

The Additional Principle Chief Conservator of Forest (Central)
Regional Office, Eastern Zone,
Bhubaneswar,
Ministry of Environment & Forest,
A/3 Chandrashekharapur,
Bhubneshwar – 751023.

WBD/KBP/1105/324/14
24.05.14

Sub.: Submission of Compliance status of Environmental Clearance for Kotre Basantpur & Pachmo Opencast Coal mine with beneficiation facilities of Tata Steel Ltd, West Bokaro.

Ref.: Letter No. J-11015/509/2007-IA.II(M) dated 18.05.2009 Government of India, MoEF, New Delhi and subsequent amendment to the EC vide letter No. J-11015/509/2007-IA.II(M), dt. 28.05.10 Govt. of India, MoEF, New Delhi.

Dear Sir,

We would like to submit before you that we have been accorded Environmental Clearance for Kotre - Basantpur & Pachmo Opencast Coal mine with beneficiation facilities of Tata Steel Ltd. for a capacity of 5.0 MTPA vide the above mentioned letters.

In this context, we are enclosing herewith half yearly compliance report (Oct'13- Mar'14) of the conditions as stipulated in original as well as modified Environmental Clearance both in hard and soft copies for your kind perusal please.

Hope this is in order as per the requirement.

Thanking you,
Yours sincerely,

Chief (KBP)

Encl.: As above.

**Compliance Status (Oct'13- Mar'14) of
Environmental Clearance for
Kotre – Basantpur & Pachmo open cast coal
mine with beneficiation facilities**

Tata Steel Ltd.

A. Specific Conditions

- (i) Mining shall not be carried out in forestland until forestry clearance is obtained.

It shall be complied with.

At present, PCCF Nodal recommended the diversion proposal for the further recommendation to MoEF, Government of Jharkhand.

Procurement of CA land equivalent to applied forest area of 882.35 ha is in advance stage and the payment of 80% of land value already deposited for the 443.27 ha.

The scheme for CA land over 53 ac, 518 ac, 524 ac and 1333 ac received from respective DFO,s.

NOC (JJ) from revenue board has been exempted vide letter no. 11-X/2010-FC from MoEF, New Delhi, GoI.

Report on Site specific wildlife conservation and management plan prepared and submitted to PCCF-WL for the approval.

- (ii) Prior environmental clearance shall be obtained for operation of the proposed pit head FBC based TPP, which shall be commissioned within a year of start of coal washery unit.

Prior EC shall be obtained for operation of Pit head FBC based TPP

- (iii) The plan for diversion and realignment of the nala and design of the diversion canal and modification of the natural surface drainage by construction shall be done in consultation and approval of the concerned State Flood and irrigation Department. Dimension and depth of the diverted nala and design of embankment shall be finalized based on the peak flow of the water.

Plan for diversion and realignment of nala has been submitted to Water Resource Department (WRD), Government of Jharkhand(GOJ) in Nov 2011 for approval and subsequently a presentation of the proposal made to Water Allocation Committee of GOJ in June, 2012. Letter from WRD recommending study of the nala diversion by CWPRS(Central Water & Power Research Station) , Pune has been received in June 2013. Process for conducting the study as per recommendations has been initiated.

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

It shall be complied with, once we start the operations in the area.

- (v) OB shall be stacked at earmarked external OB dumpsite within ML area and shall be a maximum height of 90 m. the ultimate slope of the dump shall not exceeded 28⁰ 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 Bhubneshwar on an yearly basis.

It shall be complied when we start mining operation.

- (vi) 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 utilized for watering the mine area, roads green belt development, etc. the drains shall be regularly desilted and maintained properly.

It shall be complied during mining operation.

- (vii) 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 provided adequate retention period to allow proper settling of silt material.

It shall be complied during mining operation.

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

Rainfall data are available for West Bokaro Coalfield. Therefore, its application shall be ensured during the construction phase.

- (ix) Crushers at the CHP 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.

