

Dated: 31<sup>st</sup> July 2008

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

**Ramagundam Opencast-I Coal Mine Project Expansion-Phase-II (1.5 MTPA to 3 MTPA with a peak production of 3.3 MTPA) of M/s Singareni Collieries Company Ltd., located in village Nagepalli and Mandal Kamanpur, District Karimnagar, Andhra Pradesh- environmental clearance – reg.**

Sir,  
This is with reference to letter No. CRP/ENV/A/456/406 dated 04.06.2007 for Terms of Reference which was granted vide MOEF letter dated 22.10.2007 and with reference to the application for environmental clearance based on the prescribed Terms of Reference vide letter No. CRP/ENV/A/456/197 dated 20.03.2008 and the subsequent letter dated 21.06.2008 and E-mail dated 21.07.2008 on the above-mentioned subject. The Ministry of Environment & Forests has considered the application. It has been noted that the proposal is for expansion of the existing Ramagundam OC-I Coalmine Expansion Project for environmental clearance was granted on 11.09.2006 for a production capacity of 1.5 MTPA of coal. The present proposal is for conversion of Blocks A and B of existing GDK 10 UG into opencast mining for a production capacity of 1.5 MTPA and annexing to the existing Ramagundam OC-I Expansion project of 1.5 MTPA, thus totalling a combined production capacity of **3 MTPA with a peak production of 3.3 MTPA when Highwall Mining will be introduced.** The total ML area is **923.88 ha**, of which 233.55 ha is agricultural land, 15.64 ha is forestland falling within Gunjapadugu RF, and 674.69 ha is wasteland, Forestry clearance has been sought. Of the total lease area, area for excavation is 367.44 ha, area for ext. OB dumps is 377.66 ha, infrastructure 35.77 ha, roads is 12.59 ha, and area for safety barrier, haul roads, etc is 130.42 ha. There are no ecologically sensitive areas such as National Parks, Wildlife Sanctuaries, Tiger Reserves, etc within 15 km of the core zone. The main drainage of the lease is Bokkala Vagu, a tributary of River Godavari, which flows in the central part of the lease. There is no plan to modify the existing natural drainage.

The expansion of rated capacity of the project is from 1.5 MTPA to 3 MTPA with a peak production of 3.3 MTPA during 2<sup>nd</sup> year of mining operation. Mining is opencast by mechanised method using dragline with controlled blasting, and transport of coal by belt conveyor to surface and from there by conveyors to existing CHP of 6 MTPA capacity. Mineral transportation of 9090 TPD of coal is by MGR to NTPC. Ultimate working depth of the mine is 240m below ground level (bgl). Present working depth is 155m bgl. Water table in the core zone is in the range of 4.58m – 10.20m bgl during the pre-monsoon and in the range of 1.80m – 7.21m bgl during post-monsoon period. Peak water requirement is 1470 m<sup>3</sup>/d, which will be met from mine pit water. An estimated 23,000 m<sup>3</sup>/d of water is discharged during peak season into the water course/drainage after settling. An estimated 355.53 Mm<sup>3</sup> of OB will be generated in the balance life of mine; of which about 35% of the OB will be backfilled from 2<sup>nd</sup> year onwards and the balance 65% would be dumped into the voids of the Ramagundam OC-I decolated void. The balance decolated area of 279.03 ha would be partially filled with 154 Mm<sup>3</sup> of OB from the adjoining RG OC-II Project leaving a final void would be 279.03 ha of a max. depth of 35m which will be converted into a water reservoir. Life of the mine at the rated capacity of 3 MTPA is 23 years. Project does not involve R&R. Public Hearing was held on 12.02.2008. Mining Plan has been approved by Ministry of Coal on 08.04.2008. Capital cost of the project is Rs. 7952 lakhs.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Ramagundam Opencast-I Coal Mine Expansion Project- Phase-II of M/s Singareni Collieries Company Ltd. for production of coal at 3 MTPA rated capacity with a peak production of 3.3 MTPA during Highwall mining within a lease area of 923.88 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 forestland for which forestry clearance has not been obtained under the provisions of the FC Act, 1980.

Adequate safety distance/barrier shall be maintained from the drainage within the ML- Jallaram Vagu, Maddula Vagu, Bokkala Vagu which form tributaries of River and from the habitations and from ext. OB dumps.

(iii) Topsoil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used for reclamation and development of green belt.

(iv) There shall be no external dumping of OB from this expansion project. Of the total 355.53 Mm<sup>3</sup> of OB generated in the balance life of mine of which about 35% of the OB shall be backfilled into an area of 88.41 ha from 2<sup>nd</sup> year onwards and the balance 65% would be dumped into the voids of the Ramagundam OC-I decolated void. The balance decolated area of 279.03 ha shall be partially filled with 154 Mm<sup>3</sup> of OB from the adjoining RG OC-II Project leaving a final void would be 279.03 ha of a max. depth of 35m which is to be converted into a water reservoir. The backfilled area shall be biologically reclaimed 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. The balance final void of 371.61 ha left at the end of mine life being converted into a water reservoir shall be of a max. depth of 35m and shall be gently sloped, and the upper benches of which shall be stabilised and reclaimed with plantation and the reservoir peripherally fenced.

(v) The existing external OB dumpsite(s) within ML area shall be a maximum height of 120m only consisting of 4 benches of 30m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bangalore on an yearly basis.

(vi) Monitoring of the stability of the OB dumps vis-à-vis the Model and its validation and taking appropriate mitigative measures such as construction of gabions, further compaction of OB, use of different particle size to reduce the failures, greater stabilisation through geo-textile material, and plantation including species of grasses in areas in the dumps which are susceptible to slope stability failures.

(vii) Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains of suitable size, gradient and length and sump capacity shall 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 shall also provided for adequate retention period to allow proper settling of silt material.

(viii) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.

Crushers at the existing CHP and that to be constructed shall be operated with high efficiency bag filters, water (mist type) sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, and transfer points.

(x) Mechanical sweeping of the main haul roads shall be regularly undertaken. The main haul roads and approach roads shall be black topped and have avenue plantation. The road to CHP shall be black topped and avenue plantation developed on both sides.

(xi) Drills shall be wet operated only.

(xii) 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.

(xiii) Afforestation shall cover a total area of not less than 514.12 ha which includes reclaimed external OB dump (377.66 ha), reclaimed topsoil dump, backfilled area (88.41 ha), along ML boundary, along drains and along roads (38.82 ha), near CHP, parking area and service buildings (9.23 ha), undisturbed/vacant area within the lease and in the township outside 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.

(xiv) The company shall obtain prior approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.

(xv) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. 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.

(xvi) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case of monitoring of water table indicates a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

(xvii) 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.

(xix) A sewage treatment plant shall be installed in the combined township to be established for the project.

(xx) 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.

(xxi) 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, SO<sub>2</sub> and NO<sub>x</sub> 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, SO<sub>2</sub> and NO<sub>x</sub>) 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 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 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.

(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:

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

(Dr.T.Chandini)  
Director