



To
Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, 2nd Floor, Headquarter- Jharkhand State Housing Board,
Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi
Email: ro.ranchi-mef@gov.in

WBD/EMC/4071/026/26
Date: 19.05.2026

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 October'25 – March'26 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 October'25 – March'26 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,

**Sr. Area Manager Environment
West Bokaro Division
TATA Steel Limited**

- Copy to : The Chairman, Central Pollution Control Board, South end Conclave, Block 502, 5th & 6th Floors, 1582, Razidanga, Main Road, Kolkata - 700107 (West Bengal)
: The Member Secretary, State Pollution Control Board, T.A. Division (Ground Floor), H.E.C. Dhurva, Ranchi - 834004 (Jharkhand)
: The Regional Officer, State Pollution Control Board, PTC Chowk, Matwari, Hazaribagh – 825301 (Jharkhand)

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

Your (**Half Yearly Compliance Report**) has been **Submitted** with following details

Proposal No	IA/JH/CMIN/7134/2006
Compliance ID	1227950173
Compliance Number(For Tracking)	EC/M/COMPLIANCE/1227950173/2026
Reporting Year	2026
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	20-05-2026
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.

**Half Yearly Compliance Report
2026
01 Jun(01 Oct - 31 Mar)**

Acknowledgement

Proposal Name	West Bokaro Opencast Coal Mine Project		
Name of Entity / Corporate Office	Tata Steel Limited		
Village(s)	N/A		
District	RAMGARH		
Proposal No.	IA/JH/CMIN/7134/2006	Category	Coal Mining
Plot / Survey / Khasra No.	N/A	Sub-District	N/A
State	JHARKHAND	Entity's PAN	*****2803M
MoEF File No.	J-11015/108/2006-IA.II(M)	Entity name as per PAN	UTSAV KASHYAP

Compliance Reporting Details

Reporting Year	2026
Remarks (if any)	Online submission of Half-yearly EC Compliance Report for the period October 2025 to March 2026 in Parivesh Portal w.r.t West Bokaro Open Cast Coal Mine of Tata Steel Limited.
Reporting Period	01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office Tata Steel Limited

	Project Area as per EC Granted	Actual Project Area in Possession
Private	312.06	312.06
Revenue Land	0	0
Forest	1427.94	1427.94
Others	N/A	N/A
Total	1740	1740

Others Area

Sr. no	Other Name	Area Granted	Area Actual
--------	------------	--------------	-------------

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Raw Coal	Million Tons per Annum (MTPA)	31/12/2030	7	6.01	7 MTPA

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	MINING PLAN	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 towards the ML and shall be stabilized by plantation. The height of the embankment shall be at least 5 m higher than the HFL.
<p>PPs Submission: Agreed to Comply</p> <p>The embankment along the entire stretch of river Bokaro along the quarry area exists and is taking into account the highest flood level. Following steps have been taken by the mine to guard against mine inundation: Greenery has been developed and maintained on the natural barrier. In addition to this natural barrier, an embankment has been constructed by using OB. This embankment is being maintained between mine and river Bokaro and above the certified HFL of the mine. The embankment is having a slope of 2:1 towards the ML area. The embankment has been fully covered with plantation. In addition to the above, a concrete wall having length of 340 mtrs and height of 5 mtrs has also been constructed along the quarry edges leaving a solid barrier from the riverbank.</p>		Date: 16/05/2026
2	GREENBELT	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.
<p>PPs Submission: Agreed to Comply</p> <p>No topsoil is presently being generated afresh as mining work is not being done in virgin area. Future mining operations in virgin areas will lead to generation of topsoil which will be spread over the backfilled area concurrently facilitating growth of plantation over the area. Earlier generated topsoil have already been used over the mine dumps and for plantation activities and these dumps have been stabilized.</p>		Date: 16/05/2026
3	MINING PLAN	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.
<p>PPs Submission: Agreed to Comply</p> <p>After grant of EC, no new external OB dumps have been created. Currently, excavated OB is accommodated in the internal mine voids as part of mine backfilling.</p>		Date: 16/05/2026
4	LAND RECLAMATION	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 adjoining the mine site. Sump capacity should also be provided adequate retention period to allow

		proper settling of silt material.	
<p>PPs Submission: Agreed to Comply</p> <p>In order to arrest flow of silt and sediments from OB dumps it is submitted that OB dumps have been fully covered with plantation which have become self-sustaining. There is no chance of any erosion from the OB dumps. The catch drains help to divert the surface run-off falling over the dumps to the mine sump. No water is allowed to discharge outside the mine premises. The only dump which is yet to be vegetated which falls over the coal bearing area as such it will be rehandled in the coming year to excavate coal blocked below it and accommodating the waste in de-coaled void. The mine quarry act as a big sump with approximate sump capacity 50 - 120 million gallons, considering maximum rainfall and depending upon the catchment area. Further, accumulated mine pit water is also being used in industrial and domestic purpose after necessary treatment. One of the abandoned quarries is being used as Rainwater Harvesting Structure of capacity 1600 million gallon.</p>			Date: 16/05/2026
5	LAND RECLAMATION	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	
<p>PPs Submission: Agreed to Comply</p> <p>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. Further, toe wall and garland drains have been made to channelize the water inside the mine pit. Damaged toe walls are being repaired on regular basis.</p>			Date: 16/05/2026
6	AIR QUALITY MONITORING AND PRESERVATION	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	
<p>PPs Submission: Agreed to Comply</p> <p>Crusher houses of CHP are equipped with dry fog dust suppression system at various belt transfer points. Fog Cannon and high pressurized fixed water sprinklers installed at the receiving hopper area of CHP. Additionally, truck mounted dust suction system has been deployed at crusher area. Conventional coal stock yards are replaced with concrete silos for dust controls. Mobile water sprinklers are used in mine haul roads and approach roads. Coal from mining to washery is being sent through closed conveyor system to reduce the fugitive emission. Mist Cannons is being used in coal stacking area. Fixed water sprinkler network has been installed in the coal dispatch areas. Further closed pipe conveyors are used to transport the Coal.</p>			Date: 16/05/2026
7	AIR QUALITY MONITORING AND PRESERVATION	Drills should be wet operated.	
<p>PPs Submission: Agreed to Comply</p> <p>All the drills are wet operated and interlocked with drill operations.</p>			Date: 16/05/2026
8	MINING PLAN	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	
<p>PPs Submission: Agreed to Comply</p> <p>Blasting in mines area is regularly being practiced in daytime only. Continuous monitoring along with data collection is being practiced. Delay detonators are being practiced minimizing vibration, dust and formation of fly rocks.</p>			Date: 16/05/2026
9	LAND RECLAMATION	Area brought under afforestation shall not be less than 1260 ha which includes reclaimed external OB dump (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	
		<p>PPs Submission: Agreed to Comply</p> <p>Progressive afforestation is being practiced as per approved mining plan. Financial year FY26, 19193 native trees, shrubs and grass saplings have been planted in areas including OB dumps, safety zone, residential colonies, etc. TATA Steel is committed to conserve, enhance and restore the biodiversity in its areas of operations and made a biodiversity policy to achieve no net loss of biodiversity over a period of time. Various initiatives are taken to conserve and restore the biodiversity in the area in consultation with forest officials. We have developed a native plant species nursery in the mined-out area and all the plantation activities are being carried out using the in-house developed saplings.</p>	<p>Date: 19/05/2026</p>
10	MINING PLAN	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	
		<p>PPs Submission: Agreed to Comply</p> <p>Progressive Mine Closure Plan is being implemented in accordance with approved Mine plan. This has been verified during site inspection by CCO and CMPDI held in 2024. The total reclamation of quarry area is 974 ha out of which 98 ha area has been reclaimed through backfilling as on date. Afforestation and reclamation of de-coaled area is being done by planting native species such as Banyan, Pipal, Sal, Mahua, Palash, Shisham, Karanj, Jamun, Arjuna, Babul, Kathal, Neem, Gulmohar, Teak, Ber, etc in consultation with DFO Ramgarh Forest Division as per prevailing guidelines. As per approved mine plan, all dumps will be re-handled as the mine progress, however, to stabilize the dumps, plantation was done by native grasses and shrubs, and we have also done the soil spreading on dump slopes followed by grass seedball spreading.</p>	<p>Date: 16/05/2026</p>
11	Statutory compliance	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	
		<p>PPs Submission: Agreed to Comply</p> <p>Site Specific Wildlife Conservation and Management Plan has been approved by PPCF Wildlife consultation with officials of Forest Dept. Implementation of the plan by forest department is work in progress. Medicinal Park has been developed in an area of 1700 sq.m and maintained to conserve plants having medicinal values. Many species have been planted in the medicinal park such as Aswagandha, Arjun, Bay leaf, Lemon grass, Insulin, Kalonji, Vernonia, Dhatura, Sarpagandha, Tulsi, Hing, Aloe vera, Chirata, Shatavari, Giloy, Madar, Semar, etc have been planted in the area.</p>	<p>Date: 16/05/2026</p>
12	WATER QUALITY MONITORING AND PRESERVATION	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	
		<p>PPs Submission: Agreed to Comply</p> <p>There is no abstraction of ground water from borewell, dug well for mining and project activities. However, CGWA NOC is available for dewatering of mine water. Active mine pits are being utilized for water accumulation for use in water spraying in mine. This leads to optimized use of mine water and promotes conservation of surface water resources. An abandoned mine pit is converted into Rainwater Harvesting (RWH) pond of capacity of 1600 Million Gallon, which is</p>	<p>Date: 16/05/2026</p>