Crushers at CHP shall be provided with upgraded dust suppression system which will be incorporated during installation.

- (x) Drills shall be wet operated.

All the drills shall be provided with water injection system for wet drilling operation.

- (xi) Controlled blasting shall be practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.

It shall be complied when the operation starts.

- (xii) The coal washery of 5 MTPA capacity being established within the ML shall be zero discharge facility. Coal waste rejects shall be used in the pit head FBC based Thermal Power Plant.

After amendment in EC vide letter No. J-11015/509/2007-IA.II(M), dt. 28.05.10 Govt. of India, MoEF, New Delhi, the washery with other infrastructural facilities shall be located south east of the block. The commitment of zero discharge remains unchanged. Coal rejects shall be used in FBC based thermal power plant.

- (xiii) Mineral transportation to linked coal washery and FBC based TPP shall be by conveyors only. Mineral transportation of washed coal outside the lease to the linked Steel Plant by rail only.

It shall be complied during the operational phase.

- (xiv) Area brought under afforestation shall not be less than 902 ha which includes reclaimed external OB dump (308 ha), backfilled area (582 ha), along ML boundary, along roads, green belt (12 ha), in undisturbed areas and in colony by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha.

It shall be complied.

- (xv) A Progressive Closure Plan shall be implemented by reclamation of quarry area of 642 ha of which 582 ha shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. The balance 60 ha of decoaled area being converted into a water reservoir shall gently slope along the upper benches and stabilized and reclaimed with plantation.

It has been considered in the Mine closer plan and shall be complied.

- (xvi) No groundwater or water from Chutua nala shall be used for mining operations except during initial phase. Additional water required, if any, shall be met by recycling/reuse of the water from the mining operations and from Coal Beneficiation Plant and from rainwater harvesting measures in consultation with the State Irrigation dept.

It shall be complied.

- (xvii) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.

It shall be complied after start of the mining operation and report will be submitted to various agencies as suggested.

- (xviii) Artificial groundwater recharge measures shall be constructed for augmentation of groundwater resource in case monitoring indicated decline in water table in consultation with the Central/ State Ground Water Board. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine or facing water storage due to diversion of the nalas or use of water from Chutua nala.

It shall be complied.

Though we have not started mining operation but at the same time as apart of our CSR activities within the block, the following major jobs are carried out to meet one of the thrust area i.e water requirement in the nearby villages during Oct.'13 to Mar.'14.

- **5 Hand pumps repaired in village Rahwan, Jatayatand & Pachmo.**

- **Water Harvesting Structure work is under progress in village Rahwan.**

Photographs:



- (xix) ETP shall also be provided for workshop, and CHP. Effluents shall be treated to conform to prescribed standards. Excess mine discharge water shall be monitored and treated to prescribed norms, particularly for pH and TSS, before discharge into any water course outside the lease.

It shall be complied and monitored accordingly.

- (xx) An STP shall be provided for the township/colony if any, to treat the domestic effluents to prescribed standards and for their reuse for green belt development.

STP shall be provided in the proposed residential colony.

- (xxi) R&R shall be based on norms laid down/ approval by the State Government and shall not be inferior than that in the National R&R Policy whichever is higher and shall be completed within a specified time - frame. R&R shall include provision of annuities.

The R&R activities shall be carried in accordance with the current State/ National framework provisions.

- (xxii) For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhubneshwar.

It shall be complied with and report will be submitted to various agencies as suggested.

- (xxiii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests for approval 5 years in advance of final mine closure for approval.

It shall be complied.

Mine Closure Plan has been prepared as per the stipulated guidelines of MoC. The presentation made before the standing committee of MoC, New Delhi for approval. The compliance to the observation of Standing committee submitted to MOC.

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.

It shall be complied, if required necessary approval from MoEF will be obtained.

- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.

It shall be complied and ensure no increase in production target for which environmental clearance has been accorded.

- (iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring SPM, RPM, SO₂, NO_x and heavy metals such as Hg, Pb, Cr, As, etc. 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.

