

Half Yearly Compliance Report
for the period April'22 – September'22
of
Environment Clearance accorded by MoEF&CC
vide no. J-11015/108/2006-IA.II(M)
for
West Bokaro Open Cast Coal Mine
Tata Steel Limited
PO: Ghatotand, Block: Mandu
Dist.: Ramgarh, Jharkhand - 825314





To
The Additional Principal Chief Conservator of Forest, Eastern Central Zone
Ministry of Environment, Forests & Climate Change, Govt. of India
2nd Floor, Headquarter – Jharkhand State Housing Board
Harmu Chowk, Ranchi-834002, Jharkhand
Email: ro.ranchi-mef@gov.in

WBD/EMC/4071/081/22

Date: 29.11.2022

Ref: Environmental Clearance letter no. J-11015/108/2016-IA.II(M) dated: 17.05.2007

Sub: Online submission of Half-yearly EC Compliance Report for the period April'22 – September'22 in Parivesh Portal w.r.t West Bokaro Open Cast Coal Mine of Tata Steel Limited.

Dear Sir,

Environmental Clearance was accorded to West Bokaro Open Cast Coal Mine of Tata Steel Limited vide Letter No. J-11015/108/2006-IA.II(M), dated: 17.05.2007. We are herewith submitting the half yearly EC Compliance Report for the period from April'22 – September'22 as per EIA Notification, 2006 on Parivesh Portal and through soft copy for your ready reference.

We trust that the measures taken towards environmental safeguards comply with the stipulated environmental conditions. We look forward to your further guidance which shall certainly help us in our endeavor for further improve upon our Environmental Management practices.

Thanking you,
Yours faithfully,

Head (Environment Management)
Raw Materials Division
TATA Steel Limited

Copy to: 1. jspcb_hazaribagh@rediffmail.com
2. ranchijspcb@gmail.com

TATA STEEL LIMITED

West Bokaro Division Ghatotand Jharkhand 825 314 India

Tel 91 6545 262356 (O) Fax 91 6545 262221 262172

Registered 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

EC Conditions Six Monthly Compliance Report

(by Project Proponent)



Proposal No : IA/JH/CMIN/7134/2006

1. Name of the Entity / Corporate Office :

| | | | |
|---|--|-----------------|---|
| File No. : | J-11015/108/2006-IA.II(M) | Proposal Name : | West Bokaro Opencast Coal Mine Project (4.7MTPA to 7MTPA) |
| Date Of EC. : | 17 May 2007 | EC Letter : | |
| Name of the Entity / Corporate Office : | TATA STEEL LIMITED JHARIA DIVISION | Email Address : | ankit.agrahari@tatasteel.com |
| Address : | Office of General Manager, Tata Steel Limited, Jharia Division, Jamadoba, Dhanbad, Jharkhand | Mobile No : | 7766913530 |

2. Proponent Details :

| | | | |
|------------------|------------------------|-----------------|--------------------------------|
| Proponent Name : | Mukesh | Designation : | Senior Manager Environment |
| Telephone No : | 326-6612306 | Mobile No : | +91 9263636664 |
| Fax No : | 326-03262320268 | Email Address : | mukesh.kr@tatasteel.com |
| Website : | www.tatasteel.com | Pin Code : | 828112 |
| State : | Jharkhand | District : | Dhanbad |
| Village/Town : | | | |
| Proponent Name : | Mukesh | Designation : | Head Environment Management RM |
| Telephone No : | 6545-262362 | Mobile No : | +91 9263636664 |
| Fax No : | 6545- | Email Address : | mukesh.kr@tatasteel.com |
| Website : | www.tatasteelindia.com | Pin Code : | 825314 |
| State : | Jharkhand | District : | Ramgarh |
| Village/Town : | | | |

3. Compliance Letter/Report (Proponent):

| | | | |
|----------------------------------|-----------------------------------|-------------------------------|--------------------------|
| Compliance Period : | 2022 / 01 Dec (01 April - 30 Sep) | Compliance Submission Date : | 28 Nov 2022 14:31:47:020 |
| Remarks : | | | |
| Site Visit Report : | | Site Visit Date : | N/A |
| ATR Report : | N/A | ATR Date : | N/A |
| Additional Attachment (If Any) : | N/A | Additional Remarks (If Any) : | |

4. Summary Status of Compliance :

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|--------------------|----|----------------------|---|
| Total Condition : | 37 | | |
| Complied : | 27 | Being Complied : | 9 |
| Not Complied : | 0 | Partially Complied : | 0 |
| Agreed to Comply : | 1 | | |

