

No. J-11015/307/2005-IA.II (M)  
Government of India  
Ministry of Environment and Forests

Paryavaran Bhavan  
C.G.O. Complex,  
Lodi Road, New Delhi-110 003

Date the 8<sup>th</sup> February 2006

To,  
Shir N.C. Verma  
General Manager (Envt. & Forest.)  
M/s Central Coalfields Limited,  
Darbhanga House,  
Ranchi-834 001  
Jharkhand

Subject: North Urimari Opencast Coal Mining Project of M/s Central Coalfields Ltd located in part of Village Urimari, Tehsil Urimari, District Hazaribagh in Jharkhand-environmental clearance regarding

Sir,

This has reference to the Ministry of Coal, Government of India letter No. 43011/35/2005-CPAM dated 03.08.2005 and your letter No. GM(Envt.&Forest)/2005/114 dated 05.08.2005 and subsequent letters dated 24.10.2005 and 23.11.2005 on the subject mentioned above. It has been noted that the proposal is for opening of a new mine and accorded site clearance by the Ministry on 19.11.2004. Total mining lease area of the project is 516.90 ha, out of which 259.68 ha is an agricultural land, 66.24 ha is forestland and 190.98 ha is others (settlements). Forestry clearance for diversion of 66.24 ha forestland has not been obtained as yet. Area proposed for mining is 267.57 ha, 168.95 ha area is kept for OB dumps, 21.42 ha for infrastructure, 10.59 ha for nallah diversion, 4.5 ha for roads, 43.87 ha others (safety zone). Township is located at a distance of 4 km from the mine lease on an additional 18.92 ha of land. No ecologically sensitive area such national park/sanctuary/biosphere reserve etc. reported within 10 km radius of the project. Working will be open cast by mechanised method using shovel-dumper combination involving controlled blasting. Ultimate working depth of the mine will be 140 m bgl. The envisaged rated capacity of the mine is 3.0 MTY. Approximately 100 households comprising a population of 506 people from one village namely Jojo Tola are in the core zone. Displacement of population and R&R is involved. Water table is in the range of 4.7-12.8 m bgl in core and 2.0-12.80 m bgl in buffer zone (pre-monsoon) and 1.2-3.9 m bgl in core and 0.82-6.3 m bgl in buffer zone (Post monsoon). Working will intersect ground water table and 1920 m<sup>3</sup>/day is the likely discharge from the mine during the lean period and 2880 m<sup>3</sup>/day during the monsoon period. Peak water requirement is 1675 m<sup>3</sup>/day out of which 800 m<sup>3</sup>/day will be met from river water and remaining 875 m<sup>3</sup>/day from mine sump water. A total of 171.01 million m<sup>3</sup> of OB will be generated throughout the mine life of which 90.24 million m<sup>3</sup> will be backfilled in the void created and 80.77 million m<sup>3</sup> will be accommodated in the external dumps. Backfilling will start from 6<sup>th</sup> year onwards. NOC from the State Pollution Control Board obtained on 12.04.2005 for production capacity of 3.0 MTPA involving lease area of 535.82 ha. Public hearing held on 08.10.2004. Project report approved by CIL Board on 31.07.2004. Capital cost of the project is Rs.28030 lakhs.

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PROJECT OFFICER

BIRSA PROJECT C. C. L.

सौमित्र सिंह  
SOMMITRA SINGH  
उप महाप्रबंधक/विद्युतमयक्ष (वन एवं पर्यावरण)  
सीओ सीओ एलओ, राँची  
M/s Central Coalfields Limited (Env. & Forest)



2. The Ministry of Environment & Forests hereby accords environmental clearance to the above mentioned coal mining project M/s Central Coalfields Ltd. for annual production capacity of 3.0 million tones of coal involving total mining lease area of 516.90 ha under the provisions of the EIA Notification 1994 and its subsequent amendments issued under Environment (Protection) Act, 1986 subject to implementation of the following conditions/safeguards.