		being used for industrial and domestic purpose after proper treatment as per the requirement. Entire processed water is recycled and reused. We are recycling the washery outlet water after dewatering process of tailings in our mechanical dewatering plant and further, recycling of water from the tailings ponds in a closed circuit	
13	WATER QUALITY MONITORING AND PRESERVATION	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	
PPs Submission: Agreed to Comply Regular monitoring of groundwater level and quality is being carried out by a network of piezo- and dug-wells. The monitoring of ground water level is being done four times a year in pre-monsoon, monsoon, post-monsoon and winter seasons and for quality in May. Data thus collected is being submitted to the Ministry of Environment and Forests and to the Central Pollution Control Board quarterly.			Date: 16/05/2026
14	WATER QUALITY MONITORING AND PRESERVATION	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	
PPs Submission: Agreed to Comply We have converted abandoned mined out pit in Pundi area as a rainwater harvesting reservoir which helps to recharge the ground level. The ground water recharge measures are continuously being taken up in buffer zone by developing the village ponds and wells. We are supplying the drinking water to the nearby villages by pipeline network from our mine pit water followed by water softening facility and we have also constructed a Rainwater Harvesting cum water treatment facility to supply water to nearby villages.			Date: 16/05/2026
15	WATER QUALITY MONITORING AND PRESERVATION	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	
PPs Submission: Agreed to Comply ETP for HEMM workshop is maintained with ZLD. In addition to above, mechanical tailing dewatering system is installed for Washery and CHP area by which the tailing slurry is handled through high frequency screen and belt press to produce dry tailings and recover water for recycling and further, recycling of water from the tailings ponds in a closed circuit. The water from tailing pond after proper de-silting of tailings is recycled back to washeries to maintain zero discharge. Oil traps are also installed for workshops.			Date: 16/05/2026
16	WATER QUALITY MONITORING AND PRESERVATION	A STP shall be provided for the township / colony to treat the domestic effluents to prescribed standards and for their reuse in project activities	
PPs Submission: Agreed to Comply Sewage Treatment Plants (STPs) are installed inside the lease hold area and treated water is being reused in dust suppression of the road, gardening purpose and other project activities.			Date: 16/05/2026
17	Corporate Environmental Responsibility	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	

<p>PPs Submission: Agreed to Comply Tata Steels West Bokaro Colliery was granted a mining lease of 1740 ha and all the operations are confined within the leasehold area and further, there is no additional land acquisition envisaged for the project so there is no applicability of R and R for the project. Although, we are shifting the illegal inhabitants (encroachers) outside the working area.</p>		<p>Date: 16/05/2026</p>
18	MINING PLAN	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
<p>PPs Submission: Agreed to Comply A Land use maps was prepared for core and buffer zone with a detailed study report and the same was submitted to Regional office of Ministry of Environment, Forest and Climate Change vide letter no. WBD/EMC/4071/003/24 dated: 03.01.2024 and soft copy also mail to ro.ranchi-mef gov.in dated 03.01.2024.</p>		<p>Date: 16/05/2026</p>
19	MINING PLAN	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
<p>PPs Submission: 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.</p>		<p>Date: 16/05/2026</p>
20	Statutory compliance	Consent to operate shall be obtained before expanding mining operations
<p>PPs Submission: Complied Consent to operate is being obtained regularly and is valid till 31.12.2030.</p>		<p>Date: 19/05/2026</p>
21	Statutory compliance	No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980.
<p>PPs Submission: Agreed to Comply Mining operations are continuing in the diverted forest area and broken-up forest area prior to 1980 as per Forest Conservation Act 1980 as well as non-forest areas.</p>		<p>Date: 18/05/2026</p>
<p>General Conditions</p>		
Sr.No.	Condition Type	Condition Details
1	Statutory compliance	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests
<p>PPs Submission: Agreed to Comply Noted. Shovel dumper mining technology is being implemented.</p>		<p>Date: 18/05/2026</p>
2	MINING PLAN	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made
<p>PPs Submission: Agreed to Comply Complied. The raw coal production is in line with the mining plan with the approved EC limit.</p>		<p>Date: 18/05/2026</p>

3	AIR QUALITY MONITORING AND PRESERVATION	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO ₂ and NO _x 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
<p>PPs Submission: Agreed to Comply</p> <p>Locations for ambient air quality monitoring stations were decided considering the topography of the area, prevailing wind directions obtained from long-term meteorological data and approachability to the sampling site, regional background, population density and industrial activities in the area. The pre-dominant direction of the wind is from North-West (NW) direction and 2nd dominant direction is South-East (SE) direction. Air monitoring stations in core zone (4 nos.) as well as in the buffer zone (4 nos.) has been established for ambient air quality monitoring in consultation with Regional Officer of State Pollution Control Board.</p>		Date: 18/05/2026
4	AIR QUALITY MONITORING AND PRESERVATION	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
<p>PPs Submission: Agreed to Comply</p> <p>Strategic locations of operating plants with the possibilities of fugitive dust emissions has been provided with adequate enclosures, side skirt, chute, seal plate, sealing of transfer points along with adequate dust suppression system. The haul road, loading and unloading points are provided with pressurized water tanker for water spraying along with chemical dosing, wagon loading does not require any water spraying since the coal is in moist condition. Fixed water sprinklers have been provided on the roads.</p>		Date: 18/05/2026
5	AIR QUALITY MONITORING AND PRESERVATION	Data on ambient air quality (SPM, RPM, SO ₂ and NO _x) should be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and to the Central Pollution Control Board once in six months.
<p>PPs Submission: Agreed to Comply</p> <p>Ambient air quality (SPM, RPM, SO₂ and NO_x) is being monitored on regular basis and the data has been submitted to MoEFCC, Regional office, JSPCB and CPCB once in six months.</p>		Date: 19/05/2026
6	Noise Monitoring & Prevention	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.
<p>PPs Submission: Agreed to Comply</p> <p>Control measures are being taken up to keep noise level well within limit in working environment by providing adequate enclosure/ separation to the various high noise sources, proper maintenance, provision of control room, operators a/c cabin etc. Persons engaged in operation are provided with PPEs such as ear plug/ muff during work. Warning signs in local language are also displayed at various areas in mines and plant.</p>		Date: 18/05/2026
7	WATER QUALITY MONITORING AND PRESERVATION	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
<p>PPs Submission: Agreed to Comply</p> <p>ETP for HEMM workshop is maintained with ZLD. The Industrial wastewaters generated from</p>		Date: 18/05/2026

