

BY SPEED POST

No. J-11015/251/2010-IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi-110003.
Dated: 24 January, 2014

To,

Shri Chanakya Choudhary,
Chief Resident Executive,
M/s Tata Steel Ltd.,
Tower- I, 10th Floor,
Jeevan Bharati Building,
Connaught Place,
New Delhi.

Sub.: Ganeshpur Opencast Coalmine Project (4 MTPA (normative) & 5.5 MTPA (Peak) in 398 ha project area) of M/s Tata Steel Ltd., located in dist. Latehar, Jharkhand - Environment Clearance – reg.

Sir,

This has reference to letter No. TSLDEI/177/2010 dated 06th July, 2010 of Ministry of Coal forwarding the application for Terms of Reference (TOR) and this Ministry's letter dated 03.12.2010 granting TOR to the above mentioned Project and subsequent letter from M/s Tata Steel Ltd., bearing no. TSLDEI/312/2012 dated 10th September, 2012 and subsequent letters no. dated 04.12.2012; 11.01.2013; 08.02.2013; 19.12.2013 for submitting therewith the final EIA/EMP for Environmental Clearance for the above mentioned subject.

2. The Ministry of Environment & Forests has considered the application. It is noted that the application is for environmental clearance for Ganeshpur Opencast Coalmine Project (4 MTPA (normative) & 5.5 MTPA (Peak) in 398 ha project area) of M/s Tata Steel Ltd., located in dist. Latehar, Jharkhand. The proponent has presented the proposal and informed that:

3. The Ministry of Environment & Forests has considered the application. The proposal was considered in the 61st Expert Appraisal Committee held on 19-20 November, 2012 and in the 65th Expert Appraisal Committee held on 8th -9th January, 2013. It is noted that the proposal is for grant of Environmental Clearance for Ganeshpur Opencast Coalmine Project (4 MTPA normative & 5.5 MTPA Peak in 398 ha project area) of M/s Tata Steel Ltd., located in dist. Latehar, Jharkhand. The proponent has informed that:

- i. Ganeshpur Opencast Coalmine Project (5.5 MTPA in 398 ha project area) of M/s Tata Steel Ltd. ,located in dist. Latehar, Ministry of Coal, Govt. of India vide letter No. 13016/27/2008-CA-I dated 28th May, 2009 has allotted Ganeshpur Coal block jointly to M/s Tata Steel (As leader) and M/s Adhunik Power & Natural Resource Ltd (As associate) for end use of coal in their thermal power projects.
- ii. Of the total ML area of 398 ha, 168 ha is Forest land, 154 ha is Agricultural land, 54ha is waste land, 8 ha is water body, 14 ha Habitation including Roads. Land

