

Dated: 22<sup>nd</sup> October 2007

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

**Khairagura Opencast Expansion Coal Mine Project (expansion in rated capacity from 0.72 MTPA to 2.5 MTPA with a peak production of 3 MTPA achieved during 18<sup>th</sup> -21<sup>st</sup> year of production and increase in lease area from 338.78 ha to 1217.50 ha) of M/s Singareni Collieries Company Ltd., located in village Khairagura, Mandal Tiryani, District Adilabad, Andhra Pradesh- environmental clearance – reg.**

Sir,  
This is in continuation to your application vide letter No. CRP/ENV/A/493/670 dated 14.10.2006 for Terms of Reference which was granted vide MOEF letter dated 15.01.2007. and with reference to your application for environmental clearance based on the prescribed Terms of Reference vide letter No. CRP/ENV/A/493/390 dated 27.05.2007 and your subsequent letter dated 18.09.2007 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project was granted environmental clearance vide MOEF letter NO. J-11015/36/2003-IA.II(M) dated 16.09.2004 for production of coal at a rated capacity of 0.72 MTPA in a lease area of 338.78 ha. The present application is for expansion in production from 0.72 MTPA to 2.50 MTPA with a peak production of 3.0 MTPA to be achieved during 18-21<sup>st</sup> year of production and for expansion in lease area from 338.78 ha to 1217.50 ha. Of the total lease area, 350.57 ha is forestland and 866.93 ha is non-forestland. The total lease area of the expansion project is 878.72 ha which consists of 180.42 ha of forestland and 698.30 ha of non-forestland. Forestry clearance has not been obtained for 180.42 ha of forestland. Of the total lease area, area for excavation is 542.91 ha, 392.62 ha is for external OB dumps, 29.85 ha is or approach road to the ML, 12.82 ha is for road, 11.56 ha is for diversion of Vattivagu, 9.80 ha is for service buildings and CHP, 15.53 ha is for protective bund around quarry, 16.93 ha is includes area for protective bund around dump yard, 185.48 ha is for safety distance, bund, drains.

There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the 10 km buffer zone. Project diversion of Vattivagu over a length of 1.50km during the 15<sup>th</sup> year of the project and its realignment at end of mine life. NOC has been obtained from the State Irrigation and CAD Dept. for a length of 1.40 km. Project involves R&R of involving 429 PAFs from eleven villages – Nambaguda (40), Chanduguda (58), Bordam Old (26), Bordam New (77), Devaiguda (91), Lingiguda (21), Areguda (55), Toyaguda-1 (30), Toyaguda-2 (3), Khairaguda (27), Peda Kunta (1). Flood protection bund will be provided around the working area along the dipside. Mining will be opencast by mechanised method and involves controlled blasting. A pit head CHP is proposed at the surface of the mine to receive ROM coal and transport through belt conveyors of 2.5 MTPA capacity. Mineral transportation of coal is presently by road to CHP at Kothagudam covering a road length of 40 km. Now it is proposed to dispatch coal by Wharf Loading System from nearby Railway Station.

Ultimate working depth of the mine is 222 m below ground level (bgl). Water table is in the range of 5.06 m – 13.96m bgl during pre-monsoon and in the range of 2.78m – 10.47m bgl during post monsoon period. Peak water requirement is 1940 m<sup>3</sup>/d, which will be met from mine pit water of which 1860 m<sup>3</sup>/d is for dust suppression, 20 m<sup>3</sup>/d is for workshop, 32 m<sup>3</sup>/d is for greenbelt, and 28 m<sup>3</sup>/d is for domestic use. An estimated 584.77 Mm<sup>3</sup> of OB and 10.86 Mm<sup>3</sup> of topsoil will be generated in life of mine; of which about 368 Mm<sup>3</sup> of the OB would be backfilled to reach a height of 90m over the surface and the balance 222.15 Mm<sup>3</sup> of OB would be stored in two ext. OB dumps of a maxm. height of 120m height with benches of 30m each and an overall slope of 27°. Backfilling would begin from 8<sup>th</sup> year. A water body of 256 ha in the decoaled area would be converted into a water body at the end of mine life. An estimated 1.48 Mm<sup>3</sup> of topsoil would be used in the construction of the bund.

