by specifying the details.
81. **Para 7.2** : The Bank guarantee amount needs to be calculated as per the Mineral Conservation and Development (Amendment) Rules, 2021 and Revised bank guarantee needs to be submitted.

Chapter 8: REVIEW OF PREVIOUS PROPOSALS

82. **Chapter 8:** Review of Previous Proposals: All the sub paras under this chapter should be reviewed for all the respective activities year wise covering the previous plan period.
83. **Para 8.1.1:** The lease area utilization should be in line with the Annual Return 2020-21 submitted.
84. **Para 8.2.1:** Exploration: Details of G-Axis up-gradation and Area converted under G1 from G2/G3 may be provided.
85. **Para 8.2.2:** Mine Development (Opencast/ Dump Mining): Details of Dumping site of waste/ over burden is not given and also the reason for deviation for all the items needs to be given.
86. **Para 8.2.8.3:** Reason for deviation in construction of Garland drain and Retaining wall may be specified in 'Reason for deviation column'.

CHAPTER-9- IMPACT ASSESSEMENT

87. This chapter may be furnished as a part of the text document. Though this chapter is applicable only for fresh grant, all the headings & sub headings may be furnished with "Not Applicable" against each of the same as given in the format.

ANNEXURE:

88. The numbering of annexure has not been sequentially maintained as per the format. Numbering of annexure to be specifically maintained as per the format. Any additional annexure enclosed may be followed after annexure no 18 with corresponding details. All the annexure as mentioned in above scrutiny comments of different chapters to be enclosed. Also, corrections in the annexure, as mentioned above in scrutiny comments of different chapters to be incorporated and corrected annexure to be enclosed.
89. Some of the Annexure nos. are not tallying with the reference given in the text. All the Annexure should be verified and suitably Annexure no. may be given.
90. Undertaking/Consent letter from the lessee may be digitally signed by the lessee.
91. Annexure 3a (EC) does not contain the information provided in text. Educational & Experience Certificate of QP not enclosed, same may be enclosed.
92. Flow chart showing crushing and screening should be provided.
93. Recovery study Report is not annexed, the same may be Annexed and Annexure no. may be given para 4.3
94. Bulk density test report of each of the material handled in the mine may be enclosed.

95. Copy of Valid Bank Guarantee for the entire plan period as per the amended MCDR Rule 2021 needs to be submitted.
96. 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 Annexure. All the annexure should be legible.

Plates (Hardcopy):

97. Key plan showing Mining lease boundary, adjacent leases may be provided.
98. **Plate 1:** CEC Sketch enclosed does not contain the lease boundary pillar co-ordinates, State Govt. authenticated lease boundary sketch along with lease boundary pillar co-ordinates may be provided.
99. Key Plan of the area may be provided.
100. **Plate 3: Surface Geological Map:** (i) During the inspection it is observed that there is a waste rock (shale) in between the ore band, however, this has not been shown in the Geological Map. The geological map needs to be updated with ground truth geological information. (ii) Area explored under different level of exploration may be updated on the Geological Plan. (iii) UPL is safety zone and touching the boundary pillar point BP-C, UPL line should be redrawn and should not cross safety zone. Corrected UPL may be updated in all the plans and sections.
101. **Geological Cross Section:** (i) Cross section A-A' (between 200-300 grid) shown under UNFC code 121 category, the area not covered under G1 level exploration, the same may be reviewed and modified suitably. (ii) Section B-B' and D-D' contains sub-grade dump overlapped with waste dump, however this is not shown on the Geological Plan also in text. (iii) Geological Index – Iron Ore Fe +45 may be corrected as Hematitic Iron Ore Fe 45% and above and Hematitic Siliceous Ore Fe 35 to <45% may be corrected as Hematitic Siliceous Iron Ore Fe 35 to <45%. This comment is applicable for all the plans where type of ore and grade specified.
102. In Production and Development Plans in calculation part, top and bottom mRL of the working may be specified.
103. In Production and Development Plan Year 2024-25 in pit 1, the proposed development is not in continuity with the previous Year 2023-24 proposal; the same may be reviewed and suitably proposed for smooth development of benches.
104. **Development & Production Section:** (i) Sections are provided combinedly for the plan period, the separate year-wise Development & Production Section may be provided. (ii) Calculation of year-wise dumping title may be modified as Calculation of Year-wise Development. (iii) Back filling and temporary Mineral stack shown in Section D-D', however, there is no backfilling proposal for the plan period and the same has not been shown in Production & Development Plan
105. **Progressive Mine Closure Plan:** (i) Garland drain and Retaining wall may be proposed at south-western part of the waste dump. (ii) Plantation details may be updated as per comments given in text part.
106. **Progressive Mine Closure Section:** (i) Back filling and temporary Mineral stack shown in Section D-D', however, there is no backfilling proposal for the plan period and the same has not been shown in Progressive Mine Closure Plan. The same may be reviewed and rectified. (ii) 2021-22 working proposal shown may be deleted.
107. **Conceptual Plan:** In the cross section of Conceptual Mining and Back filling is proposed, however, there is no backfilling proposal. Hence, back filling in cross section

to be deleted. Grassification on the top OB benches may be shown in the conceptual plan.

108. All the plans & sections may also be updated in softcopy (.kml/.shp) as per the comments given above and in text.

Plates soft copy (kml file)

109. Plates provided in .kml file format are not in order. Does not contain the features (polygons/line/point) as required. Most of the information provided is line feature does not contain polygon feature for area features. All the features are merged and does not contain required attribute information. All the features should contain basic attribute data which is required to identify the layer/proposal etc. The .kml files submitted should be corrected suitably and submitted with all layer information as per legend given in hard copy in shape file / kml file format.