- breakup of the total 398 ha, 204 ha for quarry area, 125 ha is for External OB dump, 7 ha is for infrastructure, 3 ha is for road, 2 ha is for office, 8 ha is for Railway siding & silo loading, 11 ha is for Barrier along mine boundary including embankment covered with plantation, 7 ha is for nallah, 14 ha is for Residential colony, 17 ha is for green belt.
- iii. Net Geological Reserves (GR) is 137.88 MT, Extractable Reserves (Estimated) 91.8 MT. Ultimate Working Depth is 220 m. Stripping ratio is 1:1.39 cum/ tone. Coal seams are Seam Local to Seam V with splits.
 - iv. The grade of Coal is 'F' (Average).
 - v. The mining with shovel dumper combination is proposed due to multiplicity of coal seams, steep gradient of seams & inconsistent thickness parting. Sequence of drilling, blasting, loading by excavators transport by dumpers and grading of waste rocks by dozers & graders has been proposed.
 - vi. During the mine life, green perennial grass will be grown all over the external OB dump area. Details of post-mining land usage after re-handling of OB has been provided. The excavated area is envisaged to be brought back to productive uses as detailed in the annexure. The external O.B dump has been worked out to be maintained to 30 m height in post mining phase. While doing so, 43 Mm³ of external O.B will be re-handled and will be filled back in quarry area to ensure that height of the resultant external O.B dump is kept up to 30 m only. In post -mining stage, as per revised plan, of the total 398 ha area, the 154 ha area will be under plantation, 185 ha under agriculture, 32 ha water body, 27 ha for public and other use. The void depth would be reduced and it would be less than 40 mt. The mine is proposed to reach up to a depth of 220 m. As per the hydro-geological studies, the radius of influence is likely to go up to 925 m.
 - vii. Total OB Generated (Estimated) would be 127.83 Mm³. OB dump in 125 ha area with 65 mt height. The backfilling started from 3rd year onwards. Width of working bench is 30 to 40 m. Maximum depth of quarry is 220 m. The final height of external O.B is to be reduced up to 30 m, in post mining phase by rehandling extra OB and filling the same in excavated area. Due to this re-handling of 43 m cum of OB, the agriculture land in excavated area will increase from 23 ha to 46 ha and plantation area increases from 104 ha to 133 ha. The external OB height shall be maintained to a height of 30m.
 - viii. Average water level in both core & buffer zone ranges between 5.5 to 11.90 m in pre-monsoon & between 3.0 to 6.0 m in post-monsoon period. Straightening of small meandering portion of Bhutha Nallah has been proposed. In post-mining stage, the water body in 71 ha area with 60mt depth. Barwapani Nallah remains undisturbed.
 - ix. Internal OB dump would be at ground level. External dump would be upto 25 years after that 90% OB would be rehandled.
 - x. The 1st phase of 120 MW plant has been commissioned at Jojebera and the 2nd Phase of 480 MW is coming up at Tiruldih.
 - xi. Controlled Blasting would be practiced. Based on R&D, effective system for dust control shall be put in place in the project area.
 - xii. The local people and families are already associated in all planning, operation and monitoring of all social developmental activities in project affected area. This is planned to be further strengthened over the life of mine. Issues related to environment pollution and the impact of open cast mining in the area. The Environment Management Plan covers all issues related to Soil, Water, Air and Noise pollution and issues related to vibrations coming from blasting.
 - xiii. There is a working mine and few proposed open cast mines have been proposed. However, as directed by EAC, regular ground water monitoring will be carried out upto one kilometer from the excavation area. Piezometers will be installed for regular monitoring.
 - xiv. Villages within impact zone of the mine will be monitored for water depletion & required care shall be taken to maintain the water level in the impact zone. Ground

- water monitoring will be done and rain water harvesting structures will be created in case of its depletion.
- xv. Handicapped persons in area will be provided Rs 3000 linked with present rate of wages and Tricycle.
- xvi. **Transportation of coal** from pit head to Tori Shivpuri railway siding which is located at the distance of 1.5-2 km will be by belt conveyor and Silo loading into wagon further by rail. There will be no transportation of coal by road.
- xvii. **R&R** of 220 PAFs of villages Jala (126 nos), Seregara (2nos) Nagra(81 nos), Pundarlawa (11 nos) involved.
- xviii. **CSR:** Rs 15.68 lakhs spent in FY-12 Rs 27.60 lakhs spent till Oct'12. A total of Rs 84.41 lakhs has been planned to be spent during this financial year. Life of the project is 25 years. CSR Capital Expenditures would be Rs. 279 Lakhs. The total expenses under the project development phase prior to coal production is proposed for CSR activities is to be Rs. 227 Lakhs/annum, during mining operation Rs 3 Crores/annum and at peak production it would be Rs 3.3 Crores/annum .
- xix. **Cost of the project:** Total capital Cost : Rs 646 Cr (Rs 90 +Rs 546) Crores; Cost of Production: Approx. Rs 900/T; Sale Price: To be decided by MoC; CSR cost:Rs 7/T; R&R Cost : Rs 53.54 Cr; Environmental Management cost: 16.20 Cr
- xx. **Public Hearing** was held on 02.06.2012. The issues raised during the Public Hearing have been categorized into three broad areas e.g. issues related to R&R and CSR. In the area of CSR, the work is already in progress. The proponent presented details of activities undertaken by the Company under the CSR eg. Mobile medical Health Unit, Organizing special camp, Anti-Malarial Measure, Anti Venom & anti rabies support for the surrounding area at Balumath. Health Awareness Programs, Computer Training is being done at Balumath, Sports, regular repairs of the hand pumps and wells, Upgrading the infrastructure of Primary Health Centre at Seregara, Beautification of Seregara Community Hall (planned),Repair of Road of Jala village (planned),Providing solar lamps at key locations in the village(planned). The proponent has assured to address the issues raised during the Public Hearing.
- xxi. **Forestry issues:** Stage I forest clearance has been obtained for diversion of 168 ha (163.52 + 4.48 ha safety Zone) of forest land vide FC division letter no. 8-37/2013-FC dated 19.12.2013.
- xxii. **Legal issues:** No legal cases are pending.

4. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) in its 61st Expert Appraisal Committee held on 19-20 November, 2012 and recommended in the 65th Expert Appraisal Committee held on 8-9 January, 2013 for granting Environmental Clearance. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Ganeshpur Opencast Coalmine Project (4 MTPA(normative) & 5.5 MTPA(Peak) in 398 ha project area) of M/s Tata Steel Ltd. ,located in dist. Latehar, Jharkhand** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto subject to the compliance of the terms and conditions mentioned below as mentioned below:

A. Specific Conditions:

- i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- ii. Details of total number of people provided employment in the project be provided to the Ministry for record.
- iii. Commitment made during public hearing, alongwith the budgetary provisions, should be adhered to.
- iv. Apart from the CSR incentives, other measures such as carrying out regular repairs of the hand pumps and wells, upgrading the infrastructure of Primary Health Centre at Seregara, beautification of Seregara Community Hall (planned), repair of Road of Jala

- village (planned), providing solar lamps at key locations in the village (planned) be undertaken so as to improve the infrastructure of the area.
- v. The budget for operational phase should be provided for CSR activity at the rate of Rs 6/T of coal production.
 - vi. Budget should be provided in the CSR Action Plan so that it is committed on behalf of Company.
 - vii. Transportation of coal from pit head to Tori Shivpuri railway siding which is located at the distance of 1.5-2 km will be by belt conveyor and Silo loading into wagon further by rail. There will be no transportation of coal by road.
 - viii. R&R of 220 PAFs of villages Jala (126 nos), Seregara (2nos) Nagra(81 nos), Pundarlawa (11 nos) involved and need to be addressed. The R&R cost shall be 53.54 crores.
 - ix. The temporary OB dump would be in 125 ha area with 75 m height which will be totally rehandled at the end of mine and no OB dump and internal filling will be brought to the ground level. Final water body /void should be of 32 ha and 30m depth
 - x. Grass turfing should be provided upto 25 years.
 - xi. The excavated area should be brought back to productive use e.g. agriculture and others.
 - xii. Continuous groundwater monitoring should be carried out in and around 5 km of mine area.
 - xiii. The height of external OB dump should be less than 30m
 - xiv. Indigenous Social Scientist should be appointed under the project.
 - xv. Local people should be involved in skill development. Employment should be created for local people e.g. Irrigation purposes, Construction of well, Talab, Poultry, Dairy etc. so the indigenous people should not be marginalized.
 - xvi. The industry should involve local people and their families as part of developmental process.
 - xvii. Handicapped persons should be provided more than Rs. 1500/month as pension for life as against the proposal of the proponent. Provision of motor tricycle could be considered to all the handicapped persons in area.
 - xviii. Long term annuities should be provided to the entire life of PAFs.
 - xix. Cow shed should be provided. Biomass can be used for cattle and as fertiliser.
 - xx. Controlled Blasting should be practiced to reduce dust generation.
 - xxi. R&D should be carried out for better infrastructure for dust suppression in coal extraction area.
 - xxii. Species of Karanj, Su-Babul should not be planted. The native species should be planted. All the 11 plant species suggested e.g. Buchnaniania lanzan, Butea monosperma, Desmodium gangeticum, Diospyros melanoxylon, Holarrhaena pubescens, Semicarpus anacardium, Shorea robusta, Terminalia alata, Terminalia arjuna, Woodfordia fruticosa, Acacia catechu.
 - xxiii. A commitment letter on these issues be submitted to the MoEF for record.
 - xxiv. Coal transport from mine to Railway Siding will be by closed conveyor and at Railway Siding wagon loading by Silo.
 - xxv. Stage-I Forest Clearance be obtained before the mining activity..
 - xxvi. The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
 - xxvii. There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.
 - xxviii. OB shall be stacked at two earmarked external OB dumpsite(s) only. 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 concerned Regional office on yearly basis.
- xxix. 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 (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.
- xxx. 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.
- xxx. Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- xxxii. Drills shall be wet operated.
- xxxiii. The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,
- xxxiv. Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- xxxv. The external O.B dump shall be maintained to 30 m height in post mining phase. While doing so, 43 Mm³ of external O.B will be re-handled and will be filled back in quarry area to ensure that height of the resultant external O.B dump is kept up to 30 m only.