5. Details of Production and Project Area :

| Date of Commencement of Project/Activity : | 01 Jan 1948 | Project Area as Per EC Granted (In Case of Mine Lease): | 1740 | |
|---|---------------------|---|-------------------|---------------------------------------|
| Actual Project Area(In Case of Mine Lease): | 1740 | | | |
| PRODUCTION CAPACITY : | | | | |
| S.No | Name of the Product | Units | As per EC granted | Production during last financial year |
| 1 | COAL | Others | 7MTPA | 3.94MT |

6. Specific Conditions (Proponent) :

| S.No | Condition | Self Declaration | Remarks / Reason | Supporting Documents | Observation of IRO |
|------|---|------------------|--|---|--------------------|
| 1 | A STP shall be provided for the township / colony to treat the domestic effluents to prescribed standards and for their reuse in project activities | Complied | A Sewage Treatment Plant (STP) of 500 KLD, 240 KLD, 15 KLD, 5 KLD (TWO NOS), 100 KLD is already installed in the residential block and treated water is being reused in dust suppression of road. |  | |
| 2 | Controlled blasting should 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 should be implemented | Complied | Blasting in mines area is regularly being practiced in daytime only. Controlled blasting is practiced in the proximity of structure, continuous monitoring along with data collection is being practiced | N/A | |
| 3 | No new external OB dumps shall be created for storing OB. Monitoring and management of existing reclaimed dump sites should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on and yearly basis. | Complied | Mined-out area and existing OB dumps are available in the operating mining area, which are being used for OB dumping. |  | |
| 4 | Area brought under afforestation shall not be less than 1260 ha which includes reclaimed external OB dump | Complied | Progressive afforestation is practiced as per plan in the area. |  | |

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| | (85 ha), backfilled area (974 ha), along ML boundary, along roads, green belt (201 ha), in undisturbed areas and in colony within the mine lease area by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants/ ha | | This year about 10,000 native trees, shrubs and grass saplings have been planted. | | |
| 5 | 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 | Complied | Crusher houses and CHP areas are equipped with dry fog dust suppression system. Fixed type dust suppression system is installed at all conveyor networks & various mineral transfer points. |  | |
| 6 | No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980. | Complied | Being complied with. | N/A | |
| 7 | Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt. | Complied | Topsoil is being accumulated for the plantation purpose. The accumulated topsoil was used to spread over dumps for the plantation purpose. |  | |
| 8 | A Progressive Closure Plan shall be implemented by reclamation of quarry area of 974 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 20 ha of de coaled area being converted into a water reservoir shall gently slope along the upper benches and stabilized and reclaimed with plantation | Being Complied | Mine plan & mine closure plan was approved by Ministry of Coal, which includes all plantation details. |  | |
| 9 | Drills should be wet operated. | Being Complied | All the drills are wet operated and interlocked with drill operations. |  | |
| 10 | The embankment along the River Bokaro shall be designed taking into account the highest flood level, based on past data, along the quarry area at the mine boundary along the River Bokaro so as to guard against mine inundation. The slope of the embankment shall at least 2:1 | Complied | There is natural solid surface of the quarry area left at the mine boundary along the River Bokaro to guard against mine inundation. |  | |

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| | towards the ML and shall be stabilized by plantation. The height of the embankment shall be at least 5 m higher than the HFL. | | | | |
| 11 | 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 de silted 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 adjoin | Complied | OB dumps have been created with inward slope so no water flows outside the dump to prevent soil erosion and siltation. |  | |
| 12 | No groundwater shall be used for the mining / project activities. Additional water required, if any, shall be met by recycling / reuse of the water from the existing activities and from rainwater harvesting measures | Being Complied | It is being complied and regularly practiced; no ground water is used for mining & other project activities. |  | |
| 13 | 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 | Complied | Dumps have been created with inward slope so that maximum runoff water in monsoon comes into the mine pits and no runoff water goes outside the mining lease. |  | |
| 14 | ETP should also be provided for workshop, coal washery and CHP. There shall be zero discharge of wastewater from CHP and the coal washeries. Effluents from the tailings pond shall be treated to conform to prescribed standards in case of discharge into any water course outside the lease | Being Complied | Zero Effluent Discharge (ZED) is being maintained at Coal Washery, CHP, workshops & power plant; the effluent generated is completely recycled & reused. |  | |
| 15 | A Conservation Plan for endangered species found in and around the project area shall be formulated and for the medicinal plants (in-situ and ex-situ) shall be prepared and implemented in consultation with the State Forest and Wildlife Departments. Separate funds shall be earmarked for implementation of the various activities there under and the status thereof shall be regularly reported to this Ministry and the MoEF Regional Office, Bhubaneswar | Complied | The project area doesn't have any endangered species found in and around area. However, some of the plants of having medicinal values are conserved by developing an area. |  | |
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| 16 | 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 | Complied | The ground water recharge measures are continuously being taken up and thrust has already been put up to streamline drinking water projects, which includes construction of ponds, bore well etc. |  | |
| 17 | Consent to operate shall be obtained before expanding mining operations | Complied | Consent to operate is being obtained regularly. | N/A | |
| 18 | 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 | Agreed to Comply | It will be complied five years in advance of final mine closure plan for approval. Although we are submitting Mine Closure Fund annually in Escrow account. | N/A | |
| 19 | For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MoEF and its Regional office at Bhubaneswar | Complied | A Land use maps was prepared for core and buffer zone with a detailed study report and the same was submitted to RO of MoEFCC vide letter no. WBD/EMC/4071/0 dated: 01.03.2021. | N/A | |
| 20 | R&R shall be based on norms laid down by the State Government and shall not be inferior than that in the National R&R Policy and shall be completed within a specified time - frame | Complied | There is no applicability of R & R for the project. |  | |
| 21 | Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. 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. | Being Complied | Regular monitoring of groundwater level and quality is being carried out by establishing a network of existing wells. |  | |