<p>various operations are handled through effluent management system provided in all operational dept. with the objective to treat the effluent and recycle the clear water into the system again. The HEMM maintenance shops have been provided with oil trap arrangement to recover the oil during washing of equipment. The recovered used oil during washing is sold to authorized recycler as per guideline and the effluent generated is checked for quality and recycled - reused in the system. The ETP treated water quality is analyzed on quarterly basis by own lab as well as third party NABL lab. The parameters have been found to be within limits.</p>		
8	Human Health Environment	Vehicular emissions should be kept under control and regularly monitored vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded
<p>PPs Submission: Agreed to Comply Vehicular emission is kept under control by regularly monitoring and maintenance of vehicles. overloading of vehicles is avoided during mineral transport. We also transferring material by pipe conveyors. For transportation of Minerals, we are using dust seal 81620 of M/s Nalco water India Ltd. for which NOC has been granted by JSPCB to use this as other means to cover coal while transportation.</p>		Date: 18/05/2026
9	Statutory compliance	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board
<p>PPs Submission: Agreed to Comply A full-fledged Environmental laboratory is functioning with adequate number of pollution monitoring and analysis instruments. The laboratory employs well trained chemists and staff to carry out the sampling and analysis jobs for monitoring of air quality, effluent water quality, drinking water quality and surface/ground water quality. Records of all such parameters including ambient noise, ground water level, meteorological data is maintained in the lab.</p>		Date: 18/05/2026
10	Human Health Environment	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 should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed
<p>PPs Submission: Agreed to Comply Dusty areas such as crushers etc. are provided with dry fog system and fixed dust sprinklers so as to eliminate dust from source. All haul roads are equipped with fixed and mobile dust sprinklers. Drill operations are wet only. The operators of various HEMM being operated inside the mines are provided with air-condition cabins. Dust masks has been provided to the personnel working in dusty area. The persons have been imparted necessary training on safe work practices and appraised the adverse consequences on health in case of any violation of the practices. Occupational health surveillance program is being conducted on regular basis in our Hospital for health checkup as per the Coal Mines Rules. The health awareness program is also being conducted regularly in all the departments. There are no adverse cases found during the health check-up assessments. West Bokaro Tata Main Hospital is well-equipped with an Occupational Health Surveillance Center. OHS Center employs a full-time Occupational Health Specialist. Health of the employees through audiometry, X-ray, pathology, ophthalmology, lung-function test, etc. are monitored. Pre-placement medical examination and periodical examination of the workers engaged is being conducted and record maintained. The schedule of Periodical Medical Examination is once in every 3 years for the employees of age more than 45 years and once in 5 years for the employees of age less than 45 years.</p>		Date: 18/05/2026
11	MISCELLANEOUS	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

<p>PPs Submission: Agreed to Comply</p> <p>A separate Environment Management Cell is in place at West Bokaro with qualified persons. The Environmental Management system is guided by the Environmental policy of Company and guidelines of ISO 14001. There is a well-established system for identification of environmental aspects and impacts and review mechanism of the implementation of environmental management system. Any non-compliance is dealt at bottom and reported to the highest level in the hierarchy. Details of the personnel of Environmental Management Cell of West Bokaro Division: Sl. No. Name Qualification Designation Work Experience 1 Mr. Mukesh Kumar Prasad B.Tech in Env Engg Head (Environment Management) RM 15 years 2 Mr. Pradeep Kumar Gour B.Tech in Env Engg Area Manager Environment Coal 07 years 3 Mr. Nageshwar Mahato Sr Secondary Lab. Asst. 22 years 4 Mr. Budhan Besra Sr Secondary Lab. Asst. 23 years 5 Mr. Karan Kishor Rakesh M.Sc in Chemistry Sr. Chemist 29 years 6 Mr. Pashupati Nath Gupta M.Sc in Chemistry Chemist 09 Years 7 Ms. Priyanka Mehta M.Sc in Chemistry Chemist 05 years 8 Mr. Sunil Kumar B.Com Environmental Associate 17 years</p>		<p>Date: 18/05/2026</p>
12	MISCELLANEOUS	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
<p>PPs Submission: Agreed to Comply</p> <p>The Environmental Management Cell of West Bokaro Division having separate fund for environmental protection measures / compliance to legal requirements. Besides above, all other departments are also maintaining expenditure details for environmental protection measures in their working area. The expenditure occurred during the FY-25 is approx. Rs. 8630.14 Lakh.</p>		<p>Date: 18/05/2026</p>
13	MISCELLANEOUS	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
<p>PPs Submission: Agreed to Comply</p> <p>Being complied with.</p>		<p>Date: 18/05/2026</p>
14	MISCELLANEOUS	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
<p>PPs Submission: Agreed to Comply</p> <p>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.</p>		<p>Date: 18/05/2026</p>
15	MISCELLANEOUS	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
<p>PPs Submission: Complied</p> <p>Complied with.</p>		<p>Date: 18/05/2026</p>
16	MISCELLANEOUS	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

PPs Submission: Complied
Complied with.

Date:
18/05/2026

Visit Remarks

Last Site Visit Report Date:

17/02/2025

Additional Remarks:

Note: This acknowledgement is as per the details submitted by project proponent. In no way is this document to be considered as conclusion on any action on the compliance of the project. This is strictly for the project proponent's reference purpose.

EC Compliance Report

A. Specific Conditions:

- (i) **No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980.**

Compliance:

Mining operations are continuing in the diverted forest area and broken-up forest area prior to 1980 as per Forest Conservation Act 1980 as well as non-forest areas.

- (ii) **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 towards the ML and shall be stabilized by plantation. The height of the embankment shall be at least 5 m higher than the HFL.**

Compliance:

The embankment along the entire stretch of river Bokaro along the quarry area exists and is taking into account the highest flood level.

Following steps have been taken by the mine to guard against mine inundation:

- Greenery has been developed and maintained on the natural barrier.
- In addition to this natural barrier, an embankment has been constructed by using OB. This embankment is being maintained between mine and river Bokaro and above the certified HFL of the mine. The embankment is having a slope of 2:1 towards the ML area. The embankment has been fully covered with plantation.
- In addition to the above, a concrete wall having length of 340 mtrs and height of 5 mtrs has also been constructed along the quarry edges leaving a solid barrier from the riverbank.

- (iii) **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.**

Compliance:

- No topsoil is presently being generated afresh as mining work is not being done in virgin area. Future mining operations in virgin areas will lead to generation of topsoil which will be spread over the backfilled area concurrently facilitating growth of plantation over the area.
- Earlier generated topsoil have already been used over the mine dumps and for plantation activities and these dumps have been stabilized.

- (iv) **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.**

Compliance:

- After grant of EC, no new external OB dumps have been created.
- Currently, excavated OB is accommodated in the internal mine voids as part of mine backfilling.

- (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 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 adjoining the mine site. Sump capacity should also be provided adequate retention period to allow proper settling of silt material.**

Compliance:

- In order to arrest flow of silt and sediments from OB dumps it is submitted that OB dumps have been fully covered with plantation which have become self-sustaining. There is no chance of any erosion from the OB dumps.
- The catch drains help to divert the surface run-off falling over the dumps to the mine sump. No water is allowed to discharge outside the mine premises.
- The only dump which is yet to be vegetated which falls over the coal bearing area as such it will be rehandled in the coming year to excavate coal blocked below it and accommodating the waste in de-coaled void.

