

F. No. 34011/28/2019-CPAM
Government of India
Ministry of Coal

Shastri Bhawan, New Delhi
The 29th May 2020

Office Memorandum

Subject: Guidelines for Preparation, Formulation, Submission, Processing, Scrutiny, Approval and Revision of Mining plan for the coal and lignite blocks.

Undersigned is directed to state that the guidelines for formulation of Mining plan and Mine Closure Plan has been amended. It has been decided by the Government that all coal (including lignite) mining operations in India shall henceforth be governed as per modified guidelines enumerated below.

1. **Mining Plan:** All coal (including Lignite) mining operation in India shall henceforth be governed as per these modified guidelines listed below and henceforth, the Mine Closure Plan and Final Mine Closure Plan shall be integral part of Mining Plan. Separate approval of Mine Closure Plan/ Final Closure Plan has been done away with. The Guideline/format for formulation of Mining plan is enumerated at **Appendix – I**.
 - 1.1. **Implementation of the approved Mining Plans shall be sole responsibility of the mine owner.** Mining operations shall be undertaken in accordance with the duly approved mining plan. The mining plan once approved shall be valid for the balance life of the Mine, provided that any modification(s) of the mining plan is approved by the competent authority and such approval of the modified mining plan shall remain valid for the estimate balance life of the mining plan. Modification of the approved mining plan during the operation of a mining lease also requires prior approval.
 - 1.2. The mining plan shall cover prescription for different phases of life of the mine as stage plan. The Stage plan for 1st year, 3rd year, 5th year, year of achieving rated capacity of the mine, Final year (i.e. at the end of mine life) and post closure shall be submitted at the time of initial submission of mining plan. The project proponent shall submit a **report/information** consisting **a.** compliance status with respect to approval condition of mining plan and grounds specified at para 1.3A; **b.** stage plan for next five years; **c.** revised balance life of the mine; and **d.** revised calculation of ESCROW amount with respect to revised balance life, to Coal Controller, CCO, Kolkata with a copy of the same to Administrative Section dealing with the allocation/allotment of the block and section dealing with approval of mining plan at MoC/CCO, **for information**. Such report/information must be submitted at least 180(one hundred eighty) days before the expiry of 5 (five) year, starting from the commencement of the Mineral Concession (Amendment) Rules, 2020 or the date of execution of the duly executed mining lease deed, whichever is later. Information desired above must bear certificate of **Qualified Person/ Accredited Mining Plan preparing Agency** and have approval of the respective company board. Non submission of such information during the stipulated time may result in withdrawal of mine opening permission or cancellation of the approved mining plan, as may be decided by CCO.
- The Mining Plan approved prior to issue of this Guideline will qualify for submission of such report/information at least 180(one hundred eighty) days prior to expiry of 5 (five) year from the date of notification of the Mineral Concession Amendment Rules 2020.
- 1.3.(A) The mining plan may be modified for **a.** for change in method of mining; **b.** for facilitating increase in sanctioned peak capacity that is in excess of one hundred and fifty per cent of the



sanctioned rated capacity; **c.** change in leased area; **d.** in the interest of safe and scientific mining; **e.** conservation of minerals; **f.** for the protection of environment; **g.** addition of reserve by way of proving of reserve in the existing lease area; **h.** for changes in final mine closure conditions; or **i.** and such other change that may be determined by the Central Government. While submission of revision/ modification of mining plan the reason for revision/ modification shall be specified in writing by the lessee.

(B) Notwithstanding anything contained in clause (A) above, for other minor changes, the project proponent is empowered to make modification with the approval of the respective company board. These minor changes shall cover **a.** changes in land type within the leased area; **b.** changes in HEMM deployment plan; and **c.** changes in location of infrastructure within the leased area. The project proponent shall submit specific report of such minor changes to Coal Controller, CCO, Kolkata with a copy of the same to Administrative Section dealing with the allocation/allotment of the block and section dealing with approval of mining plan at MoC/CCO, for information.

- 1.4. The Mining Plan submitted for approval shall have prior approval of the concerned Board of the Company.
- 1.5. The base date of the Mining Plan should be taken as cut-off date on which the extractable reserve, balance life etc. has been quantified.
- 1.6. The proposed leased area in the Mining Plan shall include the area specified in the mining lease within which mining operations can be undertaken and includes the non-mineralized area required and approved for the activities falling under the definition of mine as referred in The Mines Act 1952. Evacuation route, R&R and Employee Township area outside the block will not be part of the Mining plan.
- 1.7. Pre-mining land ownership/land type furnished in the mining plan will be of indicative in nature along with data source at its footnote (viz. from topo sheet, cadastral plan etc.).
- 1.8. The excavation/ mining area envisages in the mining plan must be restricted within the allotted/vested geological block boundary/existing mining lease and if the project area is confined within the allotted block boundary/existing mining lease, a certificate to this effect is to be provided by the **Qualified Person/ Accredited Mining Plan preparing Agency** preparing the mining plan. The certificate must be made on the Conceptual Plan depicting Cardinal Point Co-ordinates (shape co-ordinates) of the project boundary, Lease boundary and Geological Block boundary (binding co-ordinates given in the vesting order).
- 1.9. Under provisions of Rule 16 of MCR 1960, State Government is custodian of the exploration data. As such in the cases, where the project area extends beyond the block boundary/existing mining lease the Mines and Geology Department of the concerned State Government shall issue a certificate specifying (a) intent of the State Government for grant of lease beyond the vested geological boundary; (b) non-existence of coal/ lignite in the area beyond the vested/allotted geological block boundary/existing mining lease to rule out the issue of encroachment. The application for issue of certificate from the Mines and Geology Department of the State Government must be supported with proof of the non-existence of coal/lignite in the area under reference (along with their Cardinal Point coordinates) duly certified by custodian agency viz. CMPDIL/ SCCL in case of coal and NLCIL in case of lignite.

Where the project area extends beyond the block boundary/existing mining lease, the certificate issued by the Mines and Geology Department of the concerned State Government must be attached in the Mining Plan.
- 1.10. In case of allotted/auctioned coal/lignite blocks, the mining plan may be revised for extraction of more coal on year to year basis.

Provided that the mining plan shall be revised for extraction of less coal on year on year basis only under following circumstances: a. if the remaining extractable reserve of the coal mine is less than

3(three) times of the rated Capacity of the current Approved Mining Plan; b. Change in method of mining from Opencast to Underground necessitated due to change in geo-mining conditions. However, revision of Mining Plan for extraction of less coal would be subject to prior approval of the Nominated Authority.

- 1.11. The approval of the revised Mining Plan shall not result in changes in the terms and conditions or efficiency parameters mentioned in the CMDPA/Allotment Agreement signed at the time of allotment/vesting for the auctioned/allotted blocks without prior approval of the nominated authority or Central Government, as the case may be. However, efficiency parameters mentioned in the CMDPA/Allotment Agreement shall be linked to the rated capacity of the mine.
- 1.12. The project proponent shall envisage the action plan for exploration and liquidation of the balance reserve yet to be projectised.
- 1.13. The project proponent shall take all necessary precautions regarding safety of mine workings and persons deployed therein and shall adhere to all the statutory clearances with regards to safety.
- 1.14. Proposed project area envisaged in the mining plan shall not encroach into any other adjacent coal block unless permitted to do so by the Ministry of Coal in writing.
- 1.15. The approval of the Mining Plan is without prejudice to the requirement of approvals from competent /prescribed authority under the relevant rules/ regulations etc.
- 1.16. The project proponent shall submit an undertaking that the mine shall be operated as per the Environment Clearance (EC) & Forestry Clearance (FC) for the project.
- 1.17. **Statutory Obligation:** The legal obligations, if any, which the lessee is bound to implement, like special conditions imposed while execution of lease deed, approval of Mining Plan, conditions imposed by the Ministry of Environment, Forest and Climate Change (MoEF&CC), Central Pollution Control Board (CPCB), State Pollution Control Board (SPCB), Directorate General of Mines Safety (DGMS) or any other organizations describing the nature of conditions and compliance positions thereof, should be indicated in the Mining Plan.
2. **Mine closure Plans:** Mine Closure Plans will have two components viz. i) Progressive or Concurrent Mine Closure Plan, and ii) Final Mine Closure Plan. Progressive Mine Closure Plan would include various land use activities to be done continuously and sequentially during the entire period of the mining operations, whereas the Final Mine Closure activities would start towards the end of mine life, and may continue even after the reserves are exhausted and/or mining is discontinued till the mining area is restored to an acceptable level. The Mine closure details of the Mining Plan should be oriented towards the restoration of land back to its original as far as practicable or further improved condition.
 - 2.1. Mining is to be carried out in a phased manner along with reclamation and afforestation work in the mined-out area.
 - 2.2. Progressive mine closure plan shall be prepared for a period of every five years from the beginning of the mining operations. These plans would be examined periodically in every five years period and to be subjected to third party monitoring by the agencies approved by the Central Government, like Central Mine Planning and Design Institute Ltd. (CMPDIL), National Environmental Engineering Research Institute (NEERI), Indian Institute of Technology (IIT-ISM) or any other institutes/ organizations/ agencies specified from time to time for the purpose.
 - 2.3. Various project specific activities viz. mined-out land details & their technical and biological restoration plan, water quality management, infrastructure to be retained and demolished, disposal of mining machinery, etc. shall be furnished in the relevant paras. Where the backfilling of the mine void is being carried out as part of regular mining operation, it shall not be included in the list of progressive mine closure activities. However, in case, where the backfilling of mine void is to be carried out specifically for closure of the mine, quantum of such overburden and the mine closure fund earmarked for the purpose must be included in the list of activities to be taken up for mine closure in the mining plan at the time of submission itself.

