

# SUMMARY EIA

(As Per EIA Notification No. S.O. 1533(E) dated 14<sup>th</sup> September 2006 & amendments thereof

of

## Ketki Expansion Underground Coal Mine Project

Village: Jobga, Lacha & Ketka,

Taluka: Surajpur, District: Surajpur, State: Chhattisgarh

Mining lease area: 548.65 Ha

Production Capacity: 0.87 MTPA

(Project Category 'A') (Brownfield Project)

Submission for

## Public Hearing

to

## Chhattisgarh Environment Conservation Board

Project Proponent

### M/s South Eastern Coalfields Limited

Seepat Road, Bilaspur (Chhattisgarh) Pin: 495006

### EIA Consultant

### Srushti Seva Pvt. Ltd.

NABET Accredited

EIA Consultant Organization

Certificate No. NABET/EIA/25-28/RA 0423 Valid till 12/05/2028



JANUARY 2026

## **SUMMARY EIA**

The concise summary of the Key Project Parameters along with overall justification for implementation of the project and explanation of how adverse effects will be mitigated as required under the generic structure of Appendix III of the EIA Notification 2006. Further, the conclusion on the studies undertaken is also included in the Chapter.

### **1.0 ALLOCATION OF COAL BLOCK:**

Ketki underground project is an ongoing project of M/s SECL and is a part of Ketki Geological block of Lakhanpur coalfield. This block is now a part of rationalized block i.e. Rehar West block, (after rationalization of coal block) in Bishrampur Area. Existing environmental clearance of the project is for the capacity 0.42 MTPA. It is proposed to increase the mine capacity from 0.42 MTPA to 0.87 MTPA as per provisions of EIA Notification 2006 in existing ML area 548.65 Ha Without increase in mine lease area.

### **2.0 LOCATION OF THE PROJECT:**

The Ketki Underground Coal Mining Project in Ketki Coal Block of M/s SECL covers land of Villages – Jobga, Laccha & Ketka Villages of Surajpur Tehsil of Surajpur District of Chhattisgarh. The area of the leasehold is 548.65 ha.

The Ketki block occupies an area of about 14 sq. km. It is situated in the north central part of the Lakhanpur coalfield in Bishrampur Area, SECL. The block is bounded by latitude 23°05'40" to 23°09'24" N and longitude 82°49'43" to 82°55'00" E, and covered under Survey of India topo-sheet no. 64 I/16.

### **3.0 PROJECT AREA & LAND REQUIREMENT:**

The Project Area is 548.65 ha Mining Lease Area to be used for mining & allied activities like Underground Entry ( Inclines), Roads & Infrastructure, Safety Zone, etc.

The 548.65 ha Area includes 309.81 ha of Tenancy Land, 30.85 ha of Government Non Forest barren Land and 207.99 ha of Forest Land. Out of this 548.65 ha land, only 5.30 ha needs to be acquired for surface infrastructure under All Rights and has been acquired, balance 543.35 ha will be under mining rights. The necessary Stage-2 Forest Clearance of the 207.99 ha has also been obtained vide F. No - 8-13/2016-FC dated 28.02.2019.

### **4.0 CURRENT STATUS OF THE PROJECT SITE:**

The Ketki Underground Expansion Coal Mine is a brownfield project and all activities related to Mining are already in place after receipt of the Statutory Clearances and approvals for the existing EC capacity of 0.42 MTPA in an area of 548.65 ha.

### **5.0 ENVIRONMENTAL SENSITIVITY:**

No National Park, Wildlife Sanctuary, Biosphere Reserve or Migratory Corridors of Fauna is present inside the Project Site or within 10 Kms area of the Project Site. Jobga Nala is adjacent to the Eastern boundary of the Project Area.

### **6.0 GRANT OF EC & BASE LINE DATA MONITORING:**

The TOR for the Project was accorded vide MoEF & CC TOR Identification No. TO24A0102CG5312564N dated 2nd July. 2025. The Base Line Data was collected during October 2024 to December 2024 for a period of 12 weeks.

### **7.0 MINING METHODOLOGY:**

The proposed expansion in production capacity of this Mine has been planned to continue work by the existing Mechanized Underground Mining Methodology by deploying Continuous Miner for

extraction of coal. Regular drilling and Blasting is not envisaged and shall be done only when hard strata/rock is encountered.

**8.0 PRODUCTION, RESERVES AND LIFE OF MINE:**

The Project envisages normative production of 0.87 MTPA in 3rd Year of Mine Operation of balance 15 years of Mine Life.

**9.0 MANPOWER, WATER & POWER REQUIREMENT:**

The Project shall provide direct employment to nearly 461 persons besides creating many indirect employment opportunities.

