



To,  
Shri. A. N. Sharan. IFS  
Addl. PCCF. MoEFCC,  
Regional Office (ECZ),  
Bungalow No. A-2, Shyamali Colony,  
Ranchi – 834002.

Ref No. - JMB/115/ 001625 /2016

May 20 , 2016

SUB: Half Yearly Compliance Report of the conditions of EC issued by MoEFCC, New Delhi to Kalimela Open Cast Project, Tata Steel Limited, Dhanbad for the period October'15 to March'16.

Dear Sir,

We are enclosing herewith compliance report for the period October'15 to March'16 for the EC granted vide letter no.- J-11015/252/2005-IA. II(M), Dated-22<sup>nd</sup> June 2006 issued by Ministry of Environment, Forest and Climate Change, New Delhi. This is for your kind perusal.

Thanking you,

Yours faithfully,

  
General Manager (Jharia)

Email I.D.- skumar.singh@tatasteel.com

Encl: As above.

Copy to: Member Secretary, CPCB Zonal Office, Southend Conclave, 502, 5<sup>th</sup> Floor 1582, Rajdanga Main Road, Kolkata-700107.

Copy to: Member Secretary, JSPCB, T.A. Division Building (Ground Floor), H.E.C, Dhurwa, Ranchi -834004.

**TATA STEEL LIMITED**

Jharia Collieries Jamadoba 828 112 Dhanbad India

Tel 91 326 2320263/2320265/2320267 Fax 91 326 2320268

Regd. Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

**HALF YEARLY COMPLIANCE REPORT**  
**(PERIOD: OCTOBER'15 – MARCH'16)**

**OCP KALIMELA PROJECT**  
**UNDER JAMADOBA COLLIERY**



**TATA STEEL LIMITED, JHARIA DIVISION**

**P.O.- JAMADOBA, DIST. - DHANBAD,  
STATE- JHARKHAND, PIN CODE – 828112.**

**ENVIRONMENTAL CLEARANCE GRANTED VIDE LETTER NO. - J-11015/252/2005-  
IA.II(M) DATED- 22<sup>ND</sup> JUNE 2006 ISSUED BY GOVT. OF INDIA, MINISTRY OF  
ENVIRONMENT & FOREST, NEW DELHI.**

**A. SPECIFIC CONDITIONS:**

- (i) All the conditions stipulated by SPCB in their NOC no N-35 dated 31.01.2005 are to be implemented effectively.
- **Being complied with. Now the open cast operations have ceased and no raw coal production is taking place. Now backfilling of the mine void by the OB is to be undertaken. The status of the same will be regularly updated to MOEF office.**
- (ii) The bund/embankment shall be designed taking into account highest flood level, based on past data, in the Damodar River/ Dungri Jore so as to guard against mine inundation.
- **The embankment exists along Dungri Jore. The HFL (Highest flood line) of Damodar river is way below the surface level of open cast mine hence bunds across the river is not necessary. The photos have been provided in earlier compliance reports.**
- (iii) Topsoil should be stacked properly with proper slope at earmarked sites and should not be kept active and shall be used for reclamation and development of green belt.
- **No further top soil will be generated as coal mining activity has been ceased.**
- (iv) OB should be stacked at earmarked external OB dumpsite(s) within ML area and shall be a maximum height of 60m only and consist of benches of 10m each. The ultimate slope of the dump shall not exceed 28°. Backfilling shall begin at the end of 3<sup>rd</sup> year in the decoaled area. Monitoring and management of existing reclaimed dumpsites should continue until the vegetation becomes self-sustaining. Compliance Status should be submitted to the MOEF and its regional office at Bhubaneswar on yearly basis.
- **OB is stacked within ML area at an area of 12 ha approx. About 24.08 lakh cum of OB generated has been stacked with an approximate height reached of 50 mts. The other conditions are being followed as well. This OB will be used for backfilling the mine pit as part of our mine closure plan.**
- (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 drains (size, gradient and length) and sump capacity should 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 should also provide adequate retention period to allow proper settling of slit material.

- **Catch drain and siltation ponds have been constructed to arrest the debris, silt and sediment flows from OB dumps. Collected water is being used for watering mine area, roads & plantation. Total length of catch drains is 2200 mts. Garland drains (about 1790 mts) have been completely constructed around the mine site to ensure runoff water during rainy season is properly drained off). Since mine area is not going to expand, no additional garland drains are required as of now.**
- (vi) Dimension of the retaining wall 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.
- **Retention wall (or Toe wall) of about 2200 mts. exists around the dump area to check run-off and siltation.**
- (vii) The effluents from the coal washery shall be treated to prescribed norms before discharge from the lease.
- **There is no separate coal washery for OCP Kalimela. We have a central coal washery for Jamadoba group of mines, about 1.5 kms away, which has a closed water circuit system to maintain zero discharge.**
- (viii) Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- **There is no separate CHP for OCP Kalimela. The existing CHP for Jamadoba group of mines already has adequate measures in place such as water sprinkling system and dry fog system.**
- (ix) Drills should be wet operated.
- **It is not applicable now as mining has ceased.**
- (x) Controlled blasting should be practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibration and to arrest the fly rocks and boulders should be implemented.
- **It is not applicable now as mining has ceased.**
- (xi) Area brought under afforestation includes reclaimed external OB dump (12.89 ha), backfilled area (25.15 ha), along ML boundary, along roads (0.45 ha) and in undisturbed area (1.14 ha) within the lease area by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.

