

No.J-11015/ 29/2012-IA.II(M) pt.  
Government of India  
Ministry of Environment, Forest and Climate Change  
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,  
Jorbagh Road, N Delhi-3  
Dated: 28<sup>th</sup> April, 2017

To,

M/s Tata Steel Limited  
Bhelatand A. Colliery, P.O. Bhelatand,  
District Dhanbad - 828 103 (Jharkhand)

E-mail: [gmo.jharia@tatasteel.com](mailto:gmo.jharia@tatasteel.com), [ajaysahay@tatasteel.com](mailto:ajaysahay@tatasteel.com),

**Sub: Expansion of Bhelatand Amalgamated Colliery from 0.38 MTPA to 0.41 MTPA in ML area of 521.68 ha and expansion of Bhelatand Washery from 0.96 MTPA to 1.5 MTPA in 8 ha of M/s Tata Steel Ltd, located in District Dhanbad (Jharkhand) - Environmental Clearance - reg.**

Sir,

This is with reference to your online proposal No. IA/JH/CMIN/8359/2012 dated 21.02.2017 vide letter No. TSLDEL/725/2013 dated 20.03.2014 and subsequent letters dated 16.07.2014, 21.07.2014, 31.03.2015, 18.05.2015, 20.02.2017, 21.02.2017, 27.02.2017 and 02.03.2017, on the above-mentioned subject.

The Ministry has considered the application. It is proposed that the Ministry is for grant of environmental clearance to Expansion of Bhelatand Amalgamated Colliery from 0.38 MTPA to 0.41 MTPA in ML area of 521.68 ha and expansion of Bhelatand Washery from 0.96 MTPA to 1.5 MTPA in 8 ha of M/s Tata Steel Ltd, located in District Dhanbad (Jharkhand).

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Projects in its 17<sup>th</sup> meeting held on 23-25 July, 2014 and 6<sup>th</sup> meeting held on 27-28 February, 2017. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are as under:-

- (i) The project was accorded TOR vide letter No.J-11015/29/2012-IA.II(M) dated 23.03.2012. The Bhelatand Colliery has been in operation for the last 107 years. it is an underground mine.
- (ii) The project is not a Joint Venture project.
- (iii) Coal linkage: Captive Mines-1.02 MTPA and BCCL mines-0.48 MTPA
- (iv) The latitude and longitude of the project are 23° 46' 00" to 23° 48' 00" North and 86° 19' 00" to 86° 21' 00" East respectively.



(v) The land usage of the project will be as follows:

Sl	Type of Land	Pre-mining	Post-mining	Core area	Changed uses post-mining
		Area (Ha.)			
1	Land under washery	8.00	8	-	Agriculture use; Public and other use
2	Land used for office building	7.24	7.24	-	
3	Land under bungalow, colony, etc.	28.36	28.36	-	
4	Land under village	31.82	31.82	-	
5	Land under plantation and park	31	31	-	
6	Land under tank, drain, nallah etc.	32.90	32.90	-	
7	Land under railways	47.70	47.70	-	
8	Land under road network	55.72	55.72	-	
9	Land under agriculture	286.94	286.94	-	
	Total	529.68	529.68	529.68	

(vi) Total geological reserve is 72.91 MT. the mineable reserve 28.70 MT, extractable reserve is 9.50 MT. The per cent of extraction would be 30 for overall seam and 80% in panel.

(vii) The coal grade is W-III & W-IV. The stripping ratio is Not applicable. The average Gradient is 1 in 5. There will be Six Seams (XVIB, XIV, XIII, XII, XI, X seams) with thickness ranging 2.70 m to 6.63 m.

(viii) The total estimated water requirement is 12300 KL/Day (6250 KL/Day to be used for stowing purpose which is recycled and sent back to underground) m<sup>3</sup>/day. The level of ground water ranges from 3.49m to 7.51m below ground level.

(ix) The Method of mining would be by Semi-Mechanised Board and Pillar system.

(x) There will be neither external nor internal OB dump as it is underground mine.

(xi) There will be no mine void as it is underground mine.

(xii) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.

(xiii) The life of mine is 25 Years.

(xiv) Transportation: Coal transportation will be through underground belt network upto washery.

(xv) There is no R & R involved. There are no PAFs.

(xvi) Cost: Total capital cost of the project is Rs. 170 Crores. CSR Cost Rs.5.5 crores (FY15)

(xvii) Approvals: Ground water clearance is not applicable. Mining Plan including the Closure Plan was approved by Ministry of Coal vide their letter dated 24<sup>th</sup> January, 2017.

(xix) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.