**A. Specific Conditions**

- (i) The environmental clearance is subject to approval of the State Landuse Department, Government of Jharkhand for diversion of agricultural land for non-agricultural use.
- (ii) The environmental clearance is subject to grant of forestry clearance for diversion of 66.24 ha forestland.
- ✓ (iii) Top soil should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.
- (iv) OB dumps should be stacked at earmarked dump site(s) only and should not be kept active for long period. Proper terracing of OB dumps should be carried out so that the overall slope shall not exceed 28 degree. Backfilling should start from 6<sup>th</sup> years onwards. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on six monthly basis.
- ✓ (v) 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 utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly.

Garland drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.

- ✓ (vi) Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (vii) Green belt should be raised in area of 321.21 ha by planting the native species around the ML area, OB dumps, coal handling plant, roads etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (viii) The project authorities should meet the water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.

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सौमित्र सिंह  
SOURMITRA SINGH  
सम. महाप्रबंधक (विन एवं पर्यावरण)  
सीओ सीओ एन. & फॉरेस्ट  
G.M.H.O.D (Env. & Forest)  
C.I., Ranchi

PROJECT OFFICER  
BIRSA PROJECT C. C. L.



- (ix) Suitable embankment of proper dimensions should be constructed to protect the area from flood water of nallahs namely Potanga and Tilaiya during rainy season.
- (x) The project authority should implement suitable water conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (xi) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year - pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground Water Board.
- (xii) Permission from the competent authority should be obtained for drawal of water from the river.
- (xiii) The project proponent should carry out ground water modeling studies in the area simulating transient conditions to predict the impact of mining on ground water regime in and around area on a long term basis and the data thus collected may be sent regularly to Central Ground Water Authority, Regional Director Central Ground Water Board and MoEF.
- (xiv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, CGWB.
- (xv) Appropriate mitigative measures should be taken to prevent pollution of Damodar river in consultation with the State Pollution Control Board.
- (xvi) Coal handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xvii) Sewage treatment plant should be installed for the colony. ETP should also be provided for wastewater from workshop and CHP.
- (xviii) Consent to operate should be obtained from SPCB before starting production from the mine.
- (xix) The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.
- (xx) Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MOEF and its Regional Office.

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PROJECT OFFICER  
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सौमित्र सिंह  
SOUMITRA SINGH  
उप महाप्रबंधक/विभागाध्यक्ष (वन एवं पर्यावरण)  
सीओ सीओ एलओ, रॉन्ची  
GMHOD (Env. & Forest)  
C.C.L., Ranchi



- (xxi) Vehicular emissions should be kept under control and regularly monitored. Overloading of trucks be avoided to stop spillage. The loaded trucks be covered with tarpaulin sheets to prevent spillage of coal.
- (xxii) Land oustees and land losers should be compensated as per the State Government norms and CIL Policy.
- (xxiii) Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxiv) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Monkeys (*Presbytis entellus*), python, baaz, eagle, peacock reported in the study area in consultation with the concerned forest officials. Action plan for conservation of endangered fauna should be prepared and submitted to the Ministry and its Regional Office within 3 months.
- (xxv) 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 & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest department and experts.
- (iv) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> & CO 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.

Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> & CO) should be regularly submitted to the Ministry including its Regional office at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.

- (v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, loading & unloading points should be provided and properly maintained.
- (vi) Drills should either be operated with dust extractors or should be equipped with water injection system.

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**PROJECT OFFICER**  
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**सौमित्र सिंह**  
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सीओ सीओ एलओ, सीओ  
HOD (Env. & Forest)  
C. C. L. Ranchi



- (vii) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc should be provided with ear plugs/muffs.
  - (viii) Measures for safety should be provided for storage, handling and use of explosives during the project period.
  - (ix) Acid mine water, if any, has to be treated and disposed of after conforming to the standard prescribed by the competent authority
  - (x) Industrial waste water (workshop and waste water 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. Oil and grease trap should be installed before discharge of workshop effluents.
  - (xi) 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 take corrective measures, if needed.
- (xii) 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 Organization.
  - (xiii) 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 the Ministry and its Regional Office located at Bhubaneshwar.
  - (xiv) The Regional Office of this Ministry located at Bhubaneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
  - (xv) A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom and suggestion / representation has been received while processing the proposal.
  - (xvi) 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.
  - (xvii) 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 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a