- 2.4. The Government may at any time before the closure of mine require certain activities to be included in the mine closure plans, which it may consider necessary for the safety and conservation of environment, or in compliance with any modification/ amendment in the relevant legislation.
- 2.5. **Abandonment cost:** The total cost for carrying out such activities shall be estimated for assessment of abandonment cost of the mine involving progressive and final mine closure activities such as barbed wire fencing all around the working area, dismantling of structures/demolition and cleaning of sites, rehabilitation of mining machinery, plantation, physical/biological reclamation, landscaping, biological reclamation of left-out overburden dump, filling up of de-coaled void, post environmental monitoring, supervision charges, power cost, protective and rehabilitation measures including their maintenance and monitoring, miscellaneous charges etc. for the specified post closure period.
- 2.6. **Escrow Account Calculation:** In August 2009 it was estimated that typically closure cost for an opencast mine was around rupees six lakhs per hectare of the total project area and rupees one lakh per hectare for underground project area at the-then price level. Accordingly vide letter dated 7th January 2013 a guideline for mine closure was issued which needed modification in these rates based on the wholesale price index (WPI) as notified by Government of India from time to time while preparing the Mining plan and Mine Closure Plan. The escalated rate (based on the current base year i.e. 01.04.2019) is Rupees Nine Lakh per hectare in opencast and Rupees one lakh fifty thousand per hectare for underground Mine. These rates will be considered as Base Rate to be applicable from 01.04.2019, which may change as specified from time to time by the Government of India.
- [Exemplary Calculation: $\{(Rs\ 6\ lakhs \times 1.561\ linking\ factor\ for\ base\ year\ 2004-05 \times WPI\ 121.1\ as\ on\ April\ 2019) / (WPI\ as\ on\ August\ 2009)\} = Rupees\ 8.75\ lakh, rounded\ to\ Rupees\ 9\ (nine)\ lakhs\ per\ hectare\ in\ case\ of\ Opencast\ project\}$].*
- Henceforth, these rates will stand modified based on the wholesale price index (WPI) as notified by Government of India from time to time. Annual closure cost is to be computed considering the total project area of the mine multiplied by escalated rate (at the above mentioned rates) and dividing the same by the balance life of the mine in years. An amount equal to the annual cost is to be deposited each year throughout the mine life compounded @5% annually.
- [For example if the annual cost works out to Rs 100, then in the first year the amount to be deposited will be Rs 100, in the second year $100 \times (1+5\%)^1$, in the third year $100 \times (1+5\%)^2$ and so on.]*
- Further, in case of the mine, where escrow account is already open, the annual closure cost is to be computed considering the total project area at the above mentioned rates minus the amount already deposited and dividing the same by the balance life of the mine in years and annual cost as arrived should be compounded @5% annually.
- 2.7. **Financial Assurance:** The Mining Company/ Mine Owner as a part of Financial Assurance will open a Fixed Deposit Escrow account, with the Coal Controller Organization (on behalf of the Central Government) as exclusive beneficiary prior to commencement of any activities on the land/project area of the mine and shall submit the same to Coal Controller Organization (CCO) before the permission is given for opening the mine. The mining company shall cause the payment to be deposited at the rate computed as indicated at Para 2.6. The owner of the company may select the Schedule Bank where the Escrow account is to be opened and inform the same to the Coal Controller, CCO, Kolkata.
- 2.8. Coal Controller, Kolkata shall get the WPI (used for escalation of closure cost at the time of formulation of Mining plan) updated, at the time of opening of Escrow account. The mine owner/ company including all public/ private sector companies shall deposit the yearly amount in a Schedule Bank in accordance with Para 2.6. Coal Controller, **Kolkata shall also get the**

information, submitted under to para 1.2, verified and get the yearly closure cost modified with respect to the latest WPI in accordance with para 2.6.

- 2.9. Final Mine Closure: The details of the Mining Plan (covering Final Mine Closure Plan envisaging the details of the updated cost estimates for various mine closure activities and the Escrow Account already set up, shall be submitted to the approving authority for approval at least five years before the intended final closure of the mine.
- 2.10. Final Mine Closure would be considered to be completed only after acceptance of the third-party audit report by the Coal Controller on the compliance of all provisions of Mine Closure Plan. Any Institute/ Organization/Agency as may be specified by the Government for this purpose may be engaged for Third Party audit to create a self-sustained ecosystem. Failure of restoration within the specified period may result in forfeiture of Escrow Account created as per Para 2.6 & 2.7. The details of the Final Mine Closure Plan along with the details of the updated cost estimate for various mine closure activities and escrow account already set up shall be submitted at the time of approval of final mine closure plan.
- 2.11. **Time Scheduling for abandonment:** The Action plan for carrying out all abandonment operations (progressive and final mine closure) should be furnished in the form of bar chart for a period of life of the mine plus post closure period. Post closure period shall be taken as 3 (three) years for Underground mines and Opencast mines having stripping ratio lesser than 6 (six) MM^3/Te & 5 (five) years for mines having stripping ratio more than 6 (six) MM^3/Te .
- 2.12. **Implementation of the approved Mine Closure Plan shall be sole responsibility of the mine owner.** Mining is to be carried out in a phased manner i.e. continuation of mining activities from one phase to other indicating the sequence of operations depending on the geo-mining conditions of the mine. Up to 50% of the total deposited amount including interest accrued in the ESCROW account may be released after every five years in line with the periodic examination of the Closure Plan as per Para 2.2. The amount released should be equal to expenditure incurred on the progressive mine closure in past five years or 50% whichever is less. The balance amount shall be released to mine owner/leaseholder at the end of the final Mine Closure on compliance of all provisions of Closure Plan. This compliance report should be duly signed by the lessee and certify that said closure of mine complied all statutory rules, regulations, orders made by the Central or State Government, statutory organisations, court etc. and certified by the Coal Controller.
- 2.13. **Responsibility of the mine owner:** It is the responsibility of the mine owner to ensure that the protective measures contained in the mine closure plan including reclamation and rehabilitation works have been carried out in accordance with the approved mine closure plan and final mine closure plan.
- 2.14. The owner shall submit to the Coal Controller a yearly report before 1st July of every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plans (Progressive and Final Closure Plans).
- 2.15. The money to be provided per hectare of total Project Area for the purpose is to be deposited every year on commencement of any development activity on the land for the mine after opening a Fixed Deposit Escrow Account prior to obtaining mine opening permission from Coal Controller. Mining company/owners including all Public Sector Undertakings shall deposit the yearly amount in a Scheduled Bank. If the Mine owners fail to deposit the required annual amount in accordance with Para 2.6, 2.7 & 2.8, the Government can withdraw the mining permission.
- 2.16. The funds so generated are towards the security to cover the cost of closure in case the mine owner fails to complete the relevant closure activities. The prime responsibility of mine closure shall always lie with the mine owner, and in case these funds are found to be insufficient to cover the cost of final mine closure including the areas covered in Para 2.3 2.6, 2.7, 2.8 & 2.9 above. The mine owner shall undertake to provide the additional fund equivalent to the gap in

funding before five years of Mine Closure failing which it may be recovered by such other methods as the competent authority may deem fit in this regard.

2.17. **Final Closure Certificate:** The Mine owner shall be required to obtain a mine closure certificate from Coal Controller to the effect the protective, reclamation, and rehabilitation work in accordance with the approved Mining plan covering final mine closure provisions/activities have been carried out by the mine owner for surrendering the reclaimed land to the State Government.

2.18. The balance amount at the end of the final Mine Closure shall be released to mine owner on compliance of all provisions of Closure Plan duly signed by the mine owner to the effect that said closure of mine complied with all statutory rules, regulations, orders made by the Central or State Government, statutory organizations, court etc. and duly certified by the Coal Controller. This should also indicate the estimated extractable coal reserves and coal actually mined out.

2.19. If the Coal Controller has reasonable grounds for believing that the protective, reclamation and rehabilitation measures as envisaged in the approved mine closure plan in respect of which financial assurance was given has not been or will not be carried out in accordance with mine closure plan, either fully or partially, the Coal controller shall give the mine owner a written notice of his intention to issue the orders for forfeiting the sum assured at least thirty days prior to the date of the order to be issued after giving an opportunity to be heard.

3. **Formulation of Mining Plan by Qualified Person (QP) or Accredited Mining Plan Preparing Agency (MPPA):**

3.1. System of granting Recognition to a person for preparation of mining plan u/s 22C of MCR 1960 & preparation of mining plan only by RQP u/s 22B of MCR 1960 shall be done away with, after commencement of the Mineral Concessions (Amendment) Rules, 2020.