(xx) Forestry issues: No forest area involved for mining.

(xxi) Density of tree plantation will be about 1600 trees per ha.

(xxii) There are no court cases/violation pending with the project proponent.

(xxiii) Public Hearing was held on 24.01.2014. The issues raised in the Public hearing includes Tree plantation, Increase in dust pollution, Pollution due to washery operations, Discharge of effluents from washery, Subsidence issues, Noise generation due to truck transportation, Sewage treatment in colonies, Provision of basic amenities like drinking water, free electricity, Cleaning of

drains, roads, TSRDS-run programmes like Computer Hardware training, MRA camps, etc and Scholarship programmes for students undertaking ITI training, Provision of community toilets, dustbins and bathing place for women, Construction of parks/ playground in the villages etc.

(xxiv) Mine Plan and Mine closure plan has been obtained from Ministry of Coal vide letter dated 24<sup>th</sup> January, 2017.

(xxv) There are two other washeries namely, Mahuda washery 8 km away and Moonidih washery of capacity 1.6 MTPA, 5 km away falling in the 10 km study area. Apart from this, there is a proposed S&T washery (capacity-2 MTPA) located adjacent to the proposed washery. All coal for S&T washery will be sourced only from BCCL mines while the raw coal from the captive mines of Tata Steel is meant only for our captive Bhelatand washery.

(xxvi) Air pollution data of the study area captured during the baseline study showed a slightly higher level of PM10 in few locations. It is because of the cumulative impact of the number of industries/ activities in and around the location. One of the locations is Bhelatand Office area where in some of the instances, the level was marginally found to be high. Various mitigation measures have been proposed for prevention and control of air pollution, which includes the following:-

- a) Enclosures around crushing plant.
- b) Dust Extraction system at Coal Handling Plant: - Extracted dust is mixed in water and then fed into the Tailing Thickener.
- c) Covered conveyor belts.
- d) Dry fog dust suppression system-in Dry circuit coal handling plant.
- e) Plantation around the washery premises.
- f) Regular water sprinkling of roads and paved area within the plant area.
- g) Fixed water sprinklers installed which can be extended further.
- h) Presence of weighbridge in the plant to ensure no overloading in trucks.
- i) Manual checks at washery gate to ensure that trucks entering or leaving from the washery are covered with plastic sheets/tarpaulin.
- j) Roads are being regularly maintained in our area while repairing of Govt. roads intermittently is also being ensured. Water spraying is done regularly. Plantation along the road has been taken up.
- k) In future, CCTV cameras are proposed to be installed at washery gate to check compliance of covering of trucks

(xxvii) The coal transportation plan has been tabulated below:

	Source of Coal	Present capacity (TPD)	Proposed capacity (TPD)
Underground Belt Conveyor	Bhelatand A. Colliery	1250	1350
	Sijua Colliery	600	2000
Truck	Sijua Colliery	450	0
	BCCL coal mines	800	1500
Total Raw coal throughput		3100 TPD	4850 TPD
% via U/g belt conveyor		60 %	69 %
% via truck transportation		40 %	31 %

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(xxvii) There will be no surface transportation from our captive underground mines to feed coal to the washery. However the coal from BCCL mines will be transported through trucks as indicated above. Further we are exploring the feasibility of transportation of raw coal from BCCL mines via Rail network.

(xxviii) In the 10 km study area, there are a number of industries, commercial areas, residential areas, agricultural activities, mineral transportation, active OB dumps, abandoned OB dumps, OB dumps under fire, mines under fire, power plants, coal burning activities, coke plants, brick kilns, etc. Therefore there is a cumulative impact on air quality because of the activities of the stakeholders mentioned above.

(xxix) The surface water quality and mine water quality characteristics were again examined and found within standards.

(xxx) River Damodar flows in W-E direction along the southern part of the 10 km study area. The prominent streams draining the buffer zone are Katri Nadi, Jarian Nala and Khudia Nadi, which are all tributaries that carry the water from high lands to Damodar River. All these tributaries are perennial as they all are receiving mine water discharge from BCCL mines. In the mine leasehold area, surface run-off water drains through natural slope of the terrain to Katri Nadi. The drainage map is provided here:

(xxxi) Mining in Jharia coalfield started way back in the year 1896. Most of the confined aquifer has been punctured previously by different underground mines. Underground mining is being practiced along with backfilling by stowing using sand which is a plus point in this case. Firstly, stowing prevents subsidence which minimizes the development of cracks to a large extent. Second, bord and pillar method is used due to which the pillars additionally help to support of the strata above it and helps in reducing cracks. Thirdly, sand, used for stowing, is having the porosity to hold the underground water thus helping aquifer to retain the underground water. Finally, more than 50% of the amount of mine water pumped out is sent back to underground for re-use in stowing.