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**सौमित्र सिंह**  
**Soumitra Singh**  
 सय महाप्रबंधक विभागाध्यक्ष (वन एवं पर्यावरण)  
 सीओ सीओ एलओ. रैंची  
 GMHQD (Env. & Forest)  
 C.C.L., Ranchi

*[Signature]*  
**PROJECT OFFICER**  
 BIRSA PROJECT C. C. L.

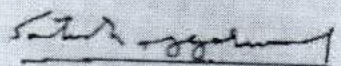


copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneshwar.

3. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of 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. S.K. Aggarwal)  
Director

**Copy to:**

- (i) Secretary, Ministry of Coal, Government of India, Shastri Bhawan, New Delhi.
- (ii) Secretary, Department of Mines & Geology, Government of Jharkhand, Secretariat, Ranchi.
- (iii) Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi.
- (iv) Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office(EZ), A/3, Chandra Shekhar Bhubaneshwar - 751 003.
- (v) Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
- (vi) Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (vii) Chairman, Jharkhand State Pollution Control Board, T.A. Building, HEC Complex, P.O. Dhurwa, District Ranchi, Jharkhand.
- (viii) Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- (ix) District Collector, Hazaribagh District, Jharkhand.
- (x) Shri M.K.Shukla, Chief General Manager, Coal India Limited, Core-I, 4<sup>th</sup> Floor, SCOPE Minar, Vikas Marg, New Delhi-110092.

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**सौमित्र सिंह**  
**Soumitra Singh**  
उप महाप्रबंधक (विन एवं पर्यावरण)  
सीओ सीओ एलओ, सीसी  
ज. ग. म. म. (Env. & Forest)  
C.L., Ranchi

  
**PROJECT OFFICER**  
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- (xi) EI Division, Ministry of Environment and Forests, Paryavaran Bhavan , C. G. O. Complex, Lodi Road, New Delhi-110 003.
- (xii) Monitoring File.
- (xiii) Guard File.
- (xiv) Record File.

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Cm  
सौमित्र सिंह  
SOUMITRA SINGH  
उप महाप्रबंधक/विभागध्यक्ष (वन एवं पर्यावरण)  
सी० सी० एल० राँची  
Dy. GM/HOD (Env. & Forest)  
C.C.L., Ranchi





Ministry of Environment & Forests (MOEF)

No. J-11015/369/2007-IA.II(M)

Paryavaran Bhawan,  
CGO Complex, Lodi Road  
New Delhi-110003.

Dated: 16<sup>th</sup> February 2011

To

Chief General Manager (Env. & Forests)  
M/s Central Coalfields Ltd.,  
Darbhanga House, RANCHI

**Sub: Urimari Expn. OCP (from 1.3 MTPA to 2 MTPA normative and 2.5 MTPA peak in an ML area of 243.09 ha) of M/s Central Coalfields Ltd., located in dist. Hazaribagh, Jharkhand (EC based on TOR granted on 31.12.2008) -Environmental Clearance -reg.**