3.2. After commencement of Mineral Concession (Amendment) Rule 2020, no mining plan shall be accepted unless it is prepared by Qualified Person (QP) or Accredited Mining Plan Preparing Agency (MPPA).

3.3. Quality Council of India (QCI) or National Accreditation Board for Education and Training (NABET) shall be engaged for accrediting following entities:

- (i) Accredited Prospecting Agency (APA) for undertaking prospecting operations and preparation of geological reports for Coal and Lignite Mines, and
- (ii) Mining Plan Preparing Agency (MPPA) for preparation of mining plan (for Coal, Lignite Mines and Sand for Stowing)

3.4. The Quality Council of India (QCI) or National Accreditation Board for Education and Training (NABET) shall grant accreditation in accordance with such standards and procedures as specified in schedule VI of Mineral Concession (Amendment) Rule 2020.

3.5. Qualified Agency (QP) or Mining Plan Preparing Agency (MPPA) who prepares mining plan for a block/mine, shall have recognition from the concerned company board that the qualification of the QP or accreditation of the MPPA has been duly verified and is in line with the relevant provision of the MCR 1960.

4 **Submission, Processing and Scrutiny of Mining Plan**

4.1 **On and from the date of publication of order and upto the expiry of period of nine months from the commencement of the Mineral Concession (Amendment) Rules, 2020,** every mining plan submitted for approval/modification shall be accompanied with a non-refundable application fee specified from time to time in this regard, for the project area specified in the mining plan.

4.2 **On and from the expiry of period of nine months from the commencement of the Mineral Concession (Amendment) Rules, 2020,** every mining plan submitted for approval/modification

shall be accompanied with a non-refundable application fee specified from time to time in this regard, for the project area specified in the mining plan and peer/expert review done by any accredited mining plan preparing or reviewing agency at their (applicant's) own cost. During examination of the Mining Plan by the internal committee of MoC, if it is felt that a review by expert or by specialized agency is required, the committee may recommend referring the mining plan to such expert/agency with the approval of the MP approving authority. Charges for the expert review shall be borne by the applicant.

- 4.3 All pages (including cover page, plates and Annexures) shall bear the signature & stamp furnishing details of the QP/Accredited Mining Plan preparing Agency (MPPA) in physical mode of submission and e-signature/digital signature during the online system of submission.
- 4.4 Ministry of Coal is in process of development of on-line portal for submission and approval of mining plan. system of acceptance of Physical copy shall be continued till the development/operationalization of online portal for submission and approval of mining plan.
- 4.4.1 **Submission to Physical Copy Mining Plan to Ministry of Coal:**
 - 4.4.1.1 The project proponent shall submit one soft copy and four hard copies of Mining Plan (draft)- one each to the concerned Administrative Section of the Ministry of Coal for the concerned block, Section of MoC/CCO dealing with approval of Mining plan, Coal Controller, CMPDIL/ Extended office of CCO & the dispatch receipt of the speed post (confirming that the draft Mining Plan has been sent).The contact details and correspondence address of the section dealing with the approval of Mining plan, administrative section for the mine, members of the committee etc. shall be updated time to time, on the website of the Ministry of Coal/Coal Controller Organisation.
 - 4.4.1.2 The project proponent shall incorporate the observation (if any) and submit the mining plan (after incorporating the compliance to the observation) to section of MoC/CCO dealing with approval of Mining plan, concerned administrative section of the Ministry of Coal, Coal Controller and CMPDIL/ Extended office of CCO.
 - 4.4.1.3 **Submission of Mining Plan (after incorporating compliance) to Ministry of Coal:** The project proponent shall submit 04 (Four) hard copies & 01 (one) soft copy of modified Mining Plan and the compliance to the observations along with copy of the dispatch receipt of the Speed Post (confirming that the modified Mining Plan has been sent to section of MoC/ CCO dealing with approval of Mining Plan, concerned administrative section of the Ministry of Coal, Coal Controller, and CMPDIL/ Extended office of CCO).
 - 4.4.1.4 The procedure of submission at Para 4.3.1 will be replaced by process of submission at para 4.3.2 on development of portal for online submission and approval of Mining Plan.
- 4.4.2 **Online System of Submission of Mining Plan for Approval:**
 - 4.4.2.1 Project proponent shall register online, using registered official mail ID.
 - 4.4.2.2 For the purpose of preparation of Mining plan through a QP or MPPA, project proponent shall share a temporary login with QP/MPPA. This temporary login shall be valid till the preparation and approval of mining plan only.
 - 4.4.2.3 The QP/MPPA shall upload the Mining plan through the temporary login and submit it to the project proponent; QP/MPPA once submits the mining plan to the project proponent, he shall not be able to modify.
 - 4.4.2.4 The Project Proponent shall make payment of processing charges/fees online as specified from time to time by Ministry of Coal;
 - 4.4.2.5 The Project Proponent shall after incorporating relevant company board approvals submit the mining plan to the Approving Authority; The mining plan submitted to approving authority shall become visible to Administrative Section for the respective block, section of MoC/CCO dealing

with approval of Mining plan, members of the Internal Committee, Coal Controller, CMPDIL/ Extended office of CCO, simultaneously. System of SMS alerts shall be available at all stages;

- 4.4.2.6 Observations of the Committee Members shall be uploaded online and the project proponent shall also submit Mining Plan, after incorporating compliance, online

5 Scrutiny & Processing of Mining Plan

- 5.1.1 The current system of getting the mining plan scrutinized through CMPDI, Ranchi shall continue. Ministry of Coal is in process of creating an extended office of Coal Controller Organization at Delhi which shall be delegated with the work of processing and scrutiny of mining Plan. A letter to this effect shall be issued separately.
- 5.1.2 CMPDIL/Extended office of CCO at Delhi shall scrutinize the mining plan and submit comments to section of MoC/CCO dealing with approval of Mining plan within Fifteen (15) days of receipt of the Mining Plan. Non-submission of comments within the stipulated time may be presumed as "no comment" from CMPDIL/Extended office of CCO; CMPDIL/ Extended office of CCO at Delhi, if consider necessary to make a physical verification of the site/site visit for scrutiny of the mining plan, may make such site visit/physical verification of the site, however, no relaxation in the time line as specified above may be given.
- 5.1.3 Administrative Section of the Ministry of Coal (dealing with the block) shall scrutinize the mining plan with respect to Vesting order/ allotment order and CMDPA signed with allottee at the time of allotment and submit observations to section of MoC/CCO dealing with approval of Mining plan (till the development of portal for Mining plan approval) within Fifteen (15) days of receipt of the Mining Plan. Non-submission of comments within the stipulated time may be presumed as "no comment" from the administrative section;
- 5.1.4 Members of the Internal Committee shall examine the mining plan from Technical and administrative angle based on the observations of the Administrative Section (dealing with the respective block) and CMPDIL/Extended office of CCO and the peer/expert review report submitted with the mining plan and submit observations to section of MoC/CCO dealing with approval of Mining plan (till the development of portal for Mining plan approval) within Fifteen (15) days of receipt of the Mining Plan. Non-submission of comments within the stipulated time may be presumed as "no comment" from the administrative section. Members of the internal committee, CMPDIL/Extended office of CCO may raise observation twice only. The observation raised shall be communicated directly to the project proponent for incorporating the same in the mining plan. The project proponent shall make presentation in the meeting of the internal committee for scrutiny.
- 5.1.5 Section of MoC/CCO dealing with approval of Mining plan shall communicate the observation (if any) to the project proponent for compliance till the development of online system for submission, processing, and approval of mining plan.
- 5.1.6 Subsequent, to development of online portal for submission, processing, and approval the observations of the internal committee members shall be uploaded directly on the portal, which will be visible to the project proponent. A timeline of 15 days shall be available for the internal committee members to upload the comments. Non-submission of comments within the stipulated time may be presumed as "no comment".

6 Timeline for submission of Compliance:

Once the observation of the Scrutiny of the mining plan is communicated either in hard copy, mail or online, the Project Proponent is required to submit the mining plan after incorporating the compliance to the observation within a period of 15 days of the communication, failing which the mining plan submitted for approval shall be rejected.

Provided that any such application may be entertained after the said period of 15 Days, if the applicant satisfies the approving authority that he had sufficient cause for non-submission of mining plan (after incorporating the compliance) in time. However, in any case this period may not be extended beyond 30 days from the date of receipt of communication of the observation.

7 Approving Authority:

- 7.1 On and from the date of publication of order and up to the expiry of period of nine months from the commencement of the Mineral Concession (Amendment) Rules, 2020, the powers to approve mining plan for all categories of coal and lignite mines and sand for stowing shall be exercisable by Project Adviser, Ministry of Coal.
- 7.2 On and from the expiry of period of nine months from the commencement of the Mineral Concession (Amendment) Rules, 2020, the power to approve mining plan for all categories of coal and lignite mines including sand for stowing shall be exercisable by the Coal Controller, CCO, Kolkata, a subordinate office of Government of India in the Ministry of Coal.
- 7.3 The person delegated to approval of Mining Plan under sub-section (1) of section 26 read with clause (b) of sub-section (2) of section 5 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) (hereinafter, the 'Act') may seek help of an Internal committee constituted for the purpose.
- 7.4 The approving authority shall dispose of the application for approval of the Mining Plans within a period of 30 days from the date of receiving of such application (The Mining Plan received on or before 30th of Current Month will be considered in the ensuing meeting). Provided that the aforesaid period of 30 days shall be applicable only if the Mining Plan is complete in all respect, and in case of any modifications subsequently suggested after the initial submission of the Mining Plan for approval, the said period shall be applicable from the date on which modified mining plan is re-submitted.