(xxxii) Subsidence is observed if there is no backfilling of the mine voids. In the Tata Steel underground mines, 100% stowing or backfilling with sand is done to minimize the impact of subsidence on surface. To monitor this, we have involved the reputed institution, CIMFR, Dhanbad to carry our subsidence studies for our mines. In the study, conducted in January, 2014, in one of the panels-16 Seam/3S, it was observed that the maximum strain value is 0.78 mm/m. The non-effective range of strain value during mining operations is 3mm/m. If the observed value is below 3mm/m, then there will be no effect of subsidence on the surface.

(xxxiii) The surface water run-off or the rainwater falling on the premises of the washery is handled by two methods- some part of the water is recycled within the plant and remaining part is handled through tailing ponds. The water is guided through drains which are connected to the water pond as a part of tailing pond management to minimize the flow of dust. The surface plan is shown here-

(xxxiv) The details of drainage, tailing pond, etc have been mentioned and shown in the above surface plan of washery and colliery premises.

(xxxv) Fresh hydro-geological study of the area covering all the seasons for monitoring of ground water. The study will include the installation of piezometers in the area in consultation with CGWB. Work order for the same has been issued to ISM.

(xxxvi) Rejects generated in the coal washery are being transported to consumer-end by rail wagons hence no road transportation is involved.

4. The EAC, after detailed deliberation on the proposal in the 6<sup>th</sup> meeting on 27-28 February, 2017 recommended the project for grant of Environmental Clearance. The Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to **expansion of Bhelatand Amalgamated Colliery from 0.38 MTPA to 0.41 MTPA in ML area of 521.68 ha and expansion**

of Bhelatand Washery from 0.96 MTPA to 1.5 MTPA in 8 ha of M/s Tata Steel Ltd, located in District Dhanbad (Jharkhand) under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the terms & conditions and environmental safeguards 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) The washery shall be as per the project report submitted and presented to EAC.
- (iii) The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.
- (iv) Transportation of coal should be carried out by covered conveyor belts. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.
- (v) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (vi) Modern practices for agriculture to be encouraged with promotion of organic farming through training and demonstration (where ever feasible)
- (vii) Special emphasis should be on training and demonstration on conservation of crops and foods and food processing (wherever feasible).
- (viii) CCTV cameras to be installed at washery gate to check compliance of covering of trucks.
- (ix) This is an underground mine. Afforestation/ green belt development takes place every year on the open surface within leasehold areas. 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.
- (x) There will be no external/internal OB dumps.
- (xi) Waste Water shall be effectively treated and recycled completely, either for washery or maintenance of green belt around the plant.
- (xii) The assurances given during the Public Hearing and as per the Action Plan developed by the proponent should be implemented
- (xiii) Hoppers of the coal crushing unit and washery unit shall be fitted with high efficiency bag filters or mist spray water sprinkling system and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.
- (xiv) All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned with mechanical sweepers.
- (xv) Records of quantum and ash content of raw coal being washed, and clean coal and coal rejects produced from every batch of washing shall be maintained and details thereof be made available to Ministry whenever directed.
- (xvi) No groundwater shall be used for the Plant Operations. Any additional water requirement envisaged shall be obtained by recycle/reuse of treated effluent and from rainwater harvesting measures.
- (xvii) Socio-economic and welfare measures for the local communities for the adjoining villages shall be implemented under CSR. Activities under CSR activities to be undertaken for the adjoining villages shall be identified in consultation with the local authorities, the details of status of implementation of CSR and expenditure thereon which should be annually updated on the company website.
- (xviii) Heavy metal content in raw coal, and washed coal shall be analysed once in a year and records maintained thereof.

## B. General Conditions

### (a) Mining

- (i) No change in mining technology and scope of work shall be made without prior approval of the Ministry of Environment, Forest and Climate Change. No change in the calendar plan including excavation, quantum of coal and waste should be made.
- (ii) Mining shall be carried out as per the approved mining plan, and also abiding by the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS). An approved progressive Mine Closure Plan shall strictly be complied with and submitted.

### (b) Land Reclamation

- (i) Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office.
- (ii) Final mine void depth should not be more than 40 m. The void area should be converted into water body. The remaining area should be back filled up to the ground level and covered with thick top soil. The land after mining should be restored for agriculture or forestry purpose.
- (iii) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The overburden dumps should be vegetated with suitable native species to prevent erosion and surface run off. The entire excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
- (iv) Greenbelt shall be developed all along the mine lease area in a phased manner. The width of the green belt along forest area should not be less than 7.5 m, and the total area covered by 3 tier green belt shall not be less than 100 ha. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.