Sir,

This is with reference to letter No 43011/88/2007-CPAM dated 17.04.2007 of Ministry of Coal forwarding the application for TOR and this Ministry's grant of TOR vide MOEF letter No. CIL/DLI/EMP-TOR/2010/01 dated 23.02.2010 to the above-mentioned project. This also refers to letter No. CIL/DLI/EMP-TOR/2010/01 dated 23.02.2010 of M/s CIL forwarding the application for environmental clearance for the above-mentioned project and subsequent letters dated 21.07.2011 and 07.09.2011. It is noted that the proposal for expansion of **Urimari Opencast Coalmine Project from 1.30 MTPA to 2 MTPA (normative capacity) and a peak production of 2.50 MTPA within the existing ML area of 243.09 ha** Environmental clearance was granted for 1.3 MTPA on 23.10.1992. There are no ecologically sensitive areas found within 15 km of the core zone. Of the total ML area of 243.09 ha, 11.10 ha is agricultural, 134.03 ha is forestland, 24.96 ha is wasteland and 73 ha is settlements. Forestry clearance of 49.97 ha of forestland was obtained on 18.01.1994 and renewal on 08.11.2010 and for 91.04 ha obtained on 17.07.2008. Mining is opencast with shovel-dumper combination and involves drilling and blasting. The mine boundary is at a distance of 300-600m from River Damodar. Maximum elevation of the lease is 386 m and the HFL is 349.6 m. The mine is drained by Potanga nala and Tiliya nala outfall into River Damodar. Tiliya nala is proposed to be diverted from the mine in the west. ML area of 243.09 ha, 165.27 ha is for quarry, 19.86 ha is for external OB dump, 30.85 ha is for zone, 15.80 ha is for road, and 11.31 ha is for colony, workshop, etc. Grade of coal is F. OC could be by shovel-dumper with surface miner. The expansion in production is by enhancing the area from the existing 112 ha to 165 ha. The mine has earmarked areas for stores, coal stockyard, ETP, STP facilities would be put up. No CHP is proposed. The total estimated OB generation is 90 m<sup>3</sup> in the balance life of the project would be backfilled and no new external OB dump is proposed. ML at the in the range of 1.62m-9.40 mbgl during pre-monsoon and 0.65 mbgl -6.10 mbgl monsoon. Ultimate working depth is 90m bgl. A water body of 39.66ha of a max. depth of 1.5m is left at the post mining stage. A total area of 190.13 ha would be reclaimed with plantation of 1160 trees. The post-mining stage. The total water requirement is 1705 m<sup>3</sup>/d of which 1160 m<sup>3</sup> is for Potanga, operation and 545 m<sup>3</sup>/d is for domestic use. R&R involves 396 PAFs from Potanga, Gandhonia, Bhurkandwa, Resaktola, Urimari, Aswa, of which 88 PAFs have been for the balance 307 PAFs from the villages of Potanga (55), Gandhonia (28), Burkhandola (27), Urimari (80), Aswa (72) would be completed by 5-6 years. An amount of Rs 21 lakhs has been earmarked for the CSR and Rs 5/tonne of coal is earmarked for revenue CSR activities for the balance life of the project. Coal despatch is presently from Sig at a

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Ministry of Environment & Forests (MOEF)

No. J-11015/369/2007-IA.II(M)

Paryavaran Bhawan,  
CGO Complex, Lodi Road  
New Delhi-110003.

To

Dated: 16<sup>th</sup> February 2011

Chief General Manager (Env. & Forests)  
**M/s Central Coalfields Ltd.,**  
Darbhanga House, RANCHI

**Sub: Urimari Expn. OCP (from 1.3 MTPA to 2 MTPA normative and 2.5 MTPA peak in an ML area of 243.09 ha) of M/s Central Coalfields Ltd., located in dist. Hazaribagh, Jharkhand (EC based on TOR granted on 31.12.2008) -Environmental Clearance -reg.**