EC Compliance Report

- The mine quarry act as a big sump with approximate sump capacity 50 - 120 million gallons, considering maximum rainfall & depending upon the catchment area. Further, accumulated mine pit water is also being used in industrial and domestic purpose after necessary treatment. One of the abandoned quarries is being used as Rainwater Harvesting Structure of capacity 1600 million gallon.

- (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.**

Compliance:

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. Further, toe wall and garland drains have been made to channelize the water inside the mine pit. Damaged toe walls are being repaired on regular basis.

- (vii) 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.**

Compliance:

Crusher houses of CHP are equipped with dry fog dust suppression system at various belt transfer points. Fog Cannon and high pressurized fixed water sprinklers installed at the receiving hopper area of CHP. Additionally, truck mounted dust suction system has been deployed at crusher area.

Conventional coal stock yards are replaced with concrete silos for dust controls. Mobile water sprinklers are used in mine haul roads and approach roads. Coal from mining to washery is being sent through closed conveyor system to reduce the fugitive emission. Mist Cannons is being used in coal stacking area. Fixed water sprinkler network has been installed in the coal dispatch areas. Further closed pipe conveyors are used to transport the Coal.

- (viii) Drills should be wet operated.**

Compliance:

All the drills are wet operated and interlocked with drill operations.

- (ix) 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.**

Compliance:

Blasting in mines area is regularly being practiced in daytime only. Continuous monitoring along with data collection is being practiced. Delay detonators are being practiced minimizing vibration, dust & formation of fly rocks.

- (x) Area brought under afforestation shall not be less than 1260 ha which includes reclaimed external OB dump (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.**

Compliance:

Progressive afforestation is being practiced as per approved mining plan. Financial year FY26, 19193 native trees, shrubs and grass saplings have been planted in areas including OB dumps, safety zone, residential colonies, etc.

TATA Steel is committed to conserve, enhance & restore the biodiversity in it's areas of operations and made a biodiversity policy to achieve no net loss of biodiversity over a period of time. Various initiatives are taken to conserve and restore the biodiversity in the area in consultation with forest officials. We have developed a native plant species nursery in the mined-out area and all the plantation activities are being carried out using the in-house developed saplings.

EC Compliance Report

- (xi) **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.**

Compliance:

Progressive Mine Closure Plan is being implemented in accordance with approved Mine plan. This has been verified during site inspection by CCO and CMPDI held in 2024. The total reclamation of quarry area is 974 ha out of which 98 ha area has been reclaimed through backfilling as on date.

Afforestation & reclamation of de-coaled area is being done by planting native species such as Banyan, Pipal, Sal, Mahua, Palash, Shisham, Karanj, Jamun, Arjuna, Babul, Kathal, Neem, Gulmohar, Teak, Ber, etc in consultation with DFO Ramgarh Forest Division as per prevailing guidelines. As per approved mine plan, all dumps will be re-handled as the mine progress, however, to stabilize the dumps, plantation was done by native grasses and shrubs, and we have also done the soil spreading on dump slopes followed by grass seedball spreading.

Plantation has been completed along the upper benches with gentle slopes of Pundi de-coaled area which has been converted into water reservoir.

- (xii) **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 MoEFCC Regional Office, Bhubaneswar.**

Compliance:

- Site Specific Wildlife Conservation and Management Plan has been approved by PPCF Wildlife consultation with officials of Forest Dept. Implementation of the plan by forest department is work in progress.
- Medicinal Park has been developed in an area of 1700 sq.m and maintained to conserve plants having medicinal values. Many species have been planted in the medicinal park such as Aswagandha, Arjun, Bay leaf, Lemon grass, Insulin, Kalonji, Vernonia, Dhatura, Sarpagandha, Tulsi, Hing, Aloe vera, Chirata, Shatavari, Giloy, Madar, Semar, etc have been planted in the area.

- (xiii) **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.**

Compliance:

- There is no abstraction of ground water from borewell, dug well for mining and project activities. However, CGWA NOC is available for dewatering of mine water.
- Active mine pits are being utilized for water accumulation for use in water spraying in mine. This leads to optimized use of mine water and promotes conservation of surface water resources.
- An abandoned mine pit is converted into Rainwater Harvesting (RWH) pond of capacity of 1600 Million Gallon, which is being used for industrial and domestic purpose after proper treatment as per the requirement.
- Entire processed water is recycled and reused. We are recycling the washery outlet water after dewatering process of tailings in our mechanical dewatering plant and further, recycling of water from the tailing's ponds in a closed circuit.

- (xiv) **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.**

Compliance:

Regular monitoring of groundwater level and quality is being carried out by a network of piezo- and dug-wells. The monitoring of ground water level is being done four times a year in pre-monsoon, monsoon, post-monsoon and winter seasons and for quality in May. Data thus collected is being submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly.

EC Compliance Report

- (xv) **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.**

Compliance:

We have converted abandoned mined out pit in Pundi area as a rainwater harvesting reservoir which helps to recharge the ground level. The ground water recharge measures are continuously being taken up in buffer zone by developing the village ponds and wells.

We are supplying the drinking water to the nearby villages by pipeline network from our mine pit water followed by water softening facility and we have also constructed a Rainwater Harvesting cum water treatment facility to supply water to nearby villages.

- (xvi) **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.**

Compliance:

ETP for HEMM workshop is maintained with ZLD. In addition to above, mechanical tailing dewatering system is installed for Washery & CHP area by which the tailing slurry is handled through high frequency screen and belt press to produce dry tailings and recover water for recycling and further, recycling of water from the tailings ponds in a closed circuit. The water from tailing pond after proper de-silting of tailings is recycled back to washeries to maintain zero discharge. Oil traps are also installed for workshops.

- (xvii) **A STP shall be provided for the township / colony to treat the domestic effluents to prescribed standards and for their reuse in project activities.**

Compliance:

Sewage Treatment Plants (STPs) are installed inside the lease hold area and treated water is being reused in dust suppression of the road, gardening purpose and other project activities.

- (xviii) **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.**

Compliance:

Tata Steel's West Bokaro Colliery was granted a mining lease of 1740 ha and all the operations are confined within the leasehold area and further, there is no additional land acquisition envisaged for the project so there is no applicability of R & R for the project. Although, we are shifting the illegal inhabitants (encroachers) outside the working area.

- (xix) **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&CC and its Regional office at Bhubaneswar.**

Compliance:

A Land use maps was prepared for core and buffer zone with a detailed study report and the same was submitted to Regional office of Ministry of Environment, Forest & Climate Change vide letter no. WBD/EMC/4071/003/24 dated: 03.01.2024 and soft copy also mail to ro.ranchi-mef@gov.in dated 03.01.2024.

- (xx) **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.**

Compliance:

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.

EC Compliance Report

(xxi) Consent to operate shall be obtained before expanding mining operations.

Compliance:

Consent to operate is being obtained regularly and is valid till 31.12.2030.

EC Compliance Report

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 Forests.**

Compliance:

Noted. Shovel dumper mining technology is being implemented.

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

Compliance:

Complied. The raw coal production is in line with the mining plan with the approved EC limit.

- (iii) **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 NO_x 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.**

Compliance:

Locations for ambient air quality monitoring stations were decided considering the topography of the area, prevailing wind directions obtained from long-term meteorological data and approachability to the sampling site, regional background, population density and industrial activities in the area. The predominant direction of the wind is from North-West (NW) direction and 2nd dominant direction is South-East (SE) direction.

Air monitoring stations in core zone (4 nos.) as well as in the buffer zone (4 nos.) has been established for ambient air quality monitoring in consultation with Regional Officer of State Pollution Control Board.