8 Internal Committee for Scrutiny of Mining Plan:

- 8.1 Members of the Internal Committee shall examine the mining plan from Technical and administrative angle based on the observations of the Administrative Section dealing with the respective block & CMPDIL/ Extended office of CCO.
- 8.2 The internal committee shall recommend the mining plan for "Approval" or "Rejection". In case of recommendation for Rejection, the committee shall record the reason for Rejection.
- 8.3 Till the opening of CCO office at Delhi, the internal committee shall consist of:
1. Director (Technical), MoC, Member Secretary
 2. Director/ Deputy Secretary, MoC of the section dealing with the allocation/allotment of the respective block, Member
 3. Coal Controller or his representative, Member
 4. Director level officer of CMPDIL, Member
 5. Director/Deputy Secretary, Nominated Authority, Member
- 8.4 After opening of CCO office at Delhi, the internal committee shall consist of:
1. Director level officer of CCO having relevant working experience., Member
 2. Director/ Deputy Secretary of the section dealing with the respective block, Member
 3. Head of Regional Coal Controller Office (having relevant working experience in mine planning), CCO Regional Office New Delhi, Member Secretary
 4. Any other technical person having working experience of not less than 15 (fifteen) years in mine planning, Member

9 Communication of Approval:

- 9.1 In case of allotted/auctioned mine, section dealing with approval of Mining Plan shall communicate the decision of the approving authority within a period of 5 (five) working days in form of a letter confirming "in-principle approval" of the Mining Plan to the project proponent

with a copy of the same to the Nominated Authority, Govt. of India. Final approval of the Mining Plan in such cases shall be communicated by the section dealing with approval of Mining Plan, only on receipt of applicable payments and its confirmation from the Nominated Authority, Govt. of India.

- 9.2 While for mines other than auctioned/allotted mines, section dealing with approval of Mining Plan shall communicate the decision of the approving authority within a period of 5 working days.

10 Revision:

- 10.1 Any person aggrieved by any order made or direction issued in respect of mining plan by an officer competent to approval mining plans shall within 30 days of the communication of such order or direction, apply to the Secretary (Coal), Ministry of Coal for a revision of such order or direction thereon.

- 10.2 On receipt of any application for revision the authority shall give the aggrieved person a reasonable opportunity of being heard and may within 30 days confirm, modify or set aside the order or direction and his decision thereon shall be final.

- 11 This Guideline** supersedes the previous orders and are without any prejudice to any other relevant rules and regulations, such as those issued by the State Governments, Ministry of Environment, Forest and Climate Change, Ministry of Labour and Employment, etc.



(Hitlar Singh)

Under Secretary to the Government of India

To,

All the existing Coal and Lignite block allocates

Copy to: -

1. All Joint Secretaries, MoC.
2. Coal Controller, Coal Controller's Office, 1- Council House Street, Kolkata.
3. CMD, CIL, Newtown, Rajarhat, Kolkata-700156, W.B
4. CMD, NLCIL, Cuddlore, Distt. Neyveli- 607801 (Tamil Nadu).
5. CMD, Singareni Collieries Company Limited (SCCL), Kothagudem Collieries, Khammam Distt.(A.P).
6. Tech. Director (NIC) - with the request to place it to Website of the Ministry of Coal.

DETAILS TO BE FURNISHED IN THE MINING PLANS FOR COAL/LIGNITE BLOCKS**A. Cover Page**

The Cover page should contain the following information:

- (i) Name of the Mining Plan and Mine Closure Plan /Final Mine Closure Plan
- (ii) Indication, if it is a Modified Mining plan seeking approval under Rule 22E of MCR 1960, it should be marked as “**Modified Mining Plan with Modification No**” i.e. First Modification, Second Modification etc.
- (iii) Name of the Coal/Lignite Block area (Acre/Hectare/Sq. Km.)
- (iv) Name of the Coalfield and its location i.e. District and State
- (v) Name and address of the Applicant
- (vi) Targeted capacity
 - a. Rated capacity : ____ Mty)
 - b. Peak Capacity (@ 150% of the rated capacity) : in ____ Mty,
- (vii) Name of the **Qualified person/ Accredited Mining Plan preparing agency (MPPA)**preparing the mining plan with details

B. Index of Chapters of the Mining Plan (Including Mine Closure Plan) / Mine Closure Plan or Final Mine Closure Plan

<i>Sl No.</i>	<i>Chapters</i>	<i>Page No</i>
1	Checklist	
2	Project Information	
3	Exploration, Geology, Seam Sequence, Coal Quality and Reserve	
4	Mining	
5	Safety Management	
6	Infrastructure Facilities proposed and their Location	
7	Land Requirement	
8	Environment Management	
9	Progressive & Final Mine Closure Plan	

C. Index for List of Annexure**D. Index of List of Plans/ Drawing Attached enclosed as Plates****E. List of Abbreviations used.**

- (viii) All Plans must be colored distinctly with proper legends.

CHECKLIST

<i>Details</i>		(✓ / ✕)
	Expert-review Report	
Text	Project Information	
Text	Exploration, Geology, Seam Sequence, Coal Quality and Reserve	
Text	Mining	
Text	Safety Management	
Text	Infrastructure Facilities proposed and their Location	
Text	Land Requirement	
Text	Environment Management	
Text	Progressive & Final Mine Closure Plan	
Annexure	Copy of allotment order /Vesting order.	
Annexure	Certificate of Qualified person/ Accredited Mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary/<u>existing mining lease</u> and Where the project area extends beyond the block boundary, a certificate of Qualified person/ Accredited Mining Plan preparing agency (MPPA) should be supported with a certificate of State Government mines and Geology department must be attached, which should specify (a) intent of the state government for grant of lease beyond the vested geological boundary/<u>existing mining lease</u>; (b) non-existence of Coal/ Lignite in the area beyond the vested/allotted geological block boundary/<u>existing mining lease</u> to rule out the issue of encroachment and use of coal bearing area (beyond the vested/allotted block boundary/<u>existing mining lease</u>) in the mining plan	
Annexure	Approval of the Company Board	
Annexure	Copy of earlier approval of mining plan.	
Annexure	Plan / chart showing schedule of Implementation of Mine closure activities (progressive and final closure) with duration of important activities	
Annexure	Expert-Review Report carried out by an Accredited Mining Plan Preparing Agency (MPPA)	

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<i>Details</i>		(✓ / ✕)
Annexure	Other document (if any)	
Plates	Location plan	
Plates	Plan certified by Qualified person/ Accredited Mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary/ <u>existing mining lease</u> and where the project area extends beyond the block boundary, a Plan certified by Qualified person/ Accredited Mining Plan preparing agency (MPPA) should be supported with a plan with cardinal co-ordinates duly certified by the Mines and Geology Department of the concerned State Government. Plan in support of Annexure - II	
Plates	Printed copy of the KML file superimposed in the recent (not older than one year from the base date) dated satellite Image duly certified by Accredited Agency should also be attached. Note: The soft copy of the KML file shall also be part of the Soft copy of the mining Plan.	
Plates	Cadastral plan showing approved block boundary vis-à-vis proposed/existing mining lease & Mine boundary superimposed over it in distinct color, showing land use and infrastructure etc..	
Plates	Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area	
Plates	Representative Graphic Litholog	
Plates	Surface Plan showing drainage system, Contour, preferably at 3m interval, location of BH (borehole)	
Plates	Conceptual plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc.	
Plates	Tentative land use plan showing land type (Govt., forest and tenancy land) with its data source	
Plates	Floor contour plan and seam folio plan, iso-grade plan	
Plates	Cross-section showing coal/lignite seam(s)	
Plates	Plan showing existing and proposed surface layout(s)	
Plates	Plan showing total coal thickness and overburden thickness and stripping ratio (in case of opencast (OC) Mines)	
Plates	Final stage quarry plan showing haul road alignment (in case of OC Mines)	

<i>Details</i>		(✓ / ✗)
Plates	Plan showing mode and location of entries and surface layouts (in case of underground (UG) Mines)	
Plates	Layout of the panel for each system (like Longwall, Continuous Miner, Bord& Pillar, road header etc.) should be given (in case of UG Mines)	
Plates	Layout of pillar extraction (in case of UG Mines)	
Plates	Support system (in case of UG Mines)	
Plates	Haulage and transport system (in case of UG Mines)	
Plates	Post mining land use plan	
Plates	Progressive mine closure plan/ stage plans	
Plates	Reclamation plan	

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Chapter 1 : Project Information