Sir,

This is with reference to letter No 43011/88/2007-CPAM dated 17.04.2007 of Ministry of Coal forwarding the application for TOR and this Ministry's grant of TOR vide MOEF letter 05.10.2007 to the above-mentioned project. This also refers to letter No. CIL/DLI/EMP-TOR/2010/01 dated 23.02.2010 of M/s CIL forwarding the application for environmental clearance for the above-mentioned project and subsequent letters dated 21.07.2011 and 07.09.2011. It is noted that the proposal is for expansion of **Urimari Opencast Coalmine Project from 1.30 MTPA to 2 MTPA (normative capacity) and a peak production of 2.50 MTPA within the existing ML area of 243.09 ha.** Environmental clearance was granted for 1.3 MTPA on 23.10.1992. There are no ecologically sensitive areas found within 15 km of the core zone. Of the total ML area of 243.09 ha, 11.10 ha is agricultural land, 134.03 ha is forestland, 24.96 ha is wasteland and 73 ha is settlements. Forestry clearance for 49.97 ha of forestland was obtained on 18.01.1994 and renewal on 08.11.2010 and for 91.04 ha was obtained on 17.07.2008. Mining is opencast with shovel-dumper combination and involves drilling & blasting. The mine boundary is at a distance of 300-600m from River Damodar. Maximum elevation within the lease is 386 m and the HFL is 349.6 m. The mine is drained by Potanga nala and Tiliya nala which outfall into River Damodar. Tiliya nala is proposed to be diverted from the mine in the west. Of the ML area of 243.09 ha, 165.27 ha is for quarry, 19.86 ha is for external OB dump, 30.85ha is for safety zone, 15.80 ha is for road, and 11.31 ha is for colony, workshop, etc. Grade of coal is F. OC mining would be by shovel-dumper with surface miner. The expansion in production is by enhancing the quarry area from the existing 112 ha to 165 ha. The mine has earmarked areas for stores, coal stockyard. If necessary, ETP, STP facilities would be put up. No CHP is proposed. Maximum working depth is 90m. Grade of coal is F. Mineral transportation is by road to Gidi Washery. The total estimated OB generation is 42.93 Mm3 in the balance life of the project would be backfilled and no new external OB dump is proposed. Water table is in the range of 1.62m-9.40 mbgl during pre-monsoon and 0.65 mbgl -6.10 mbgl during post-monsoon. Ultimate working depth is 90m bgl. A water body of 39.66ha of a max. depth of 40-45m is to be left at the post mining stage. A total area of 190.13 ha would be reclaimed with plantation within the ML at the post-mining stage. The total water requirement is 1705 m3/d of which 1160 m3/d is for the mine operation and 545 m3/d is for domestic use. R&R involves 396 PAFs from the villages Potanga, Gandhonia, Bhurkandwa, Resaktola, Urimari, Aswa, of which 88 PAFs have been resettled. R&R for the balance 307 PAFs from the villages of Potanga (55), Gandhonia (28), Burkhandwa (45), Rasaktola (27), Urimari (80), Aswa (72) would be completed by 5-6 years. An amount of Rs 219 lakhs is earmarked for R&R Plan. The total Cost for environmental measures is Rs 7652.75 lakhs. An amount of Rs 975 lakhs has been earmarked for the CSR and Rs 5/tonne of coal is earmarked for revenue expenditure on CSR activities for the balance life of the project. Coal despatch is presently from Saunda Railway Siding at a

**PROJECT OFFICER**  
BIRSA PROJECT C. C. L.

**सौमित्र सिंह**  
**SOUMITRA SINGH**  
ज्य. महाप्रबंधक/विभागध्यक्ष (वन एवं पर्यावरण)  
ज्यो. सीओ एलओ, रॉकरी  
Dy. GM/HOD (Env. & Forest)  
C.C.L., Ranchi



distance of 5 km. A railway siding of North Urimari OCP, located at a distance of 2-3km, is under construction which would be used for rail dispatch of 7575 TPD coal in the expansion project. Public Hearing was held on 10.01.2010. Balance life of the project is 10 years. Capital cost of the project is Rs 25.30 crores. Project approval has been obtained in 21.01.2009. Public Hearing was held on 11.01.2010. Capital cost of project is **Rs 143.5693 crores.**

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Urimari Opencast Coalmine Expansion Project of M/s Central Coalfields Ltd. for expansion from 1.3 MTPA to 2 MTPA normative and 2.5MTPA peak production capacity within the existing ML area of 243.09 ha** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under MOEF Circulars there under subject to the compliance of the terms and conditions mentioned below:

**A. Specific Conditions**

- (i) Peak production from the mine shall not exceed 2.5 MTPA, without prior environmental clearance.
- (ii) Mining shall be carried out as per statuette from River Damodar and Tilaya Nala flowing within the lease and maintaining a safe distance from the river/Nalas flowing along the lease boundary.
- (iii) The diversion of Tilaya Nala flowing within the ML boundary shall ensure that the nala realigns to its original course at the ML boundary. The slopes of the diverted canal shall be stabilised with plantation using native species selected from the study area.
- (iv) No washery shall be established within the ML without prior environmental clearance from this Ministry.
- (v) Topsoil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used within a year of its generation for reclamation and development of green belt.
- (vi) The entire OB of 42.93 Mm3 generation during the balance life of the project shall be backfilled and no new external OB dump shall be created.
- (vii) 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 Bhubaneswar on yearly basis.
- (viii) 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.
- (ix) Garland drains (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 provide adequate retention period to allow proper settling of silt material.
- (x) 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.

**PROJECT OFFICER**  
**BIRSA PROJECT C. C. U**

**सौमित्र सिंह**  
**Soumitra Singh**  
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C.C.L., Ranchi



- (xi) Coal despatch of 7575 TPD coal from the mine for the expansion project shall be from a railway siding of North Urimari OCP, located at a distance of 2-3km, which is under construction which would be used for rail dispatch. Mineral transportation by road from mine to CHP and to North Urimari Railway Siding shall use trucks of a minimum capacity of 20-T. All internal roads and approach roads, and roads for colony shall be black topped. A 3-tier green belt shall be developed on both sides of these roads. Green belt (3-tier) shall be developed at the railway siding at Central Saunda and North Urimari also.
- (xii) High efficiency water sprinkling system provided to check fugitive emissions at the transfer points, haulage roads, etc shall be provided for crushing/loading operations for dust control at the CHP.
- (xiii) Drills shall be wet operated only.
- (xiv) Controlled blasting shall be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- (xv) A Progressive Mine Closure Plan shall be implemented whereby, of the total ML area of 243.09 ha, an area not less than 190.13 ha shall be reclaimed with plantation consisting of quarry area (100.59 ha), quarry batter (24.02 ha), area where no external OB dump is now planned (19.86 ha), roads (5 ha), embankment (3.30 ha), near infrastructure (11.31 ha) and safety zone (26.05 ha).
- (xvi) A Final Mine Closure Plan shall be implemented by reclamation of 165 ha of the total quarry area of 125.34 ha shall be afforested by planting native plant species in consultation with the local DFO/Agriculture Department/Relevant Institution. The density of the trees shall be around 2500 plants per ha. A water body of 39.66ha of a max. depth of 40-45m is to be left at the post mining stage, the upper sides of which shall be gently sloped and stabilised with plantation from species found in the original ecosystem.
- (xvii) No groundwater (bore well) shall be used for mining operations except for drinking (mine and in colony). Rainwater harvesting structures including check dams for recharge of ground water shall be erected within and around the ML in case the water table shows a declining trend. Additional water if any required during mining operations shall be met from mine sump water or from rainwater.
- (xviii) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing 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.
- (xix) The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xx) Sewage treatment plant of adequate capacity shall be installed in the colony. ETP shall also be provided for workshop and CHP wastewater. Treated wastewater meeting prescribed norms only shall be permitted to be discharged in to the natural water courses.
- (xxi) 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 third party health check up for occupational diseases and hearing impairment, if any, through an a medical institution/hospitals in the district/State.

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PROJECT OFFICER  
BIRSA PROJECT C. C. L.



- (xx) The impact of CSR and R&R shall be assessed every 3 years on basis of socio-economic and quality of life parameters such as the UNDP Human Development Index and furnished as part of the Monitoring Report. R&R shall be compensated as per norms not below that laid out under the National/State Govt. R&R Policy. A revenue expenditure of Rs 5/tonne of coal shall be earmarked for CSR. The details of expenditure and various activities shall be form part of the Annual Report of the company and also uploaded on the company website and updated at least once a year.
- (xxii) For monitoring land use pattern and for post mining land use, a time series of land use 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 Bhubaneswar.
- (xxiii) 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 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 quantum of mineral coal and waste being produced 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 monitoring  $PM_{10}$ ,  $PM_{2.5}$ ,  $SO_x$  and  $NO_x$ . 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. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in particulates shall be carried out at least once in six months.
- (iv) Data on ambient air quality ( $PM_{10}$ ,  $PM_{2.5}$ ,  $SO_x$  and  $NO_x$  and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EP Rules, 1986 shall be furnished as part of the compliance report.
- (v) 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.
- (vi) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge 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. Oil and grease trap shall be installed before discharge of workshop effluents.
- (vii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.
- (viii) Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with

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BIRSA PROJECT C. C. L.