### (c) Emissions, Effluents, and Waste Disposal

- (i) Transportation of coal by road should be carried out by covered trucks only. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM<sub>10</sub> and PM<sub>2.5</sub> such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board in this regard.
- (ii) Vehicular emissions shall be kept under control and regularly monitored. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centres.
- (iii) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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.

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(iv) Crusher/feeder and breaker material transfer points should invariably be provided with dust suppression system. Belt-conveyors should be fully covered to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(v) The project proponent shall not alter the major channels around the site. Appropriate embankment should be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary should be of suitable dimensions and critical patches should 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.

(vi) Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources in the area in consultation with Central Ground Water Board.

(vii) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. Dimension of the retaining wall to be constructed at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.

(viii) Industrial waste water (CHP, workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.

(d) Noise & Vibration Control

(i) 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.

(ii) Controlled blasting techniques should be practiced with use of delay detonators to mitigate ground vibrations and fly rocks.

(e) Occupational Health & Safety

(i) Besides carrying out regular periodic health check-up of their workers, 20% 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.

(ii) 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. Supervisory staff shall be held responsible for ensuring compulsory wearing of dust mask.

(iii) In case of outsourcing of work through MDO, the project proponent shall ensure the strict enforcement of the above conditions.

(f) Biodiversity

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State

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Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

(g) Implementation of Action Plan as per Public Hearing and CSR Activities

(i) Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees should be compensated as per the norms laid out R&R Policy of the Company or the National R&R Policy or R&R Policy of the State Government, whichever is higher.

(ii) The Board of every company, shall ensure that the company spends, in every financial year, at least two per cent. of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy under Section 135 of the Companies Act, 2013, for the socio economic development of the neighbourhood.

(h) Corporate Environment Responsibility

(i) The Company should have a well laid down Environment Policy approved by the Board of Directors.

(ii) To have proper checks and balances, the Company should 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.

(iii) 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.

(iv) The funds earmarked for environmental protection measures should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.

(i) Statutory Obligations

(i) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law, if any, as may be applicable to the project.

(ii) This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, as applicable to the project.

(iii) The project proponent shall obtain Consent to Establish and Consent to Operate from the concerned State Pollution Control Board prior to increase in capacity of washery and effectively implement all the conditions stipulated therein.

(iv) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) for drawl of water (surface and ground water).

(j) Monitoring of Project

(i) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall 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 Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.



- (ii) The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
- (iii) The Regional Office of this Ministry 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.
- (iv) The activities pertaining to development of green belt/horticulture shall be reported to concerned Regional Office of MoEF&CC on six monthly basis from the date of commencement of mining operations.
- (v) For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years and submitted to the concerned authorities within 2 months of the completion of periodicity of monitoring.

(k) Miscellaneous

- (i) A copy of clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
- (ii) An electronic copy of the EC letter shall be marked to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.
- (iii) The EC 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 public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant 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 mine office and in corporate office and on company's website.
- (iv) The project authorities should advertise at least in two local newspapers widely circulated, 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 copy of the clearance letter is available with the SPCB and also at web site of the Ministry of Environment, Forest and Climate Change at [www.environmentclearance.nic.in](http://www.environmentclearance.nic.in) and a copy of the same should be forwarded to the Regional Office.
- (v) The Environmental Statement for each financial year ending 31 March in Form-V is mandated to be submitted by the PP 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&CC by e-mail.

5. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.

6. The project proponent shall 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 PP shall set up an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

8. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this EC and attract action under the provisions of 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 and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The PP 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.

10. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

*SKJ*  
28/4/2017  
(S. K. Srivastava)  
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**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Gov. of Jharkhand, Secretariat, Ranchi.
3. The Additional Principal Chief Conservator of Forests, Regional office (ECZ), Ministry of Environment & Forests, Bungalow No. A-2, Shyamali Colony, Ranchi - 834002
4. The Member-Secretary, Jharkhand SPCB, TA Building, HEC Complex, PO Dhurwa, Ranchi
5. The Member-Secretary, CPCB, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The Advisor, Coal India Limited, SCOPE Minar, Core-I, 4<sup>th</sup> Floor, Vikas Marg, Laxmi Nagar, New Delhi.
8. The District Collector, Dhanbad, Government of Jharkhand
9. Monitoring File 10. Guard File 11. Record File. 12. Notice Board

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28/4/2017  
(S. K. Srivastava)  
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