The CGWA NOC has been obtained for GW abstraction and dewatering to the extent of 3006 cum/day and is valid till 26-10-27. The Water Requirement of the Project is estimated to be 1095 KLD. Out of this, 1086 KLD is required for industrial use and 9 KLD for domestic use. The breakup of industrial water utilization is 540 KLD of the water is required for Continuous Miner Package, 112 cum/day for UG Dust suppression, 400 cum/day for Dust Suppression on surface haul road, 3 cum/day for Green Belt, 10 cum/day for Workshop, 5 cum/day Fire Services, 16 cum/day for CHP, 9 cum/day for Office and residential services and the balance 1911 cum/Day shall be for drinking/domestic purpose of peripheral villages/ discharged to natural water course . Domestic Water shall be sourced from ground water through bore wells for which necessary approvals have been obtained. Water for Industrial Use shall be sourced through mine pit water based on the aforesaid approvals from competent authority.

The Power Requirement based on rated peak capacity of 0.87 MTPA ROM Coal shall be in the range of 8 MVA at 3.3 kV.

**10.0 RESETTLEMENT & REHABILITATION:**

No Resettlement & Rehabilitation is envisaged as this is an Underground Mining Project and requirement of land already acquired is to the extent of 5.30 ha only for infrastructure. No additional land acquisition is required for the proposed expansion.

**11.0 BASE LINE ENVIRONMENT:**

The Base Line Environmental quality data for various components of environment viz. Air, Noise, Water, Land and Socio-Economic were generated during October 2024 to December 2024 for a period of 12 weeks. Other environmental data on Flora and Fauna, Land Use Pattern, Forest etc were also generated through field surveys and also collected from different State Government Departments.

- **Air Environment:** Air Quality Monitoring was carried out at 12 Stations consisting 3 Sampling Stations within the Core Zone (Project Area) and 9 Sampling Stations in Buffer Zone (10 Kms around Core Zone). The ambient air quality of Ketki Underground Expansion Coal Mine Project area and its buffer zone showed that the concentrations of all monitored parameters were within the stipulated standards of MoEF & CC.
- **Surface & Ground Water Environment:** Water quality monitoring was carried out from 7 ground water and 7 surface water monitoring stations located in the study area. The quality of water samples are showing that the water sources of the area are not polluted except the surface water samples getting contamination from surface run-off. The Coliforms values are exception otherwise all the water samples are indicating its characteristics are within limit as given in relevant Indian Standards.

- **Noise Environment:** The noise Levels in the lease and buffer zone were generally observed to be within the prescribed regulatory limits.in all the monitored locations.
- **Flora & Fauna:** Keeping with this view the present assignment has been undertaken for carrying out a field survey of the flora and fauna as an internal input for an EMP. In this regard, field surveys were carried out in the core area of 10 kms radius around the project area. Listing of flora and fauna within core and buffer has been done. A site specific Wildlife Conservation Plan for the reported Schedule-I species has been prepared and submitted to the competent authority for approval.
- **Land Environment:** The land use pattern of the study area (10 km radius around the mine site) has been estimated by using satellite image.
- **Soil Environment:** Soil samples were collected from four selected locations in the study area in Oct 24 to Dec 2024 to assess the existing soil quality around the existing Ketki Underground Coalmine lease area.
- **Socio-Economic Environment:** Primary socio-economic survey along with secondary data has been used for socio economic information

#### **12.0 ANTICIPATED IMPACTS & MITIGATION MEASURES:**

- To predict the expected impacts of various activities on the different environmental parameters, a detailed survey of the factors are performed and identification of probable impacts are done by different techniques.
- In order to estimate the ground level concentrations due to the emission from the proposed increase in production, EPA approved Industrial Source Complex AERMOD View Model has been employed.
- Predicted 24 hourly Ground Level Incremental Concentrations of PM10 & PM2.5 are estimated to be 0.248 ug/m<sup>3</sup> and 0.217 ug/m<sup>3</sup> respectively at work place. This prediction is based on various mining operations and site specific meteorological data in worst scenario.
- The mining operations may cause surface water pollution due to direct discharge of mine pumped out water to the natural water courses. For proper control measures the mine pumped out water is collected in a sedimentation tank on surface and treated. This treated water is then utilized for various industrial and domestic/ agricultural purposes.
- It is proposed to liquidate the reserves by mechanized underground mining method using Continuous Miner Technology. Out of the 548.65 ha of mining lease area, 543.35 ha will be used under Mining Rights for extraction of Coal at a minimum depth of 58 m and to an ultimate depth of 117 m. Plantation in 0.775 Ha (out of 5.30 ha disturbed/acquired due to mining infrastructure activities) land will be done which covers barrier, safety zone and infrastructure around including road and undisturbed land etc.
- SECL proposes to develop about 0.775 ha (around infrastructure area) of land with 1938 saplings in available land and further plantation activities will be taken up during the depillaring phase of the mine in a phased manner during the life of the mine. As per the MoEF& CC guidelines, it is proposed to plant local tree species @ 2500 trees/ ha in consultation with the Forest Department.
- Under CSR activities it is proposed to distribute fruit saplings (like guava, mango, Jamun, Chikoo etc.) to the students of various schools and nearby villages. The students will be encouraged to plant these saplings at their backyards and in school premises. They will be also encouraged to maintain and nourish these trees.
- The transport of coal will be carried out to the desired destination of end use through rail. However, the coal will be transported from underground mine to surface CHP by Belt Conveyor. After screening in the CHP this coal shall be transported to the Kumda railway siding through road network which is about 22.30 Km from the mining lease. The available road network is adequate to handle the additional transport load. Considering 100% transport by road which works out to be 2852 tonnes per day (at peak production), there will be an additional traffic of 286 dumpers of 20 tonnes capacity

considering two way movement. The transport route will be maintained by SECL on regular basis and water sprinkling will be carried out thrice a day besides undertaking avenue plantation on the available places on the route.