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GM/HOD (Env. & Forest)  
C.C.L., Ranchi



the State Pollution Control Board and data got analysed through a laboratory recognised under EP Rules, 1986.

- (ix) 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.
- (x) 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.
- (xi) 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 Bhubaneswar.
- (xii) 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>
- (xiii) A copy of the environmental clearance letter shall be marked to concerned Panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.
- (xiv) A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (xv) The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.
- (xvi) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.
- (xvii) The Regional Office of this Ministry located at Bhubaneswar 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.
- (xviii) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.

**PROJECT OFFICER**  
BIRSA PROJECT C. C. B

**सौमित्र सिंह**  
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Dy. GM/HOD (Env. & Forest)  
C.C.L., Ranchi




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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.



(Dr. T. Chandini)  
Director

**Copy to:**

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarpur, Bhubaneswar - 751023.
4. Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), H.E.C., Dhurwa, Ranchi - 834004.
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.
8. Dr. R.K. Garg, Advisor, M/s Coal India Ltd., SCOPE Minar, New Delhi.
9. District Collector, Hazaribagh, Government of Jharkhand.
10. Monitoring File 11. Guard File 12. Record File.

  
PROJECT OFFICER  
BIRSA PROJECT C. C. L.

  
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0651-2491041





# झारखण्ड राज्य प्रदूषण नियंत्रण बोर्ड

Ph: 0651-240300  
Fax: 0651-240300

## JHARKHAND STATE POLLUTION CONTROL BOARD

राज्य (प्रदूषण निवारण एवं नियंत्रण) अधिनियम 1981 के अन्तर्गत गठित  
(CONSTITUTED UNDER THE AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981  
T. 2, Division Building (Ground Floor), H.E.C. Campus, Dhanbad-834004

Ref No: HZM/11/AM

Date: 15/09/2005

### EMISSION CONSENT ORDER

With reference to the application dated 12/08/2004 of Sri B.D. Yadav, PO, M/s. Sayal (D) Colliery, CCL, Po- Sayal, Hazaribagh for consent under section 21 of the Air (Prevention & Control of Pollution) Act, 1981, he/they is/are granted consent to operate his/their Industrial Plant at Po- Sayal, Hazaribagh, Hazaribagh-2829125 for the period from 01/01/2005 to 31/03/2005 with the following conditions:

1. That, he/they shall not make any alteration, addition, deletion or modification in the plant without the prior approval from the board and shall also abide by the obligations under sections 22, 23 and 31A of the Air (Prevention & Control of Pollution) Act, 1981 and shall further extend co-operation to the Board in performance its functions enumerated in sections 24, 25, and 26 of the Act;
2. That, he/they shall comply with the requirements of rule 14 of the Environment (Protection) Rules, 1986, rules 7, 9, 10 and 11 of the Hazardous Wastes (Management and Handling) Rules, 1989, and 2000, rules 1, 5, 7, 8, 9, 10, 12, 13, 15, 17 and 18 of the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and the provisions of the Public Liability Insurance Act, 1991, whichever is applicable;
3. That, he/they shall monitor his/their emission(s) and ambient air quality from representative points regularly and maintain its quality in conformity with Board's standards and shall produce its proof, as and when asked for;
4. That, he/they shall submit application for consent again 30 days before the expiration of the period of consent 31/03/2005 or within 30 days from the date of receipt of this order, whichever is applicable
5. He/they shall reclaim the mine out area regularly.
6. He/they shall submit Ambient Air Quality Report within consent period.
7. He/they shall submit Environmental Statement by 30th Sept. every year
8. He/they shall continue tree plantation & shall maintain.
9. He/They shall prepare and submit plan for rain water harvesting within six months.
10. He/they shall do sprinkling of water time to time on haul roads and dusty areas.