- xxxvi. In post -mining stage, as per revised plan, of the total 398 ha area, the 154 ha area will be under plantation, 185 ha under agriculture, 32 ha water body, 27 ha for public and other use. The void depth would be reduced and it would be less than 40 mt.
- xxxvii. Total OB Generated (Estimated) would be 127.83 Mm³. OB dump in 125 ha area with 65 mt height. The backfilling would be started from 3rd year onwards. Width of working bench is 30 to 40 m. Maximum depth of quarry shall be 220 m. The final height of external O.B is to be reduced up to 30 m, in post mining phase by rehandling extra OB and filling the same in excavated area. Due to this re-handling of 43 m cum of OB, the agriculture land in excavated area will increase from 23 ha to 46 ha and plantation area increases from 104 ha to 133 ha.
- xxxviii. Internal OB dump would be at ground level. External dump would be upto 25 years after that 90% OB would be rehandled.
- xxxix. A Progressive afforestation plan shall be implemented by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.
- xl. The maximum height of external OB dump, if any, for hard OB will not exceed 90 m and that for soft OB shall not exceed 60 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self- sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.
- xli. Of the total quarry area of 204 ha, the External dump area of 125 ha shall be reclaimed with plantation shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation 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.
- xlii. No groundwater shall be used for mining operations.

- xl.iii. 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.
- xliv. The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xlv. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
- xlvi. 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 specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- xlvii. Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.
- xlviii. 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 concerned Regional office.
- xlix. A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of Environmental Clearance.
 - i. The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.
 - ii. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.
 - iii. Corporate Environment Responsibility:
 - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

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 of production for quantum of mineral coal 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 PM₁₀, PM_{2.5}, 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.

- Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.
- iv. Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office 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 EPA rules, 1986 shall be furnished as part of 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, 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.
 - vii. Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting 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 the State Pollution Control Board and data got analysed through a laboratory recognised under EPA 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.
 - x. 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. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
 - 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 concerned Regional Office.
 - xiii. 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>.
 - xiv. A copy of the environmental clearance letter shall be marked to concern 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 company's website.
 - xv. A copy of the environmental clearance letter shall also 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 Sector and Collector's Office/Tehsildar's Office for 30 days.
 - xvi. The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance 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 public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.



- xvii. The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Offices of CPCB and the SPCB.
- xviii. The Regional Office of this Ministry located in the Region 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.
- xix. The Environmental statement for each financial year ending 31 March in Form -V is mandated to be submitted by the project proponent for 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.


5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.

6. The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

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

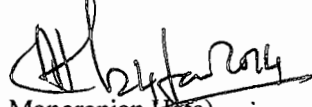
8. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

9. 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. Manoranjan Hota)
Director

Copy to:

1. The 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. Member-Secretary, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), H.E.C., Dhurwa, Ranchi - 834004.
5. Member-Secretary, 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, dist. Latehar Government of Jharkhand.
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board


(Dr. Manoranjan Hota)
Director