- (iv) **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.**

Compliance:

Strategic locations of operating plants with the possibilities of fugitive dust emissions has been provided with adequate enclosures, side skirt, chute, seal plate, sealing of transfer points along with adequate dust suppression system.

The haul road, loading and unloading points are provided with pressurized water tanker for water spraying along with chemical dosing, wagon loading does not require any water spraying since the coal is in moist condition. Fixed water sprinklers have been provided on the roads.

- (v) **Data on ambient air quality (SPM, RPM, SO₂ 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.**

Compliance:

Ambient air quality (SPM, RPM, SO₂ and NO_x) is being monitored on regular basis and the data has been submitted to MoEFCC, Regional office, JSPCB & CPCB once in six months.

- (vi) **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.**

Compliance:

Control measures are being taken up to keep noise level well within limit in working environment by providing adequate enclosure/ separation to the various high noise sources, proper maintenance, provision of control room, operator's a/c cabin etc. Persons engaged in operation are provided with PPEs such as ear plug/ muff during work. Warning signs in local language are also displayed at various areas in mines & plant.

EC Compliance Report

- (vii) 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.**

Compliance:

ETP for HEMM workshop is maintained with ZLD. 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 the clear water into the system again. The HEMM maintenance shops have been provided with oil trap arrangement to recover the oil during washing of equipment. The recovered used oil during washing is sold to authorized recycler as per guideline and the effluent generated is checked for quality and recycled - reused in the system.

The ETP treated water quality is analyzed on quarterly basis by own lab as well as third party NABL lab. The parameters have been found to be within limits.

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

Compliance:

Vehicular emission is kept under control by regularly monitoring & maintenance of vehicles. overloading of vehicles is avoided during mineral transport. We also transferring material by pipe conveyors. For transportation of Minerals, we are using dust seal 81620 of M/s Nalco water India Ltd. for which NOC has been granted by JSPCB to use this as other means to cover coal while transportation.

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

Compliance:

A full-fledged Environmental laboratory is functioning with adequate number of pollution monitoring and analysis instruments. The laboratory employs well trained chemists and staff to carry out the sampling and analysis jobs for monitoring of air quality, effluent water quality, drinking water quality and surface/ground water quality. Records of all such parameters including ambient noise, ground water level, meteorological data is maintained in the lab.

- (x) 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 program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.**

Compliance:

Dusty areas such as crushers etc. are provided with dry fog system and fixed dust sprinklers so as to eliminate dust from source. All haul roads are equipped with fixed and mobile dust sprinklers. Drill operations are wet only. The operators of various HEMM being operated inside the mines are provided with air-condition cabins. Dust masks has been provided to the personnel working in dusty area. The persons have been imparted necessary training on safe work practices and appraised the adverse consequences on health in case of any violation of the practices.

Occupational health surveillance program is being conducted on regular basis in our Hospital for health checkup as per the Coal Mines Rules. The health awareness program is also being conducted regularly in all the departments. There are no adverse cases found during the health check-up assessments.

West Bokaro Tata Main Hospital is well-equipped with an Occupational Health Surveillance Center. OHS Center employs a full-time Occupational Health Specialist. Health of the employees through audiometry, X-ray, pathology, ophthalmology, lung-function test, etc. are monitored.

Pre-placement medical examination and periodical examination of the workers engaged is being conducted & record maintained. The schedule of Periodical Medical Examination is once in every 3 years for the employees of age more than 45 years and once in 5 years for the employees of age less than 45 years.

EC Compliance Report

- (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.**

Compliance:

A separate Environment Management Cell is in place at West Bokaro with qualified persons. The Environmental Management system is guided by the Environmental policy of Company & guidelines of ISO 14001. There is a well-established system for identification of environmental aspects and impacts and review mechanism of the implementation of environmental management system. Any non-compliance is dealt at bottom and reported to the highest level in the hierarchy.

Details of the personnel of Environmental Management Cell of West Bokaro Division:

Sl. No.	Name	Qualification	Designation	Work Experience
1	Mr. Mukesh Kumar Prasad	B.Tech in Env Engg	Head (Environment Management) RM	15 years
2	Mr. Pradeep Kumar Gour	B.Tech in Env Engg	Area Manager Environment Coal	07 years
3	Mr. Nageshwar Mahato	Sr Secondary	Lab. Asst.	22 years
4	Mr. Budhan Besra	Sr Secondary	Lab. Asst.	23 years
5	Mr. Karan Kishor Rakesh	M.Sc in Chemistry	Sr. Chemist	29 years
6	Mr. Pashupati Nath Gupta	M.Sc in Chemistry	Chemist	09 Years
7	Ms. Priyanka Mehta	M.Sc in Chemistry	Chemist	05 years
8	Mr. Sunil Kumar	B.Com	Environmental Associate	17 years

- (xii) **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.**

Compliance:

The Environmental Management Cell of West Bokaro Division having separate fund for environmental protection measures / compliance to legal requirements. Besides above, all other departments are also maintaining expenditure details for environmental protection measures in their working area. The expenditure occurred during the FY-25 is approx. Rs. 8630.14 Lakh.

- (xiii) **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.**

Compliance:

Being complied with.

- (xiv) **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.**

Compliance:

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.

- (xv) **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.**

Compliance:

Complied with.

- (xvi) **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>.**

EC Compliance Report

Compliance:

Complied with.

News Paper circulation





ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



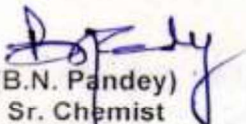
TC- 5076

TEST REPORT AMBIENT AIR QUALITY

ULR No.TC 50762500000527F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/527
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 14/10/2025 to 15/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample: 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

CORE ZONE		LOCATION – MUKUNDABEDA		
	Avg. Ambient Temperature	28°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	78.0	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	58.14	60 µg/m ³	
3.	SO ₂ , µg/m ³	19.96	80 µg/m ³	
4.	NO ₂ , µg/m ³	29.66	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



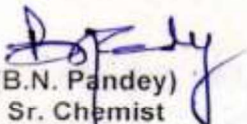
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 50762500000528F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/528
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 16/10/2025 to 17/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample: 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

CORE ZONE	LOCATION –	HOUSING COMPLEX		
	Avg. Ambient Temperature	28 ⁰ C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	81.0	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	51.2	60 µg/m ³	
3.	SO ₂ , µg/m ³	22.54	80 µg/m ³	
4.	NO ₂ , µg/m ³	31.18	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



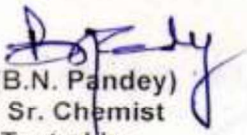
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 50762500000529F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/529
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 16/10/2025 to 17/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample: 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

CORE ZONE		LOCATION – TRAINING CENTER (PUNDI)		
SI No.	Particulars	Value	NAAQ - CPCB STANDARD	
	Avg. Ambient Temperature	28°C	Avg. Humidity	73%
1.	Particulate Matter (PM ₁₀), µg/m ³	90.2	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	53.4	60 µg/m ³	
3.	SO ₂ , µg/m ³	22.34	80 µg/m ³	
4.	NO ₂ , µg/m ³	29.88	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



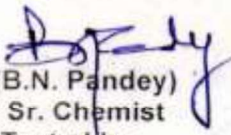
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 507625000000530F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/530
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 17/10/2025 to 18/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample: 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

CORE ZONE		LOCATION – BANJI		
	Avg. Ambient Temperature	28°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	89.6	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	48.6	60 µg/m ³	
3.	SO ₂ , µg/m ³	19.65	80 µg/m ³	
4.	NO ₂ , µg/m ³	28.88	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



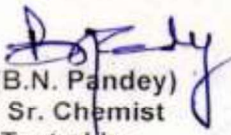
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 507625000000531F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/531
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 15/10/2025 to 16/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