	<i>Parameters</i>	<i>Details</i>
1.1	INTRODUCTION	
1.1.1	Name of Coal / Lignite Block	
1.1.2	Name of the Coalfield/ Lignite Field	
1.1.3	Base date of Mining Plan/ Mine Closure Plan	
1.1.4	Linked End Use Plant	
1.1.5	Distance of End use plant from the pit head of the project in "km"	
1.1.6	Mode of Coal Transport	

1.2 LOCATION, TOPOGRAPHY AND & COMMUNICATION

1.2.1	Location of coal deposit (District and State)	
1.2.2	Communication: PWD roads, railway lines, Air	
1.2.3	Availability of power supply, water etc.	
1.2.4	Prominent physiographic features, drainage pattern, natural water courses, rainfall data, highest flood level	
1.2.5	Important surface features within the project area and major diversion or shifting involved	

1.3 DETAILS OF THE ALLOTTMENT AGREEMENT

1.3.1	Name the Allottee	
1.3.2	Details of allotment/vesting order	
1.3.3	Name and address of the applicant	
1.3.4	Name of the Previous allottee of the Block	
1.3.5	Starting Date of the Mine as per CMDPA	
1.3.6	Rated Capacity as per CMDPA	
1.3.7	Production Schedule as per opening permission (meeting provisions of CMDPA if any)	
1.3.8	End Use of Coal/Lignite as	

	<i>Parameters</i>	<i>Details</i>																		
	per allotment order if any																			
1.3.9	Cardinal Points co-ordinates of the Block boundary	<table> <tr> <th>ID</th><th>Latitude</th><th>Longitude</th></tr> <tr> <td>1</td><td>° ' " N</td><td>° ' " E</td></tr> <tr> <td>2</td><td>° ' " N</td><td>° ' " E</td></tr> <tr> <td></td><td>° ' " N</td><td>° ' " E</td></tr> <tr> <td></td><td>° ' " N</td><td>° ' " E</td></tr> <tr> <td></td><td></td><td></td></tr> </table>	ID	Latitude	Longitude	1	° ' " N	° ' " E	2	° ' " N	° ' " E		° ' " N	° ' " E		° ' " N	° ' " E			
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1.4 DETAILS OF THE PREVIOUS APPROVAL OF MINING PLAN

DETAILS OF THE PREVIOUS APPROVAL OF MINING PLAN																											
1.4.1	Date of Approval																										
1.4.2	Conditions, if any																										
1.4.3	Scheduled year of start of production																										
1.4.4	Proposed year of achieving the targeted production																										
1.4.5	Date of actual commencement of mining operations, if operations already started																										
1.4.6	Likely date of mining operations, if operations not yet started & reasons for non-commencement of operations																										
1.4.7	Planned production and actual levels achieved in last 3 years (Coal in Mte, OB in MM³, SR in MM³/te)	<table><tr><th rowspan="2">Year</th><th colspan="2">Coal “Mte”</th><th rowspan="2">OB MM³</th><th rowspan="2">SR “MM³/te”</th></tr><tr><th>UG</th><th>OC</th></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	Year	Coal “Mte”		OB MM ³	SR “MM ³ /te”	UG	OC																		
Year	Coal “Mte”			OB MM ³	SR “MM ³ /te”																						
	UG	OC																									
1.4.8	Statutory obligations vis-à-vis compliance status in a tabular form																										
1.4.9	Reasons for difference between the planned and actual production levels																										

1.5 PARAMETERS OF APPROVED MINING PLAN VIS-À-VIS PROPOSED MINING PLAN

		Approved Mining Plan	Proposed Mining Plan
1.5.1	Block Area in "Ha"		
1.5.2	Block Area Projectised "Ha"		
1.5.3	Lease area "Ha"		
1.5.4	Project Area "Ha"		
1.5.5	Life of the Project "Yrs"		
1.5.6	Minimum and Maximum Depth of working "m"		

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	<i>Parameters</i>	<i>Details</i>	
1.5.7	Net Geological Block “Ha”		
1.5.8	Production Target “MTPA”		
1.5.9	Seams Available “As per GR”		
1.5.10	Seams not considered for Mining with Reasons		
1.5.11	Gross Geological Reserve “Mt”		
1.5.12	Net Geological Reserve “Mt”		
1.5.13	Blocked Reserve “Mt”		
1.5.14	Minable Reserve “Mt”		
1.5.15	Extractable Reserves “Mt”		
1.5.16	% of Extraction/ recovery		
1.5.17	Reserve Depleted (till the base date) Reserves “ Mt”		
1.5.18	Balance Extractable reserve “Mt”		
1.5.19	Average Grade		
1.5.20	OB in MM3		
1.5.21	SR MM3/te		
1.5.22	Mining Technology		
1.5.23	Coal Beneficiation envisaged		
1.5.24	Handling of Rejects		
1.5.25	Land use pattern “ Ha”		
1	Excavation Area		
2	Top Soil Dump		
3	External Dump		
4	Safety Zone		
5	Other Use		
6	Infrastructure area		
7	Green Belt		
8	Undisturbed Area		
	Total		
1.5.26	Reasons for revision		

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Chapter 2 : Exploration, Geology, Seam Sequence, Coal Quality and Reserve

	Parameters	Details																			
2.1	DETAILS OF THE BLOCK																				
2.1.1	Particulars of adjacent blocks: North, South, East, West	North : South:	East: West:																		
2.1.2	Location of the Block District / State																				
2.1.3	Area of the Block “Ha”																				
2.1.4	Area of the geological block projectized “in Ha” (Area of the geological block considered for liquidation of coal reserve)																				
2.1.5	Balance area yet to be projectized “Ha”																				
2.1.6	Likely Reserve in the area yet to be projectized “Mte”																				
2.1.7	Cardinal Point Co-ordinates of the non-coal/lignite bearing area/ <u>existing mining lease</u> outside the allotted Geological Coal/Lignite block (Duly certified in line with para 1.9 of the Guideline, if fresh inking lease required)	<u>Cardinal Points Co-ordinates of the Proposed area outside the non-coal/lignite bearing area outside the allotted Geological Coal/Lignite block</u> <table><tr><th>ID</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>° ' " N</td><td>° ' " E</td></tr><tr><td>2</td><td>° ' " N</td><td>° ' " E</td></tr><tr><td></td><td>° ' " N</td><td>° ' " E</td></tr><tr><td></td><td>° ' " N</td><td>° ' " E</td></tr><tr><td></td><td></td><td></td></tr></table>		ID	Latitude	Longitude	1	° ' " N	° ' " E	2	° ' " N	° ' " E		° ' " N	° ' " E		° ' " N	° ' " E			
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2.1.8	Certificate of Qualified person/ Accredited Mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary/<u>existing mining lease</u> and Where the project area extends beyond the block boundary, a certificate of Qualified person/ Accredited Mining Plan preparing agency (MPPA) should be supported with a certificate of State Government mines and Geology department must be attached, which should specify (a) intent of the state government for grant of lease beyond the vested geological boundary; (b) non-existence of Coal/ Lignite in the area beyond the vested/allotted geological block boundary/<u>existing mining lease</u> to rule out the issue of encroachment and use of coal bearing area (beyond the vested/allotted block boundary/<u>existing mining lease</u>) in the mining plan The Project area, Lease area and geological block area in “Ha” shall also be envisaged.	<u>Cardinal Points Co-ordinates of the Proposed LeaseArea considered in the Mining Plan</u> <table><tr><th>ID</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>° ' " N</td><td>° ' " E</td></tr><tr><td>2</td><td>° ' " N</td><td>° ' " E</td></tr><tr><td></td><td>° ' " N</td><td>° ' " E</td></tr><tr><td></td><td>° ' " N</td><td>° ' " E</td></tr><tr><td></td><td></td><td></td></tr></table> Note: Certificate should be given on conceptual plan envisaged in the proposed mining plan depicting OB area, infrastructure locations and cardinal point co-ordinates of the lease area, block area, project area; In case the project boundary extends beyond the allotted geological block boundary/<u>existing mining lease</u> certificate of non-occurrence of coal should be clearly shown. Certificate should envisage that the Geo-reference Co-ordinates considered for preparation of Mining plan is in line with Vesting/allotment order and does not encroach		ID	Latitude	Longitude	1	° ' " N	° ' " E	2	° ' " N	° ' " E		° ' " N	° ' " E		° ' " N	° ' " E			
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	<i>Parameters</i>	<i>Details</i>
		any other adjacent block, and non-coal bearing certificate of the area in case any proposed infrastructure or OB dump is outside the block area;
2.1.9	KML file of the Proposed lease area, Project Area and geological block.	Note: Printed copy of the KML file superimposed in the recent (not older than one year from the base date) dated satellite Image duly certified by Accredited Agency should also be attached. Note: The soft copy of the KML file shall also be part of the Soft copy of the mining Plan.
2.1.10	Whether the proposed project area is confined within the allotted block boundary/ existing mining lease , if not, the reason for deviation from allotted block boundary, may be given.	
2.1.11	If the project area extends outside the allotted block boundary/ existing mining lease , confirmation about non-occurrence of coal/lignite in the area under reference needs to be furnished	
2.1.12	Type of the Project (Operating / under Implementation) and year of Starting.	
2.2	EXPLORATION, GEOLOGY AND ASSESSMENT OF RESERVE	
2.2.1	Regional geological set up of the area, local geology, structure, stratigraphic sequence, characteristics of the litho-logical units (coal seams /partings/overburden).	(In Maximum 500 Words)
2.2.2	Local geology, Structure, Stratigraphic sequence, Characteristics of the litho-logical units (coal seams /partings/overburden).	(In Maximum 500 Words)
2.2.3	Geological Block Area “Ha”	
2.2.4	Status of Exploration of the block	
2.2.5	Area covered by ‘detailed’ exploration within the block (sq. km)	
2.2.6	Whether entire lease area has been covered by ‘detailed’ exploration.	
2.2.7	No. of boreholes drilled within the block	
2.2.8	Whether any further exploration/study is required or suggested and time frame in which it is to be completed	
2.2.9	Year wise future programme of exploration	
2.2.10	Overall borehole density within the block (no./ sq. km) approx	
2.2.11	No of Seams available as per GR (Geological Report)	
2.2.12	Seams not considered for Mining with Reasons	
2.2.13	Dip of the Seam	
2.2.14	Seam wise thickness, depth and reserve	