*[Signature]*  
PROJECT OFFICER  
Sayal 'D' Colliery

To,  
Sri B.D. Yadav, PO  
M/s. Sayal (D) Colliery, CCL,  
Po- Sayal, Hazaribagh (P & P)  
Hazaribagh-2829125  
Place: Hazaribagh (B-S) Area

*[Signature]*  
उपमहाप्रबन्धक / विभागाध्यक्ष  
पर्यावरण एवं वन विभाग  
सी० सी० एल० दरभंगा हाउस  
राँची

*[Signature]*  
MEMBER SECRETARY





# झारखण्ड राज्य प्रदूषण नियंत्रण बोर्ड

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## JHARKHAND STATE POLLUTION CONTROL BOARD

बल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम 1974 के अन्तर्गत गठित  
CONSTITUTED UNDER THE WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974  
T. A. Division Building (Ground Floor), H.E.C. Campus, Dhurwa, Ranchi-834004

HZ/4295/W1

Date 27/06/2005

### DISCHARGE CONSENT ORDER

In reference to the application dated 02/05/2004 of Project Officer, M/s. Sayal (D) Colliery, CCL, Po-Sayal for  
under section 23/26 of the Water (Prevention & Control of Pollution) Act, 1974, he/they is/are granted consent to  
into use his/their new/alterted/existing outlet(s) for discharge of trade effluent and / or domestic sewage at CCL  
yal for the period from 01/01/2004 to 31/12/2004 with the following conditions:  
That, he/they shall not make any alteration, addition, deletion or modification in the plant without the prior clearance  
from the Board and shall also abide by the obligations under sections 24, 31 and 33A of the Water (Prevention &  
Control of Pollution) Act, 1974 and shall further extend cooperation to the Board in performing its functions entrusted  
under sections 20, 21, 23, 30 and 32 of the Act;

That, he/they shall comply with the requirements of rule 14 of the Environment (Protection) Rules, 1986; rules 4, 5,  
9, 10 and 11 of the Hazardous Wastes (Management and Handling) Rules 1989 and 2000, rules 4, 5, 7, 8 10, 11,  
2, 13, 15 and 18 of the Manufacture Storage and Import of Hazardous Chemical Rules, 1989; and the provisions of  
the Public Liability Insurance Act, 1991, whichever is applicable;

That he/they shall monitor his/their effluent(s) regularly and maintain its quality in conformity with Board's standards  
and shall produce its proof, as and when asked for;

That, he/they shall submit application for consent again 30 days before the expiration of the period of consent i.e.  
31/12/2004 or within 30 days from the date of receipt of this order, whichever is applicable.

He/they shall submit Environmental Statement by 30th Sept. every year.

He/they shall conform the quality of effluent to the standard prescribed by the Board.

He/They shall prepare and submit plan for rain water harvesting within six months.

उपमहाप्रबन्धक / विभागाध्यक्ष  
पर्यावरण एवं वन विभाग  
सी० सी० एल० दरभंगा हाउस  
राँची

Project Officer  
Sayal (D) Colliery  
Po-Sayal  
Dhagh-829125  
# :- 0

MEMBER SECRETARY

PROJECT OFFICER  
Sayal (D) Colliery

No. HZ/4295/W1

Dated 27/06/2005

Forwarded to the Regional Officer

Hazaribag for information and necessary action

S.O. (P & P)  
(B-S) Area

MEMBER SECRETARY

सौमित्र सिंह  
SOUMITRA SINGH  
उपमहाप्रबन्धक/विभागाध्यक्ष (वन एवं पर्यावरण)  
सी० सी० एल० दरभंगा हाउस  
राँची  
(Env. & Forest)