BUFFER ZONE		LOCATION – CHAINPUR VILLAGE		
	Avg. Ambient Temperature	28 ⁰ C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	92.3	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	52.4	60 µg/m ³	
3.	SO ₂ , µg/m ³	21.44	80 µg/m ³	
4.	NO ₂ , µg/m ³	31.22	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



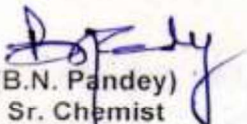
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 50762500000532F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/532
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 17/10/2025 to 18/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

BUFFER ZONE		LOCATION – PERSABEDA VILLAGE		
	Avg. Ambient Temperature	28 ⁰ C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	74.4	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	42.7	60 µg/m ³	
3.	SO ₂ , µg/m ³	19.27	80 µg/m ³	
4.	NO ₂ , µg/m ³	28.52	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



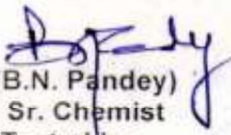
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 50762500000533F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/533
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 14/10/2025 to 15/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

BUFFER ZONE		LOCATION – DUNI VILLAGE		
	Avg. Ambient Temperature	28°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	73.8	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	42.6	60 µg/m ³	
3.	SO ₂ , µg/m ³	21.02	80 µg/m ³	
4.	NO ₂ , µg/m ³	34.99	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



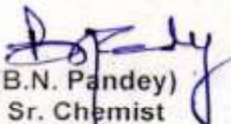
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No.TC 507625000000534F	
Test Report No: 232	Date of Issue : 25/10/2025
Customer Name and Address:	Requisition No. 232 Ref No.- ARDS/25/ENV/534
	Job Order No/ Job Id. ARDS/AAQ/232
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 15/10/2025 to 16/10/2025
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample : 21/10/2025
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 21/10/2025 – 22/10/2025

TEST RESULTS

BUFFER ZONE		LOCATION – PUNDI VILLAGE		
	Avg. Ambient Temperature	28 ⁰ C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	69.8	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	45.8	60 µg/m ³	
3.	SO ₂ , µg/m ³	18.05	80 µg/m ³	
4.	NO ₂ , µg/m ³	27.90	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/AAQ/1

Date: 26/10/2025

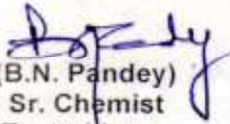
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 14/10/2025 to 15/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – MUKUNDABEDA		
	Avg. Ambient Temperature	28 ⁰ C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	12.62	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	14.54	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.91	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds-services.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/2

Date: 26/10/2025

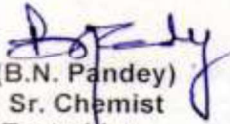
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 16/10/2025 to 17/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – HOUSING COMPLEX		
	Avg. Ambient Temperature	28 ⁰ C	Avg. Humidity	720%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	14.65	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	16.20	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.72	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/3

Date: 26/10/2025

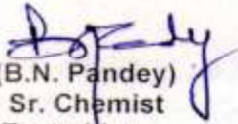
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 16/10/2025 to 17/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – TRAINING CENTER (PUNDI)		
SI No.	Particulars	Value	Avg. Ambient Temperature	Avg. Humidity
		28°C		72%
				NAAQ - CPCB STANDARD
1.	Ozone, $\mu\text{g}/\text{m}^3$	17.68		180 $\mu\text{g}/\text{m}^3$
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	16.28		400 $\mu\text{g}/\text{m}^3$
3.	CO, mg/m^3	0.882		4 mg/m^3
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL		1 $\mu\text{g}/\text{m}^3$
5.	As, ng/m^3	BDL		6 ng/m^3
6.	Ni, ng/m^3	BDL		20 ng/m^3
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL		5 $\mu\text{g}/\text{m}^3$
8.	Benzoapylene, ng/m^3	BDL		1 ng/m^3

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds-services.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/4

Date: 26/10/2025

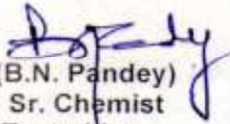
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 15/10/2025 to 16/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – BANJI		
	Avg. Ambient Temperature	29°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, µg/m ³	16.96	180 µg/m ³	
2.	NH ₃ , µg/m ³	14.32	400 µg/m ³	
3.	CO, mg/m ³	0.80	4 mg/m ³	
4.	Pb, µg/m ³	BDL	1 µg/m ³	
5.	As, ng/m ³	BDL	6 ng/m ³	
6.	Ni, ng/m ³	BDL	20 ng/m ³	
7.	Benzene, µg/m ³	BDL	5 µg/m ³	
8.	Benzoapyrene ng/m ³	BDL	1 ng/m ³	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/5

Date: 26/10/2025

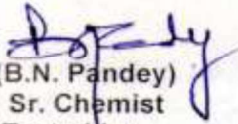
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 15/10/2025 to 16/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFFER ZONE		LOCATION – CHAINPUR VILLAGE		
	Avg. Ambient Temperature	29°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	15.86	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.12	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.68	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapylene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditimdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/6

Date: 26/10/2025

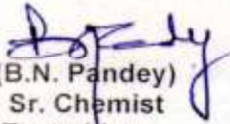
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 17/10/2025 to 18/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFFER ZONE		LOCATION – PERSABEDA VILLAGE		
	Avg. Ambient Temperature	28°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	14.38	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	14.62	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.65	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/7

Date: 26/10/2025

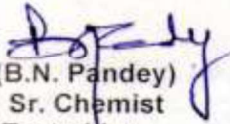
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 14/10/2025 to 15/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFER ZONE		LOCATION – DUNI VILLAGE		
	Avg. Ambient Temperature	28°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	13.92	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	14.60	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.78	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapylene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O.- Domgarh, Dist.- Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/8

Date: 26/10/2025

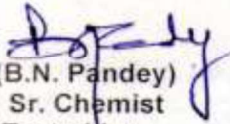
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 15/10/2025 to 16/10/2025
- Date of Testing : 21/10/2025 to 22/10/2025
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFFER ZONE		LOCATION – PUNDI VILLAGE		
	Avg. Ambient Temperature	29°C	Avg. Humidity	72%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	18.26	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.14	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.86	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by



Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



TC- 5076

TEST REPORT AMBIENT AIR QUALITY

ULR No. TC 50762600000011F		
Test Report No: 007	Date of Issue : 22/01/2026	
Customer Name and Address:	Requisition No. 007	Ref No.- ARDS/26/ENV/011
	Job Order No/ Job Id . ARDS/AAQ/007	
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 12/01/2026 to 13/01/2026	
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample: 17/01/2026	
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026	

TEST RESULTS

CORE ZONE		LOCATION – MUKUNDABEDA		
	Avg. Ambient Temperature	21 ⁰ C	Avg. Humidity	39%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	105.84	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	67.21	60 µg/m ³	
3.	SO ₂ , µg/m ³	14.09	80 µg/m ³	
4.	NO ₂ , µg/m ³	21.76	80 µg/m ³	

(B.N. Pandey)
Sr. Chemist
Tested by



(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditimdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/AAQ/1

Date: 24/01/2026

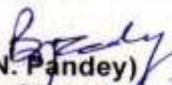
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 12/01/2026 to 13/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION - MUKUNDABEDA		
	Avg. Ambient Temperature	21 ⁰ C	Avg. Humidity	39%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	13.16	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	14.84	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.88	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377

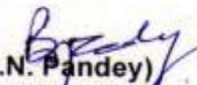


TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 50762600000012F		
Test Report No: 007	Date of Issue : 22/01/2026	
Customer Name and Address:	Requisition No. 007	Ref No.- ARDS/26/ENV/012
	Job Order No/ Job Id. ARDS/AAQ/007	
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 13/01/2026 to 14/01/2026	
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026	
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026	