	Parameters	Details																																																																																																																																																																																																									
	<table><tr><th>Seam</th><th>Thickness Range 'm'</th><th>Depth Range 'm'</th><th>Net Geological Res "Mte"</th><th>Highwall/ Batter</th><th>Nala/ River/Road</th><th>Barrier</th><th colspan="2">Blocked Reserve below</th><th colspan="2">Min Res " Mte"</th><th rowspan="2">Mining losses</th></tr><tr><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Un- economl</th><th>Total Blocked</th><th>UG</th><th>OC</th></tr><tr><td>Seam p</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam p</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam p</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam p</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam p</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Total</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <table><tr><th>Seam</th><th colspan="3">Ext Res "Mte"</th><th colspan="7">As on base date "Mte"</th><th rowspan="2">Reason not considered for mining</th></tr><tr><th></th><th>UG</th><th>OC</th><th>Highwall</th><th colspan="3">Depletion of Reserve</th><th colspan="4">Balance Reserve</th></tr><tr><th></th><th></th><th></th><th></th><th>UG</th><th>OC</th><th>Highwall</th><th>UG</th><th>OC</th><th>Highwall</th><th>Total</th></tr><tr><td>Seam</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Seam</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Total</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Seam	Thickness Range 'm'	Depth Range 'm'	Net Geological Res "Mte"	Highwall/ Batter	Nala/ River/Road	Barrier	Blocked Reserve below		Min Res " Mte"		Mining losses								Un- economl	Total Blocked	UG	OC	Seam p												Seam p												Seam p												Seam p												Seam p												Total												Seam	Ext Res "Mte"			As on base date "Mte"							Reason not considered for mining		UG	OC	Highwall	Depletion of Reserve			Balance Reserve								UG	OC	Highwall	UG	OC	Highwall	Total	Seam												Seam												Seam												Seam												Seam												Total												Note : Break-up of the geological reserve for the block, considered in the proposed mining plan, to be projected later and that likely to be sterilized to be given seam wise along with the relevant plans.
Seam	Thickness Range 'm'	Depth Range 'm'	Net Geological Res "Mte"	Highwall/ Batter	Nala/ River/Road	Barrier	Blocked Reserve below		Min Res " Mte"		Mining losses																																																																																																																																																																																																
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2.2.21	Corresponding extractable reserve of the block “Mte”																																																																																																																																																																																																										
2.2.22	Percentage of Extraction																																																																																																																																																																																																										
2.2.23	Reserve already depleted (Base date of Mining Plan)																																																																																																																																																																																																										
2.2.24	Balance Reserve (as on Base Date)																																																																																																																																																																																																										

Chapter 3: Mining

	<i>Parameters</i>	<i>Details</i>
3.1	MINING METHOD	
3.1.1	Existing method of mining if the mine is under operation	
3.1.2	Proposed method of mining with justification on suitability of method of mining	• Seams to be worked, Choice of Mining Method and justification for Optimization of targeted capacity, sequence of mining, production scheduling, equipment configuration etc. • Behavior of coal roof & floor and support system for strata control including, Geo-technical investigations, rock mechanics study carried out already, if any, Scheme of mine development in tandem with production, transport and winding system in underground for coal and rock (if required) and personnel; Sources of stowing material (if applicable) • Brief description of all operation e.g. winning, transport, blasting, overburden removal and disposal, Life of the mine furnishing the assumptions made and the detailed computations • Location of Mine Opening: In case of opencast mines location of Access trench & reason for selection of site thereof the mining system (geometry and bench parameters and its sequence of development, along with a drawing) and quarry parameters (surface area, floor area), thickness range of each seam and parting, minimum and maximum depth. Quarry stage plans including OB dumps for 1st year, 3rd year, 5th year, year of achieving rated capacity of the mine, Final year (i.e. at the end of mine life) and post closure subsequently, also indicating the volume of excavation for coal and OB, area of excavation volume of internal and external dump and the area, in hectare, for internal and external dumps and height. Seam wise calendar programme of excavation, timeframe for commencement of Backfilling & justification therefor. • In case of underground mining, number and location, length & depth of shafts, inclines, and other mode of entries to be shown in the plan, e.g. Shaft 1, Shaft -2 etc.), HFL of the area, gassiness of the seams, Technology tie-ups if any. • Seams to be worked, method of working, optimization of coal roof & floor and support system for strata control including, Geo-technical investigations, rock mechanics study carried out already, if any, Scheme of mine development in tandem with production, extent of working for 1st year, 3rd year, 5th year, year of achieving rated capacity of the mine, Final year (i.e. at the end of mine life) and post closure, (all stages may be marked in distinct color in the working plan of each seam), transport and winding system in underground for coal and rock (if required) and personnel; Sources of stowing material (if applicable). • Adequacy of ventilation system taking into account the

	Parameters	Details																																																						
		development works with supporting calculations, specifications of Main Mechanical Ventilator, blasting requirements and requirement of explosives, pumping requirements and standby arrangements. (In Maximum 2000 Words)																																																						
3.1.3	Coal production capacity proposed "Mtpa"																																																							
3.1.4	Justification for optimization Coal production capacity	(In Maximum 500 Words)																																																						
3.1.5	Calendar year from which the production will start																																																							
3.1.6	Year of Achieving rated production																																																							
3.1.7	Tentative Coal production Plan "MT"																																																							
	<table border="1"> <thead> <tr> <th colspan="2">Year</th> <th colspan="3">Coal Production Schedule</th> <th rowspan="2">OB "MM3"</th> <th rowspan="2">SR</th> </tr> <tr> <th>Year of Operation</th> <th>Calendar Year</th> <th>UG</th> <th>OC</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td colspan="2">Up to 31.03.2019</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y-1</td> <td>2019-20</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Y-5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Year		Coal Production Schedule			OB "MM3"	SR	Year of Operation	Calendar Year	UG	OC	Total	Up to 31.03.2019							Y-1	2019-20						Y-2							Y-3							Y-4							Y-5						
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Y-5																																																								
	Note: Calendar Plan / Production Plan for the entire life of the mine.																																																							
3.1.8	Rated Capacity "Mtpa"																																																							
	- By OC																																																							
	- By UG																																																							
	- Overall																																																							
3.1.9	Life of the mine: "Years"																																																							
	- By OC																																																							
	- By UG																																																							
	- Overall																																																							
3.1.10	Whether the proposed external OB dump site is coal/ lignite bearing: If so, whether coal/lignite below waste disposal area is extractable.																																																							
3.1.11	Whether negative proving for coal / lignite in the proposed site for OB dump/ infrastructure has been done.																																																							
3.1.12	Results of any investigation carried out for scientific mining, conservation of minerals and protection of																																																							

	<i>Parameters</i>	<i>Details</i>
	environment; future proposals.	
3.1.13	Type of Equipment/ HEMM proposed	

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Chapter 4 : Safety Management

	<i>Parameters</i>	<i>Details</i>
4.1	Safety Management	
4.1.1	Important safety aspects: Major Risks and uncertainties to the project viz. Proximity to river, adjacent working, geo-mining disturbances, slope stability and remedial measures suggested. It should also include proposed overall slope of the quarry and OB dump, dump height, strata control, fire and spontaneous heating, gas monitoring, disaster management, danger from inrush of water etc.	(In Max 500 Words)
4.1.2	A Commitment from the Company Board that entire mining operation will be carried out as per the Statutory provision given under Mines Act 1952, Coal Mine Regulation 2017 and & wherever specific permission will be required the company will approach the concerned authorities.	(To be furnished as a Part of Annexure)

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Chapter 5 : Infrastructure Facilities

	<i>Parameters</i>	<i>Details</i>
5.1	Mine infrastructure required e.g. Equipment maintenance planning, Office buildings, Workshop, Power supply arrangement, Water supply etc.	(Tabular Form) (Location to be shown in Conceptual Plan/Plates)
5.2.	Power supply & illumination.	(Max 500 Words) (Location to be shown in Plates)
5.3	Drainage & Pumping : Assessment of Volume of Water for Pumping, Pumping Capacity and Pump Selection	(Max 500 Words) (Location to be shown in Plates)
5.4	Coal Handling Arrangement: Brief detail of the CHP/ Mode of Dispatch, Coal quality and Coal staking and handling arrangement	(Max 500 Words) (Location to be shown in Plates)
5.5	Coal washing and the proposed handling/disposal of rejects.	(Max 500 Words) (Location to be shown in Plates) Annual Raw coal Feed plan and product with reduction in ash% from feed to product must be furnished in a tabular form