- The impact on socio economic of surrounding area will be positive, as mine will directly employ about 461 workers. Preference will be given to the local residents of the area for employment. There will be employment generation for a large number in secondary and tertiary sectors. There is no displacement of any habitation or personnel.
- There will be negligible impacts on bio diversity of the area beyond what is already present due to traffic on the State Highway. On the other hand, there will be positive impact due to the plantation activities, which are proposed by management on areas surrounding surface infrastructure for the proposed Underground mine.

**13.0 ENVIRONMENT MANAGEMENT PLAN:**

A Comprehensive Environment Management Plan including development of Green Belt over 0.775 ha area has been suggested. Further plantation will be taken up during the depillaring phase of the mine over balance period of mine life.

Capital Expenditure of Rs. 6.83 Crores and Recurring Expenditure of Rs. 1.53 Crores is envisaged for implementation of the suggested Environment Management Plan.

**14.0 CORPORATE SOCIAL RESPONSIBILITY:**

SECL has proposed Capital Expenditure of Rs. 2.75 Crores (for first five years) and Recurring Annual Expenditure of Rs. 0.69 Crores (for the first five years) towards implementation of Corporate Social Responsibility as per applicable statutes.

**15.0 CORPORATE ENVIRONMENT RESPONSIBILITY:**

SECL has proposed total expenditure of Rs. 2.58 Crores in addition to the CSR towards implementation of the Corporate Environment Responsibility as per applicable statutes/guidelines of MoEF & CC.

**16.0 OVERALL JUSTIFICATION FOR IMPLEMENTATION OF THE PROJECT:**

Ketki Underground Expansion Coal Mining project gives downstream integration of supply chain providing leverage on supply of coal from own source which ultimately helps in increased efficiency and flexibility of power generation in case of increased demand in future.

Considering the Demand / Supply Position of coal, extraction of coal from Ketki Underground Expansion Coal Mining Project is economically beneficial for the national economy.

Further, the Project shall be creating additional employment opportunities, peripheral development of the mining area and also contributing to the State Exchequer.

Considering the overall scenario, implementation of the Ketki Underground Expansion Coal Mining Project is justified.

**17.0 EXPLANATION ON HOW ADVERSE EFFECTS ARE MITIGATED:**

The EIA/EMP Report has established the Base Line Environment of the Project Area and has assessed anticipated impacts of the Project on the overall ecology & environment. Accordingly, general as well as specific mitigation measures for management of the Key Environmental Parameters have been suggested. Further, specific measures towards monitoring and implementation of the Environment Management Plan along with details of the funds required towards implementation of the Pollution Control Measures are also included in the Report.

By implementing the suggested Environment Management Plan adverse effects of the Project can be mitigated.

**18.0 CONCLUSION:**

The proposed expansion of Ketki Underground Coal Mine is likely to have certain adverse impacts on the local environment. However with proper mitigation measures and an effective implementation of the Environment Management Plan as suggested in this draft EIA/EMP Report and recommended by MoEF & CC, CPCB and State Pollution Control Board, the negative impacts may be minimized to a great extent.

The Project on the other hand shall bring in positive and beneficial impacts in terms of growth in regional economy by transforming the economy from predominantly agricultural to significantly industrial, increase in government earnings and revenues and accelerate the pace of overall development of the region.

The proposed project will provide direct employment to a large number of people in the project area and nearby villages. This project will also generate indirect employment to a considerable number of families, who will render their services for the employees of the project.

The project will also encourage ancillary industries in the region, which will not only increase the employment potential but also strengthen the economic base of the region.

The Project would be in the interest of the Region and State of Chhattisgarh as a whole and therefore may be implemented.

**APPEAL**

*In compliance with the mandatory procedure M/s. SECL has made an application for environmental clearance. Necessary scientific studies have been undertaken as per the guidelines set by the Ministry of Environment Forests & Climate Change (MoEF & CC). The suggestions/recommendations of all the experts, competent authorities, and government officials are being sought for the impacts of the proposed project. Views and guidance of the local residents, community based organizations, social organizations are extremely important in order to devise a full proof Environment Management Plan for the proposed mining project and also mitigate the damages caused due to the project. Allocation of necessary funds, manpower and machinery will be made to for the protection and conservation of all the components of environment. It is ensured that all mandatory clearances will be sought from respective competent authorities before operating the proposed Ketki Expansion Underground Coal Mine Project (Production capacity 0.87 MTPA) by M/s South Eastern Coalfields Limited. M/s. SECL is committed to implement the suggestions for the improvement of the environment and assure that every attempt will be made for the conservation and protection of the natural resources to the maximum extent with this submission it is requested to all participants to provide their consent for the proposed expansion in production for Ketki Expansion Underground Coal Mine Project.*