- **We have planned to utilize the external OB to backfill the mine voids. The whole area will be reclaimed and plantation will be done in future.**
- (xii) A progressive closure plan shall be implemented by reclamation of quarry area of 25.15 ha which shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. The balance 1.10 ha of decoaled area shall be converted into a water reservoir, the upper benches of which shall be gently sloped and stabilized and reclaimed with plantation.
- **Around 1 Ha area was backfilled when the mine was in operation. The remaining area will also be taken up for backfilling and subsequent restoration to original land-use. The mine closure plan has been prepared and submitted to MOC, Delhi for approval. The same will be informed to your office as soon as it will be approved.**
- (xiii) Conservation Plan for endangered species, if any, found in and around the project area shall be formulated, if required, in consultation with the State Forest and Wildlife Departments.
- **Not Applicable.**
- (xiv) The company shall obtain prior approval of CGWA/ CGWB Regional Office for use of groundwater if any, for mining operations.
- **Not applicable.**
- (xv) 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 & Forest and to the Central Pollution Control Board quarterly within one month of monitoring.
- **Now there will be no impact on ground water as mining has ceased.**
- (xvi) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- **There are many ponds in the leasehold area which act as an artificial groundwater recharge. These ponds are regularly cleaned and maintained by Tata Steel.**
- (xvii) ETP should also be provided for workshop, coal washery and CHP wastewater.
- **It is not applicable.**

(xviii) R&R shall not be less than the norms laid down by the State Government and shall be completed within a specified time-frame.

- **It is not applicable.**

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

- **It has been prepared and submitted for approval to MOC, Delhi.**

(xx) Consent to operate shall be obtained before starting mining operations.

- **Consent to operate has been obtained from JSPCB vide letter ref. No. D-662(C) dated-17.03.2016 valid upto 30.09.2017. We have applied for renewal of the consent.**

## **B. GENERAL CONDITIONS:**

(i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forest.

- **Complied. All mining excavation activities are terminated since Nov'14.**

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

- **Complied. All mining excavation activities are terminated since Nov'14.**

(iii) Four Ambient Air quality monitoring station should be established in the core zones as well as in the buffer zone SPM, RSPM, SO<sub>2</sub> and NO<sub>X</sub> monitoring location of the stations should be decided based on the metrological data & topographical features & environmentally & ecologically sensitive targets in consultation with SPCB.

- **The operations have now ceased. Though the ambient air quality is still being measured for the adjoining mines of Tata Steel and the reports sent in the EC compliance reports of those units.**

(iv) Fugitive dust emissions (SPM & RSPM) from all the sources should be controlled regularly monitored & data recorded properly. Water spraying arrangement on haul roads, wagon loading, and dump trucks (loading & unloading) points should be provided & properly maintained.

- **Transportation has been stopped due to closure of mining operation. When backfilling will be started, all the control measures will again be put in place like water spraying, etc.**

- (v) Data on ambient air quality (SPM, RSPM, SO<sub>x</sub> & NO<sub>x</sub>) should be regularly submitted to the Ministry including its regional office at Bhubaneswar and to the SPCB & CPCB once in six months.
- **The ambient air monitoring is being done for the adjoining underground mines and their reports sent in different compliance reports.**

- (vi) Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations of HEMM etc. All should be provided with Ear Plug/Muff.

**It is being complied. Since the operation is closed now, all prominent sources of noise are eliminated.**

- (vii) 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 before discharged. Oil and Grease trap should be installed before discharge of Work shop effluent.

- **There is no generation of waste water.**

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

- **No mineral or OB is being transported now.**

- (ix) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the SPCB.

- **We have a fully equipped Environment Cell Laboratory with qualified personnel. Laboratory has been recognized and registered for R&D work by the Jharkhand State Pollution Control Board vide letter ref no. B-3922, Dated-30.08.2012.**

- (x) Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational Health Surveillance programme of the worker should be under taken periodically to observe any contraction due to exposure to dust and to take corrective measures if needed.

- **Persons working in dusty area have been provided with dust masks & have been given awareness training on safety& health aspects. Regular PME (Periodic Medical Examinations) are being done.**

- (xi) 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 Company.
- **We have a separate Environmental Management Cell with three qualified personnel. (one Head (Safety & Env't) and two Manager (Env't)). The reporting of Environmental Cell is directly to General Manager of the Division.**
- (xii) Funds earmarked for environmental protection measures should be kept in separate A/C and should not be diverted for other purposes. Year wise expenditure should be reported to this ministry and its regional office at Bhubaneswar.
- **The mine was closed during this period.**
- (xiii) The regional office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities shall extend full co-operation to the officer of regional office by furnishing the requisite Data/ information/ monitoring report.
- **Being complied. All data is being furnished in the compliance report and during inspection.**

  
General Manager (Jharia)