It shall be complied with during active operation of mine in due consultation with State pollution control Board.

- (iv) Fugitive dust emissions (SPM and RSPM and heavy metals such as Hg, Pb, Cr, As, etc.) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.

It shall be complied with during active operation of mine and monitored & maintained.

- (v) Data on ambient air quality (SPM, RSPM, SO₂, NO_x and heavy metals such as Hg, Pb, Cr, As, etc.) shall be regularly submitted to the Ministry including its Regional Office at Bhubneshwar and to the State Pollution Control Board and the Central Pollution Control Board once in six months.

It shall be complied and report will be sent to various agencies as suggested.

- (vi) Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/ muffs.

It shall be complied, monitored and maintained.

- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 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.

It shall be complied as suggested.

- (viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.

It shall be complied as suggested.

- (ix) Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.

It shall be complied with. Moreover, a full fledged laboratory is already functional at West Bokaro Division of Tata Steel which is adjacent to the new block. It shall continue to cater to the need of the proposed project.

- (x) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.

It shall be complied and monitored.

- (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.

Environment Management Cell at West Bokaro Division is in place with qualified person reporting to Top management. The same shall cater to the need of proposed project also.

- (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubneshwar.

It shall be complied with.

- (xiii) The Regional Office of this Ministry located at Bhubneshwar 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.

It is being complied with.

- (xiv) A copy of the same will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal.

Complied.

- (xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/ Tehsildar's Office for 30 days.

To be complied by SPCB, Hazaribag, Jharkhand.

- (xvi) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>. The compliance status shall also be uploaded by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at the entrance of the project premises and mines office and in corporate office.

Complied.

Additional Conditions prescribed as per the modified EC granted vide your letter No. J-11015/509/2007-IA.II(M), dt. 28.05.10 Govt. of India, MoEF, New Delhi.

- (i) The inhabitants of the two villages Hurdag and pachmo shall continue to live in the same location within the leasehold, in an R&R colony proposed to be constructed by the project authorities for the 583 PAFs from the two villages.

The inhabitation of the above mentioned villages shall continue to live in proposed R&R colony.

The PAFS from village Hurdag and Pachmo will be Resettled and Rehabilitated in proposed R & R Colony set up by Company. The R&R colony (No. of houses) will be constructed based on the finding of SIA study conducted followed by Plot survey to freeze the exact figure.

- (ii) A distance of 200m shall be maintained between the quarry and the R&R colony for the villages Hurdag and Pachmo and a thick green belt (3-tier) shall be developed in between to mitigate the effects air pollution due to quarry operations.

A distance of 200 mtrs. shall be maintained in between quarry and R&R colony with a thick green belt of 3-tier.

- (iii) 50-m wide green belts shall be developed and maintained between the washery and the ML.

A 50 mtrs green belt shall also be developed and maintained in between the washery and the mining lease.

- (iv) An embankment being constructed between the Chutwa nala and washery shall be at least 3m above the HFL of Chutwa nala and shall be stabilised with thick plantation. Plantation shall also be developed in the area between the embankment and the washery.

Embankment between Chutwa nala and washery shall be constructed more than 3 mtrs above the HFL of Chutwa nala. The embankment/ slop shall be further stabilised by thick plantation and also plantation to be developed between embankment and the washery to mitigate diffusion of fugitive dust.

- (v) Water quality of Chutwa nala upstream and downstream of the washery shall be regularly monitored and records thereon maintained properly and form a part of the Monitoring Report.

It shall be complied with.

- (vi) The extent of forestland in the area of 60ha required to be diverted for construction of the washery shall be reduced to the extent possible.

The forest land to be covered in washery complex shall be less than 60 ha.

- (vii) The total conveyor length shall be reduced from the proposed 5.1 km to 2.7 km.

The conveyor length shall be reduced to 2.7 km from 5.1 km proposed earlier, since the washery will be nearer to mine pit.