Chapter 6 : Land Requirement

	Parameters	Details									
6.1	LAND REQUIREMENT										
6.1.1	Total Land requirement for the mine in “Ha”	Break up of pre-mining land type (indicative) and source of data.									
		Land Type							Area		
		Tenancy	Agricultural								
			Township								
			Grazing								
			Barren								
			Water Bodies								
			Road								
			Community/other use								
		Govt Non Forest	Agricultural								
			Township								
			Grazing								
			Barren/other use								
		Forest	Reserve								
			Protected								
FreeHold											
Total											
6.1.2	During mining Land use details:										
	Type	Land use (Proposed)	Land Use (End of Life)	Land Use (Post Closure)							
				Agricul tural land	Plant ation	Water Body	Public/ Company Use	Forest Land (Returned)	Undist urbed	Total	
	Excavation Area										
	Backfilled Area										
	Excavated Void										
	Without plantation										
	Top Soil Dump										
	External Dump										
	Safety Zone										
	Haul Road between quarries										
	Road diversion										
	Diversion/ below River/Nala/canal										
	Settling pond										
	Road & Infrastructure area										
	Rationalization area										
	Garland drains										
	Embankment										

<i>Parameters</i>		<i>Details</i>							
	Green Belt								
	Water Reservoir near pit								
	UG entry								
	Undisturbed/ Mining right for UG								
	Resettlement								
	Pit head power plant								
	Water harvesting								
	Agricultural land								
	Total								
6.1.3	Surface features over the block area								
6.1.4	No. of villages/Houses to be shifted								
6.1.5	Population to be affected by the project								
6.1.6	Proposed Rehabilitation programme								
6.2	DETAILS OF LEASE								
6.2.1	Status of Lease								
6.2.2	Existing Lease Area "Ha"								
6.2.3	Period for which Mining Lease has been granted/is to be renewed/ is to be applied for.								
6.2.4	Date of expiry of earlier Mining Lease, if any								
6.2.5	Whether the lease boundary/ required boundary is same as mentioned in the allotment order								
6.2.6	Lease Area (applied/ required) as per the Mining Plan under consideration (Ha)								
6.2.7	Whether the applied lease area falls within the allotted block								
6.2.8	Area (Ha) of lease which falls outside the delineated Block Boundary/Existing Mining Lease								
6.2.9	Details of outside area:								
	☐ Whether forms part of any other coal block								
	☐ Whether it contains any coal/lignite reserves								
	☐ Purpose for which it is								

	<i>Parameters</i>	<i>Details</i>
	required, e.g. roads/ OB dumps/ service buildings/ colony/ safety zone/ others (specify)	
6.2.10	Whether some part(s) of the allotted block has not been applied for mining lease.	
	- Total area in Ha of such part(s).	
	- Total reserves in such part(s). (Mt)	
	- Brief reasoning for leaving such part(s)	

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Chapter 7 : Environmental Management

	<i>Parameters</i>	<i>Details</i>
7	ENVIRONMENTAL MANANGEMENT	
7.1	Commitment from the project proponent that the company will comply Environment and Forest Condition stipulated in the respective clearances	

Re

Chapter 8 : Progressive & Final Mine Closure Plan

	Parameters		Details							
8.1	Land Degradation and restoration Schedule									
8.1.1	Tentative Land Degradation and Technical Reclamation (Commutative Area "Ha")									
	Year/Stage (Life of the mine plus post closure period)		Land Degraded				Technically Reclaimed Area			
			Excav	Dump (Extn + Top Soil)	Infra/ others	Total	Backfill	Dump (Extn + Top Soil)	Others	Total
	Up to Base year *									
	Y-1	19-20								
	Y-3	21-22								
	Y-5	23-24								
	Y-10	28-29								
	Y-15	33-34								
	Y-20									
	Y-25									
	Y-30									
	Y-33*									
	Post Closure									
	Y-36									
* - Considering Base year i.e. 2018-19 and life of 33 years in this case										
Note: For the purpose of preparation of Stage plan and action plan for restoration and assessment of life of mine and escrow account, the year in which any activity over the proposed land is envisaged, should be considered as 1 st year i.e First year of development .										
Stages of reclamation and restoration of land should be given for 1 st , 3 rd , 5 th and subsequently every five year for the entire life of the project and for 3 years post closure.										
8.1.2	Tentative Biological Reclamation (Cumulative in “Ha”)									
	Year/Stage (Life of the mine plus post closure period)		Biologically Reclaimed Area					Forest land (Return)	Un Disturbed/ To be left for Public/com Use	Total
			Agriculture	Plantation	Water Body	Public/ Company Use	Total			
	Up to Base year *									
	Y-1	19-20								
	Y-3	21-22								
	Y-5	23-24								
	Y-10	28-29								
	Y-15	33-34								
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8.2	Post Closure Water Quality management:				(Max 200 Words) (Existing water bodies available in the lease hold area; Measures to be taken for protection of the same including control of erosion, sedimentation, siltation, water treatment, diversion of water course if any; Measures for protection of contamination of ground water from leaching etc;)																																																																																																																																																														
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16

	Parameters		Details				
8.5	Top Soil Management – (Including Action plan for Top Soil management) (Tentative)						
	(All Figures are Cumulative and in MM3)						
	Year/Stage (Life of the mine plus post closure period)		Top Soil Removal Plan	Top Soil Used			
				Spreading Over Embankment	Spreading over Backfill area	Spreading over External OB Dump area	Used in Green Belt area
	Up to Base year *						
	Y-1	19-20					
	Y-3	21-22					
	Y-5	23-24					
	Y-10	28-29					
	Y-15	33-34					
	Y-20						
	Y-25						
	Y-30						
	Y-33*						
	Post Closure						
Y-36							
Stages at 1 st , 3 rd , 5 th and subsequently every five year for the entire life of the project and for 3 years post closure							
8.6	Management of Coal Rejects.		(Max 150 Words)				
			Proposal regarding future maintenance and dismantling of structures, slurry pond and rejects				
8.7	Restoration of Land used for Infrastructure		(Infrastructure to be retained and to be dismantled are to be presented in a tabular form envisaging measures to be taken for their physical stability and maintenance for the retained infrastructure facilities)				
8.8	Disposal of Mining Machinery						
8.9	Safety & Security		Measures to be implemented to prevent access to surface opening for underground working, excavation etc				
8.10	Abandonment Cost and Financial Assurance						
8.10.1	Abandonment Cost: Cost of Activities to be taken up for closure of the mine						



Parameters		Details			
Head		Unit	Quantity	Rate Rs/Unit	Amount "Rs. Cr"
Progressive closure	Water quality management	LS			
	Air quality management	LS			
	Waste Management	M Cum			
	Barbed wire fencing around dump	m			
	Barbed wire fencing around the Pit	m			
	Filling of Void - Rehanging of Crown Dump	MM3			
	Top Soil management	MM3			
	Technical and Biological Reclamation of Mined out of land and OB Dump	Ha.			
	Plantation over virgin area including green belt	Ha			
	Manpower Cost and supervision				
	Toe Wall around the dump	m			
	Garland drain	m			
	Garland Drain around the dump	m			
	Any other Activity				
Dismantling of Infrastructure & Disposal/ rehabilitation of Mining machinery	Dismantling of workshop	LS			
	Rehabilitation of the dismantled Facilities	LS			
	Dismantling of pumps and Pipes/ other facilities	LS			
	Dismantling of stowing bunker, provisioning of pumps for borewell pumping arrangement				
	Dismantling of UG equipment				
	Rearranging water pipeline to dump top park/ Agricultural land	LS			
Safety and security	Dismantling of Power lines				
	Barbed wire fencing around dump				
	Barbed wire fencing around the Pit	m			
	Barbed wire fencing with masonry pillars				
	Concrete wall with Masonary pillars around the pit	m			
	Securing air shaft and installation of borewell pump				
	Securing of Incline				
	Concrete wall fencing around the water body				
	Boundary wall around the water body				
	Stabilisation(viz benching, pitching etc) of side walls of the water body				
	Toe Wall around the dump				
Technical and Biological Reclamation of Mined out of land and OB Dump	Garland drain				
	Garland Drain around the dump				
	Drainage Channel from main Ob dump				
	Filling of Void	Ha			
	Top Soil management	MM3			
	OB Rehanging for backfilling	MM3			
	Terracing, blanketing with soil and vegetation of External OB Dump	Ha			
	Peripheral road, gates, view point, cemented steps on bank				
Post Closure management and supervision	Expenditure on development of Agricultural land				
	Landscaping and Plantation	LS			
	Power Cost	LS			
	Post Mining Water quality management	LS			
	Post Mining Air quality management	LS			
	Subsidence monitoring for 5 years	LS			
	Waste Management	LS			
	Manpower Cost and supervision	LS			
Others	Enterprenuership development (vocational/skill development training for sustainable income of affected people				
	Golden Handshake / Retrenchment benefits to 100 employees of OC				
	Golden Handshake / Retrenchment benefits to 200 employees of UG				
	Onetime financial grant to societies / institutions /organisations which is dependent upon the project,				
	Provide jobs in other mines of the company				
	Continuation of other services like running of schools etc.				
Total					