Public Hearing was held on 09.03.2007. Life of the mine at the rated capacity of 2.5 MTPA with a peak production of 3 MTPA during 18<sup>th</sup> -21<sup>st</sup> year of mine life is 27 years. Revised Mining Plan has been approved by Ministry of Coal on 21.05.2007. Capital cost of the project is Rs. 131.06 crores which includes Rs. 92.46 crores upto 3<sup>rd</sup> year of operation and an additional Rs. 55.94 crores thereafter.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Khairagura Opencast Expansion Coal Mine Project of M/s Singareni Collieries Company Ltd. for expansion in production of coal from 0.72 MTPA to 2.50 MTPA with a peak production of 3 MTPA during 18<sup>th</sup> -21<sup>st</sup> year and expansion in lease area from 338.78 ha to 1217.50 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) No mining operations shall be undertaken in the 180.42 ha of forestland until forestry clearance has been obtained under the provisions of FC Act, 1980.
- (ii) Diversion of the Vattivagu flowing within the mining area would require diversion during the 15<sup>th</sup> year of mine operation and an additional area of 1.5 km an area of 14.2 ha is required for the proposed diversion. Diversion shall be undertaken with the approval of the State Irrigation Department.
- (iii) 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 and partly for construction of bund.
- (iv) A bund being constructed along the dipside of the quarry shall be stabilised with plantation.
- (v) OB should be stacked at earmarked external OB dumpsite(s) within ML area and shall be a maximum height of 120m only consisting of benches of 30m each. The ultimate slope of the dump shall not exceed 28°. External dumps would be required mainly during the initial 8 years. Backfilling shall begin at the end of 8<sup>th</sup> 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.
- (vi) 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.
- (vii) 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.
- (viii) 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.
- (ix) Drills should be wet operated only.
- (x) 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 should be implemented.
- (xi) Afforestation shall cover a total area of not less than 819.65 ha which includes reclaimed external OB dump (392.62 ha), reclaimed topsoil dump, backfilled area (286.41 ha), along ML boundary, along drains, vagu diversion and along service buildings (140.62 ha) within the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xii) A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of 286.41 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 should be around 2500 plants per ha. The balance 256 ha of decoaled area being converted into a water reservoir shall be gently sloped, and the upper benches of which shall be stabilised and reclaimed with plantation and the reservoir peripherally fenced.
- (xiii) The company shall obtain prior approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.
- (xiv) Regular monitoring of groundwater level and quality should be carried out by establishing a network of exiting wells and construction of new peizometers. The monitoring for quantity should 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 should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- (xv) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xvi) 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 should also be provided for workshop and CHP wastewater. Mine discharge water shall be treated to prescribed standards before discharge into any natural water course.

(xviii) A sewage treatment plant shall be installed in the township.

(xix) 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.

(xx) A Final Mine Closure Plan along with details of Corpus Fund should 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 should 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 should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub> monitoring. Location of the stations should 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 RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.
- (v) Data on ambient air quality (SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub>) should 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 should 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 should be provided with ear plugs/muffs.
- (i) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May 1993 and 31<sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.
- (ii) Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.
- (iii) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (iv) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.
- (v) A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- (vi) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bangalore.
- (vii) 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.
- (viii) 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.
- (ix) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (x) The Project authorities should 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, 4<sup>th</sup> 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, Karimnagar, Government of Andhra Pradesh.
  8. Monitoring File 9. Guard File 10. Record File

(Dr.T.Chandini)  
Director

No.J-11015/689/2007-IA.II(M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
C.G.O.Complex,  
New Delhi -110510.

Dated: 6<sup>th</sup> December 2007

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

**Khairagura Opencast Expansion Coal Mine Project (expansion in rated capacity from 0.72 MTPA to 2.5 MTPA with a peak production of 3 MTPA achieved during 18<sup>th</sup> -21<sup>st</sup> year of production and increase in lease area from 338.78 ha to 1217.50 ha) of M/s Singareni Collieries Company Ltd., located in village Khairagura, Mandal Tiryani, District Adilabad, Andhra Pradesh- environmental clearance – reg.**

Sir,  
This is in continuation to this Ministry's environmental clearance letter No. J-11015/689/2007-IA.II(M) dated 22.10.2007. After specific condition (xx), the following specific condition No. (xxi) is introduced:

"The 12km road connecting the Goleti township and the Khairagura opencast expansion project and all permanent approach roads will be black topped".

All other conditions remain the same.

(Dr.T.Chandini)  
Director

- Copy to:**
9. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
  10. Secretary, Department of Environment & Forests, Government of Andhra Pradesh, Secretariat, Hyderabad.
  11. Chief Conservator of Forests, Regional office (SZ), Ministry of Environment & Forests, 4<sup>th</sup> Floor, F-Wing, Kenriya Sadan Block, Kormangala, Bangalore – 560034.
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