TEST RESULTS

CORE ZONE LOCATION – HOUSING COMPLEX				
SI No.	Particulars	Value	NAAQ - CPCB STANDARD	
	Avg. Ambient Temperature	22 ⁰ C	Avg. Humidity	27%
1.	Particulate Matter (PM ₁₀), µg/m ³	91.62	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	58.36	60 µg/m ³	
3.	SO ₂ , µg/m ³	24.75	80 µg/m ³	
4.	NO ₂ , µg/m ³	33.10	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirmdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/2

Date: 24/01/2026

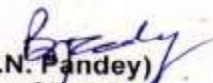
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 13/01/2026 to 14/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – HOUSING COMPLEX		
	Avg. Ambient Temperature	22°C	Avg. Humidity	27%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	13.82	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.73	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.78	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



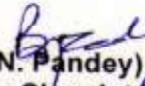
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 507626000000013F	
Test Report No: 007	Date of Issue : 22/01/2026
Customer Name and Address:	Requisition No. 007 Ref No.- ARDS/26/ENV/013
	Job Order No/ Job Id . ARDS/AAQ/007
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 15/01/2026 to 16/01/2026
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026

TEST RESULTS

CORE ZONE LOCATION – TRAINING CENTER (PUNDI)				
	Avg. Ambient Temperature	21 ⁰ C	Avg. Humidity	26%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	92.66	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	58.38	60 µg/m ³	
3.	SO ₂ , µg/m ³	16.64	80 µg/m ³	
4.	NO ₂ , µg/m ³	27.92	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/3

Date: 24/01/2026

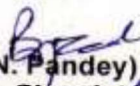
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 15/01/2026 to 26/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – TRAINING CENTER (PUNDI)		
SI No.	Particulars	Value	Avg. Ambient Temperature	Avg. Humidity
1.	Ozone, $\mu\text{g}/\text{m}^3$	17.82	21°C	26%
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.88		NAAQ - CPCB STANDARD
3.	CO, mg/m^3	0.82		180 $\mu\text{g}/\text{m}^3$
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL		400 $\mu\text{g}/\text{m}^3$
5.	As, ng/m^3	BDL		4 mg/m^3
6.	Ni, ng/m^3	BDL		1 $\mu\text{g}/\text{m}^3$
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL		6 ng/m^3
8.	Benzoapyrene ng/m^3	BDL		20 ng/m^3
				5 $\mu\text{g}/\text{m}^3$
				1 ng/m^3

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 50762600000014F		
Test Report No: 007	Date of Issue : 22/01/2026	
Customer Name and Address:	Requisition No. 007	Ref No.- ARDS/26/ENV/014
	Job Order No/ Job Id. ARDS/AAQ/007	
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 14/01/2026 to 15/01/2026	
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026	
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026	

TEST RESULTS

CORE ZONE LOCATION – BANJI VILLAGE				
	Avg. Ambient Temperature	22 ⁰ C	Avg. Humidity	28%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	108.76	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	60.84	60 µg/m ³	
3.	SO ₂ , µg/m ³	24.52	80 µg/m ³	
4.	NO ₂ , µg/m ³	32.80	80 µg/m ³	

(B.N. Pandey)
Sr. Chemist
Tested by



(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/4

Date: 24/01/2026

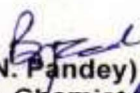
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 14/01/2026 to 15/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

CORE ZONE		LOCATION – BANJI VILLAGE	
SI No.	Particulars	Value	NAAQ - CPCB STANDARD
1.	Ozone, $\mu\text{g}/\text{m}^3$	16.20	180 $\mu\text{g}/\text{m}^3$
2.	NH_3 , $\mu\text{g}/\text{m}^3$	14.82	400 $\mu\text{g}/\text{m}^3$
3.	CO, mg/m^3	0.73	4 mg/m^3
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$
5.	As, ng/m^3	BDL	6 ng/m^3
6.	Ni, ng/m^3	BDL	20 ng/m^3
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED



TC- 5076

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377

TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 50762600000015F	
Test Report No: 007	Date of Issue : 22/01/2026
Customer Name and Address:	Requisition No. 007 Ref No.- ARDS/26/ENV/015
	Job Order No/ Job Id. ARDS/AAQ/007
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 12/01/2026 to 13/01/2026
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026

TEST RESULTS

BUFFER ZONE LOCATION – CHAINPUR VILLAGE				
	Avg. Ambient Temperature	18 ⁰ C	Avg. Humidity	46%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	96.68	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	62.18	60 µg/m ³	
3.	SO ₂ , µg/m ³	21.52	80 µg/m ³	
4.	NO ₂ , µg/m ³	33.67	80 µg/m ³	

(B.N. Pandey)
Sr. Chemist
Tested by



(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory
NABL ACCREDITED

(A Constituent Board of Quality Council of India)
ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/5

Date: 24/01/2026

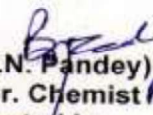
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 12/01/2026 to 13/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFFER ZONE		LOCATION – CHAINPUR VILLAGE		
	Avg. Ambient Temperature	18°C	Avg. Humidity	46%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	15.38	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.64	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.65	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377

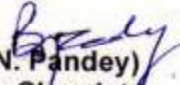


TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 50762600000016F	
Test Report No: 007	Date of Issue : 22/01/2026
Customer Name and Address:	Requisition No. 007 Ref No.- ARDS/26/ENV/016
	Job Order No/ Job Id. ARDS/AAQ/007
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 15/01/2026 to 16/01/2026
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026

TEST RESULTS

BUFFER ZONE		LOCATION – PERSABEDA VILLAGE		
	Avg. Ambient Temperature	22 ⁰ C	Avg. Humidity	23%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	90.86	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	58.74	60 µg/m ³	
3.	SO ₂ , µg/m ³	21.31	80 µg/m ³	
4.	NO ₂ , µg/m ³	33.00	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirmdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/6

Date: 24/01/2026

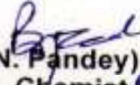
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 15/01/2026 to 16/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFFER ZONE		LOCATION – PERSABEDA VILLAGE		
	Avg. Ambient Temperature	22°C	Avg. Humidity	23%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	15.24	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.06	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.68	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED



Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377

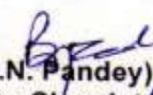
TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 50762600000017F	
Test Report No: 007	Date of Issue : 22/01/2026
Customer Name and Address:	Requisition No. 007 Ref No.- ARDS/26/ENV/017
	Job Order No/ Job Id. ARDS/AAQ/007
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 13/01/2026 to 14/01/2026
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026

TEST RESULTS

BUFFER ZONE		LOCATION – DUNI VILLAGE		
	Avg. Ambient Temperature	21°C	Avg. Humidity	26%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	96.45	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	59.32	60 µg/m ³	
3.	SO ₂ , µg/m ³	18.85	80 µg/m ³	
4.	NO ₂ , µg/m ³	32.05	80 µg/m ³	


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/7

Date: 24/01/2026


TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 13/01/2026 to 14/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFER ZONE		LOCATION – DUNI VILLAGE		
	Avg. Ambient Temperature	22°C	Avg. Humidity	26%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Ozone, $\mu\text{g}/\text{m}^3$	14.29	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.16	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.82	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

Plot No.- I-B-17(P), Sindri Industrial Area, P.O. Domgarh, Dist- Dhanbad, Jharkhand 828107
E-mail : sindriaditi@gmail.com, Mob. : 09471358492, 9431512608, Ph. : 0326-2952377



TC- 5076

TEST RESULTS AMBIENT AIR QUALITY

ULR No. TC 507626000000018F	
Test Report No: 007	Date of Issue : 22/01/2026
Customer Name and Address:	Requisition No. 007 Ref No.- ARDS/26/ENV/018
	Job Order No/ Job Id. ARDS/AAQ/007
M/S TATA STEEL LIMITED WEST BOKARO DIVISION GHATOTAND, DIST. - RAMGARH (JHARKHAND)	Date Of Sampling : 14/01/2026 to 15/01/2026
Sample Details: Ambient Air Quality	Date. Of Receipt of Sample 17/01/2026
Test Required PM ₁₀ SO ₂ NO ₂ PM _{2.5}	Date Of Testing : 19/01/2026 – 22/01/2026

TEST RESULTS

BUFFER ZONE LOCATION – PUNDI VILLAGE				
SI No.	Particulars	Value	NAAQ - CPCB STANDARD	
	Avg. Ambient Temperature	22 ⁰ C	Avg. Humidity	26%
1.	Particulate Matter (PM ₁₀), µg/m ³	93.78	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	60.84	60 µg/m ³	
3.	SO ₂ , µg/m ³	14.79	80 µg/m ³	
4.	NO ₂ , µg/m ³	29.12	80 µg/m ³	

(B.N. Pandey)
Sr. Chemist
Tested by



(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

1. The test report refers only to the particulars item(s) submitted for testing.
2. The test results reported in this report are valid at the time of and under the stated condition of measurement.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality / Technical Manager of the laboratory.