	Parameters		Details		
8.10.2	Financial Assurance : Amount to be deposited in Escrow account as a security against the mine activities to be carried out for the closure of the mine				
	WPI as on	Apr-19		121.10	
	WPI as on base date *	Apr-19		121.10	
	Escalation rate of Closure cost			1.00	
		UG	OC		
	Base Rate of Closure Cost "Rs. Crs./Ha"	0.015	0.09		
	Closure Cost "Rs. Crs./Ha"	0.015	0.09		
	Project Area	1000.00	885.53		
	Amount to be deposited into Escrow Account "Rs. in Crs"	15.00	79.70		
	Amount already deposited into Escrow Account "Rs. in Crs"	5.00	8.87		
	Net Amount to be deposited into Escrow Account "Rs. in Crs"	10.00	70.83		
	Rate of compounding of Annual Closure Cost		5.00%		
	Balance Life of the project "in Yrs"	10	33		
	Annual Closure Cost	1.000	2.146		
	in Crs"		184.42		
	* - Base date considered in the example is 01.04.2019 and the life of the OC mine considered is 33 years and UG mine considered is 10 years. Rs. 8.87 and RS 5.0 crs have been deposited in escrow account for OC and UG mine respectively.				
	Amount to be deposited into Escrow				
	Year	OC	Year	UG	Total
	1	2.146	1	1.000	3.146
	2	2.254	2	1.050	3.304
	3	2.366	3	1.103	3.469
	4	2.485	4	1.158	3.642
	5	2.609	5	1.216	3.824
	6	2.739	6	1.276	4.016
	7	2.876	7	1.340	4.216
	8	3.020	8	1.407	4.427
	9	3.171	9	1.477	4.648
	10	3.330	10	1.551	4.881
	11	3.496			3.496
	12	3.671			3.671
	13	3.854			3.854
	14	4.047			4.047
	15	4.249			4.249
	16	4.462			4.462
	17	4.685			4.685
	18	4.919			4.919
	19	5.165			5.165
	20	5.424			5.424
	21	5.695			5.695
	22	5.979			5.979
	23	6.278			6.278
	24	6.592			6.592
	25	6.922			6.922
	26	7.268			7.268
	27	7.631			7.631
	28	8.013			8.013
	29	8.414			8.414
	30	8.834			8.834
	31	9.276			9.276
	32	9.740			9.740
	33	10.227			10.227
	Total	171.839		12.578	184.417

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ANNEXURES

	<i>Parameters</i>	<i>Details</i>	
I	Copy of allotment order /Vesting order.	Mandatory Document	Annexure - I
II	Certificate of Qualified person (QP) / Accredited Mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary <u>existing mining lease area</u> Where the project area extends beyond the block boundary, a certificate of Qualified person (QP)/ Accredited Mining Plan preparing agency (MPPA) should be supported with a certificate of State Government mines and Geology department must be attached, which should specify (a) intent of the state government for grant of lease beyond the vested geological boundary; (b) non-existence of Coal/ Lignite in the area beyond the vested/allotted geological block boundary <u>existing mining lease</u> to rule out the issue of encroachment and use of coal bearing area (beyond the vested/allotted block boundary <u>existing mining lease</u>) in the mining plan	Mandatory Document Note: Certificate should be given on conceptual plan envisaged in the proposed mining plan depicting OB area, infrastructure locations and geo-reference co-ordinates of the lease area, block area, project area; In case the project boundary extends beyond the allotted geological block boundary certificate of non-occurrence of coal should be clearly shown. Certificate should envisage that the Cardinal Point Co-ordinates considered for preparation of Mining plan is in line with Vesting/allotment order and does not encroach any other adjacent block, and non-coal bearing certificate of the area in case any proposed infrastructure or OB dump is outside the block area; The Project area, Lease area and geological block area in “Ha” shall also be envisaged.	Annexure - II
III	Approval of the Company Board Approval: ,	Mandatory Document Board approval must Specify: • Approvals of Mining Plan form the Board of the company giving undertaking for correctness of data used in preparation of Mining Plan; • Details of the Qualified person (QP)/ Accredited Mining Plan preparing agency (MPPA) with certification that the eligibility of Qualified person/	Annexure - III



	<i>Parameters</i>	<i>Details</i>
		Accredited Mining Plan preparing agency has been verified. • Acceptance of the Mining Plan by the company board with recommendation for approval; • Undertaking that the mine will be developed as per the approval of the mining plan from Ministry of coal and all other approvals, as required will be obtained from relevant authorities • Commitment that entire mining operation will be carried out as per the Statutory provision given under Mines Act 1952, Coal Mine Regulation 2017, EP Act 1986 and FC Act 1980 and & wherever specific permission will be required the company will approach the concerned authorities. • Financial Assurance for implementation • Undertaking that the reclamation & rehabilitation work shall be carried out in accordance with the approved Mine Closure Plan and any modification /amendments which may be made in the mine Closure Plan by Ministry of Coal, from time to time. • Undertaking that the protective measures contained in the mine closure plan including reclamation and rehabilitation works will be carried out in accordance with the approved mine closure plan and final mine closure plan and undertake to submit a yearly report before 1st July of every year to the Coal Controller setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plans (Progressive and Final Closure; • Undertaking that they will obtain a mine closure certificate from Coal Controller to the effect that the protective, reclamation and rehabilitation works carried out in accordance with the approved mine

	<i>Parameters</i>	<i>Details</i>	
		closure plan/final mine closure plan and will surrender the reclaimed land to the State Government concerned.	
IV	Copy of earlier approval of mining plan.	Mandatory Document	Annexure - IV
V	Plan / chart showing schedule of Implementation of Mine closure activities (progressive and final closure) with duration of important activities	Mandatory Document	Annexure - V
VI	Non-refundable Application Fee	Proof of the payment	Annexure - VI
VII	Expert-Review Report	Carried out by Accredited Mining Plan Preparing Agency (MPPA)	Annexure - VII
VIII	Other document (if any)		Annexure - ...

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PLANS/ PLATES

I	Location plan	
II	Plan certified by Qualified person (QP) / Accredited Mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary and Where the project area extends beyond the block boundary, a Plan certified by Qualified person (QP) / Accredited Mining Plan preparing agency (MPPA) should be supported with a plan with cardinal point co-ordinates duly certified by the State Government mines and Geology department. Plan in support of Annexure - II	Plan in support of Annexure - II Note: Certificate should be given on conceptual plan envisaged in the proposed mining plan depicting OB area, infrastructure locations and cardinal Point co-ordinates of the lease area, block area, project area; In case the project boundary extends beyond the allotted geological block boundary certificate of non-occurrence of coal should be clearly shown. Certificate should envisage that the cardinal point Co-ordinates considered for preparation of Mining plan is in line with Vesting/allotment order and does not encroach any other adjacent block, and non-coal bearing certificate of the area in case any proposed infrastructure or OB dump is outside the block area;
III	KML file of the Proposed lease area, Project Area and geological block.	Note: A printed copy of the KML file superimposed in the recent (not older than one year from the base date) dated satellite Image duly certified by Accredited Agency should also be attached. The soft copy of the KML file shall also be part of the Soft copy of the mining Plan.
IV	Cadastral plan showing approved block boundary vis-à-vis proposed/existing mining lease & Mine boundary superimposed over it in distinct color, showing land use and infrastructure etc.	
V	Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area	
VI	Graphic Litholog	
VII	Surface Plan showing drainage system, Contour, at minimum 3m interval, location of BH	
VIII	Conceptual plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc	
IX	Tentative land use plan showing land type (Govt., forest and tenancy land)	



	with its data source				
X	Floor contour plan and seam folio plan, ISO-grade plan	Seam	Floor Contour	Seam Folio	
XI	X-section showing coal/Lignite seams				
XII	Plan showing existing and proposed surface layout				
	OPENCAST (OC) MINES				
XIII	Plan showing total coal thickness and overburden thickness and stripping ratio	OC			
XIV	Final stage quarry plan showing haul road alignment	OC			
	UNDER GROUND (UG) MINES				
XV	Plan showing mode and location of entries and surface layouts	UG			
XVI	Layout of the panel for each system (like Longwall, Continuous Miner, Bord & Pillar, road header etc.)	UG			
XVII	Layout of pillar extraction	UG			
XVIII	Support system	UG			
XIX	Haulage and transport system	UG			

CLOSURE PLAN

XX	Post mining land use plan				
XXI	Progressive mine closure plan/ stage plan indicating stages at 1st,3rd, 5th, year of achieving rated capacity of the mine and end of life (showing area, volume, dump height etc. for OC and seam-wise layout projects and ventilation system in UG)	Year	Plate No		
		1st			
		3rd			
		5th			
		PRC			
		End of Life			
XXII	Reclamation plan				