7. General Conditions (Proponent) :

| S.No | Condition | Self Declaration | Remarks / Reason | Supporting Documents | Observation of IRO |
|------|--|------------------|---|---|--------------------|
| 1 | Data on ambient air quality (SPM, RPM, SO ₂ and NO _x) should be regularly submitted to the Ministry including its Regional Office at Bhubneshwar and to the State Pollution Control Board and to the Central Pollution Control Board once in six months | Being Complied | Being complied with. |  | |
| 2 | The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports | Being Complied | Being complied with. | N/A | |
| 3 | No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests | Complied | No change in mining technology shall be made without prior approval of the Ministry of Environment, Forests & Climate Change. | N/A | |
| 4 | Industrial wastewater (workshop and wastewater from the mine) should 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 should be installed before discharge of workshop effluents | Complied | The Industrial wastewaters generated from various operations are handled through effluent management system provided in all operational dept. with the objective to treat the effluent and recycle. |  | |
| 5 | State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/ Tehsildar's Office for 30 days | Complied | Complied with. | N/A | |
| 6 | Vehicular emissions should be kept under control and regularly monitored vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded | Being Complied | Vehicular emission is kept under control by regularly monitoring & maintenance of vehicles. |  | |
| 7 | Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers | Complied | All dusty areas such as crushers etc. are provided with dry fog system and fixed dust sprinklers so as to eliminate dust from source. |  | |

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| | should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed | | | | |
| 8 | Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained | Complied | All the strategic locations of operating plants with the possibilities of fugitive dust emissions has been provided with adequate enclosures, side skirt, chute, seal plate, sealing etc. |  | |
| 9 | The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhubaneswar | Complied | The expenditure occurred during the FY-22 is approx. Rs.4035.42 Lakh. |  | |
| 10 | A copy of the clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom any suggestion / representation has been received while processing the proposal | Complied | A copy of the Environmental Clearance letter was submitted to The Panchayat Sewak vide letter no. WBD/EMC-10/59/07 dated: 12.06.2007. | N/A | |
| 11 | No change in the calendar plan including excavation, quantum of mineral coal and waste should be made | Complied | Complied with. | N/A | |
| 12 | The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within 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 | Being Complied | Being complied with | N/A | |
| 13 | 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 | Complied | A separate Environment Management Cell is in place with qualified person reporting to Top management. | N/A | |
| 14 | Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in | Complied | A full-fledged NABL accredited & JSPCB recognized Environmental laboratory is |  | |

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|----|--|----------|--|---|--|
| | consultation with the State Pollution Control Board | | functioning with adequate number of pollution monitoring and analysis instruments. | | |
| 15 | Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB | Complied | Air monitoring stations in core zone as well as in the buffer zone has been established for ambient air quality monitoring in consultation with Regional Officer of State Pollution Control Board. | N/A | |
| 16 | Adequate measures should 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. should be provided with ear plugs/ muffs | Complied | Control measures are being taken up to keep noise level well within limit in working environment . |  | |

I ' TATA STEEL LIMITED JHARIA DIVISION ' hereby give undertaking that the specific / general condition is entered by me is correct.

E-Sign
TATA STEEL LIMITED JHARIA DIVISION
Date : 28 Nov 2022 14:31:47:020

****Note : N/A - Not Available**

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