

Dated: 1st May 2008

To
M/s Singareni Collieries Company Ltd.,
Kothagudam Collieries – 507 101,
Bhadrachalam Road Railway Station,
Khammam District, A.P.

Sub: Kakatiya Khani Opencast Sector-1 Project (KTK-OCP Sector 1) (expansion in rated capacity from 0.572 MTPA to 1.25 MTPA with a peak production of 1.50 MTPA) of M/s Singareni Collieries Company Ltd., located near village and Mandal Bhoopalpalli, District Warangal, Andhra Pradesh- environmental clearance – reg.

Sir,
This is in continuation to your application vide letter No. CRP/ENV/A/470/517 dated 16.07.2007 for Terms of Reference, which was granted vide MOEF letter dated 22.10.2007 and with reference to your application for environmental clearance based on the prescribed Terms of Reference vide letter No. CRP/ENV/A/479/18 dated 07.01.2008 and your subsequent letter dated 06.03.2008 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. The present application is for conversion of the existing KTK-3 Incline Underground mine into opencast mine under the name **Kakatiya Khani Opencast Sector-1 Project and involving expansion in production from 0.572 MTPA to 1.50 MTPA (peak production) in a total lease area of 306.92 ha.** KTK-3 Incline Underground mine was granted environmental clearance on 26.07.2007 for a production capacity of 0.572 MTPA. Of the total lease area, 270.16 ha is agricultural land and 36.77 ha is Govt. land with the company. No forestland is involved. Of the total lease area, area for excavation is 133.38 ha, 105.96 ha is for external OB dumps, 4.46 ha is for infrastructure, and 63.13 ha is for roads. The project does not involve R&R. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the 10 km buffer zone. A number of seasonal streams flow within the ML. The project does not involve modification of the natural drainage. Expansion of the rated capacity of the mine is from 0.572 million tonnes per annum (MTPA) to 1.25 MTPA of coal production with a peak production of 1.50 MTPA. Mineral transportation of 4545 TPD of coal is by road to CHP covering a road length of 3 km. Ultimate working depth of the mine is 165 m below ground level (bgl). Water table during pre-monsoon is in the range of 2.250m – 7.80m bgl and during post monsoon period is in the range of 0.47m –12.35m. Peak water requirement is 1338 m³/d of which 1290 m³/d is for dust suppression, which would be met from mine pit water. An estimated 98.15 Mm³ of OB including topsoil will be generated over the life of mine; of which about 44.5% of the OB will be backfilled and the would be dumped in one external dump of a max. height of 90m in 3 benches of 30m each. Backfilling will begin from 5th year onwards and an additional O of 5.73 Mm³ of OB would be rehandled at the finals stage to limit the height of the ext. OB dump height to a max. of 90m. The void of 73.54 ha proposed to be left at the end of mine life would be completely filled up with 37.89 Mm³ of OB from KTK-OC Sector-II. Life of the mine at the rated capacity is 8 years. Public Hearing was held on 04.12.2007. Mining Plan has been approved by Ministry of Coal on 26.02.2008 for 1.25 MTPA of coal production with a peak production of 1.50 MTPA. Capital cost of the project is **Rs. 9150 lakhs.**

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Kakatiya Khani Opencast Sector-1 Coal Mine Project of M/s Singareni Collieries Company Ltd.** for expansion in rated capacity from 0.572 MTPA to 1.25 MTPA with a peak production of 1.50 MTPA in a total lease area of **306.92 ha** under Section 12 of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Para 2.1.1 of MOEF Circular dated 13.10.2006 subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) Adequate safety measures shall be implemented for mining in areas where underground mining has been undertaken. Prior permission of the DGMS shall be taken to undertake opencast mining in areas where underground mining has been done.
- (ii) Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- (iii) OB should be stacked at earmarked external OB dumpsite(s) within ML area and shall be a maximum height of 90m only consisting of 3 benches of 30m each. The ultimate slope of the dump shall not exceed 28°. Backfilling shall begin at the end of 5th year in the decoaled area. Monitoring and management of existing reclaimed dumpsites should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bangalore on an yearly basis.
- (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly. Garland drains of suitable size, gradient and length and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided for adequate retention period to allow proper settling of silt material.
- (v) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (vi) Crushers at the existing CHP and that to be constructed should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, and transfer points.
- (vii) Drills should be wet operated only.
- (viii) Controlled blasting shall be practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- (ix) Afforestation shall cover a total area of not less than 277.50 ha which includes reclaimed external OB dump (179.50 ha), reclaimed topsoil dump, backfilled area (59.84 ha), along ML boundary, along roads (37.04 ha) and along service buildings (1.12 ha) within the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (x) A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 179.50 ha which shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. There shall be no decoaled void left at the end of mine life.
- (xi) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of exiting wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- (xii) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xiii) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.

ETP shall also be provided for workshop and CHP wastewater. Mine discharge water shall be treated to prescribed standards before discharge into any natural water course.

(xv) For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bangalore.

(xvi) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

B. General Conditions

- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.
- (iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for SPM, RSPM, SO₂ and NO_x monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Fugitive dust emissions (SPM and RSPM) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.
- (v) Data on ambient air quality (SPM, RSPM, SO₂ and NO_x) shall be regularly submitted to the Ministry including its Regional Office at Bangalore and to the State Pollution Control Board and the Central Pollution Control Board once in six months.
- (vi) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- (ix) Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (x) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.
- (xi) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bangalore.
- (xiii) The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- (xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (xvi) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>.

3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

5. The above conditions will be enforced *inter-alia*, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.

(Dr.T.Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Andhra Pradesh, Secretariat, Hyderabad.
3. Chief Conservator of Forests, Regional office (SZ), Ministry of Environment & Forests, 4th Floor, F-Wing, Kenriya Sadan Block, Kormangala, Bangalore – 560034.
4. Chairman, Andhra Pradesh State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanatnagar, Hyderabad – 500038.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Warangal, Government of Andhra Pradesh.
8. Monitoring File 9. Guard File 10. Record File

(Dr.T.Chandini)
Director