ADITI R&D SERVICES

Testing Laboratory

NABL ACCREDITED

(A Constituent Board of Quality Council of India)

ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/25-26/ AAQ/8

Date: 24/01/2026

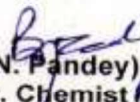
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL LIMITED
WEST BOKARO DIVISION GHATOTAND,
DIST. - RAMGARH (JHARKHAND)
- Date of Sample Collection : 14/01/2026 to 15/01/2026
- Date of Testing : 19/01/2026 to 24/01/2026
- Test Procedure : As per IS - 5182

TEST RESULTS

BUFFER ZONE		LOCATION – PUNDI VILLAGE		
SI No.	Particulars	Value	NAAQ - CPCB STANDARD	
	Avg. Ambient Temperature	22°C	Avg. Humidity	27%
1.	Ozone, $\mu\text{g}/\text{m}^3$	17.28	180 $\mu\text{g}/\text{m}^3$	
2.	NH ₃ , $\mu\text{g}/\text{m}^3$	15.68	400 $\mu\text{g}/\text{m}^3$	
3.	CO, mg/m^3	0.78	4 mg/m^3	
4.	Pb, $\mu\text{g}/\text{m}^3$	BDL	1 $\mu\text{g}/\text{m}^3$	
5.	As, ng/m^3	BDL	6 ng/m^3	
6.	Ni, ng/m^3	BDL	20 ng/m^3	
7.	Benzene, $\mu\text{g}/\text{m}^3$	BDL	5 $\mu\text{g}/\text{m}^3$	
8.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit


(B.N. Pandey)
Sr. Chemist
Tested by




(Md. Riyaz)
Quality Manager
Approved by
(Authorized Signatory)

Statements :

- The test report refers only to the particular item(s) submitted for testing.
- The test results reported in this report are valid at the time of and under the stated condition of measurement.
- This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.



To
Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, 2nd Floor,
Headquarter- Jharkhand State Housing Board,
Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi
Email: ro.ranchi-mef@gov.in

WBD/EMC/4071/129/25
Date: 17.11.2025

Sub: Groundwater Level Monitoring Report for the Post-Monsoon period (November 2025)

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

Dear Sir,

Please find enclosed here with monitoring report of ground water level for Post-Monsoon season as **Annexure-I**.

Thanking you,
Yours faithfully,

Sr. Manager (Environment)
West Bokaro Division
TATA Steel Limited

Copy to : The Chairman, Central Pollution Control Board, Southern Conclave, Block 502,
5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107 (W. B.)

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



Annexure – I

Ground Water Level (bgl) of existing wells (Post-Monsoon period - November 2025)

Sl. No.	Location	Latitude	Longitude	Level in Meter
1	Housing	23.793323	85.574833	0.50
2	Mkundbeda	23.794802	85.575524	2.49
3	Driver Hut	23.784555	85.556142	1.82
4	Pundi Village	23.779666	85.521478	1.83
5	Duni Village	23.756172	85.556454	0.19
6	Kedla Road	23.804268	85.574922	3.41
7	Jharna Basti	23.784335	85.581215	1.3
8	Birhor Village	23.808672	85.564011	1.33
9	Bhelgada Village	23.792068	85.575390	0.0 (Full)
10	Chainpur Well No. 1	23.738282	85.569806	5.73
11	Chainpur Well No. 2	23.73467	85.573745	2.05

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



To
Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, 2nd Floor,
Headquarter- Jharkhand State Housing Board,
Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi
Email: ro.ranchi-mef@gov.in

WBD/EMC/4071/009/26
Date: 12.01.2026

Sub: Groundwater Level Monitoring Report of Winter period (January 2026)

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

Dear Sir,

Please find enclosed here with monitoring report of ground water level for Winter season (January 2026) as **Annexure-I**.

Thanking you,
Yours faithfully,

Sr. Area Manager (Environment)
West Bokaro Division
TATA Steel Limited

Copy to : The Chairman, Central Pollution Control Board, Southern Conclave, Block 502,
5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107 (W. B.)

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



Annexure – I

Ground Water Level (bgl) of existing wells (Winter period – January 2026)

Sl. No.	Location	Latitude	Longitude	Level in Meter
1	Housing	23.793323	85.574833	0.52
2	Mkundbeda	23.794802	85.575524	3.44
3	Driver Hut	23.784555	85.556142	Mined out
4	Pundi Village	23.779666	85.521478	1.84
5	Duni Village	23.756172	85.556454	0.66
6	Kedla Road	23.804268	85.574922	3.14
7	Jharna Basti	23.784335	85.581215	1.6
8	Birhor Village	23.808672	85.564011	1.42
9	Bhelgada Village	23.792068	85.575390	0.0 (Full)
10	Chainpur Well No. 1	23.738282	85.569806	5.68
11	Chainpur Well No. 2	23.73467	85.573745	4.47

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

To,
The Panchayat Sewak
Barughutu, Ghatotand
Hazaribag, Jharkhand

WBD/EMC-10/59/07
Dt. 12.06.07

Sub. : Submission of a copy of Environmental Clearance of West
Bokaro open cast coal mine project of Tata Steel Ltd.

Ref. : Letter No. J-11015/108/1006-IA.II(M), Govt. of India, Ministry
of Environment and Forest

Dear Sir,


This is to inform that we have been accorded Environmental
Clearance of West Bokaro open cast coal mine expansion project,
Tata Steel Ltd. from 4.7 MTPA to 7.0 MTPA vide above mentioned
letter by Ministry of Environment and Forest. As stipulated in General
condition No. (xiv), a copy of the said clearance is being forwarded to
your kindself for record and reference please.

Thanking you,

Yours truly,


12.6.07
Chief (Planning)
West Bokaro
Tata Steel Ltd.




12-6-07
पञ्चायत सेवक,
बाराहू, हजारीबाग

EC Compliance Report

- (xvi) **The Project authorities should advertise in 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>.**

Compliance:

Complied with.

News Paper circulation



Sl No.	Annexure-II: Expenditure on Environmental Safeguards - FY'25			
Environmental Expenditure for FY'25 of Tata Steel Foundation				
1	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Construction of water harvesting structures (i.e Ponds for natural ground water recharging)		23.76
	2	Deepening of Ponds		14.56
		Sub Total =	0.00	38.32

Environmental Expenditure for FY'25 of W-II				
2	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Installation of bluescope sheet at conveyor transfer point area and crusher house ro reduce fugitive dust pollution		21.00
	2	Dust suppression (maintenance spares)		12.48
	3	Water Sprinkling for dust supression		7.69
	4	Effluent recycling for resource conservation and zero effluent discharge		27.00
	5	Cleaning and housekeeping to reduce fugitive emission in washery area		135.56
	6	Repair of HRT to eliminate spillage/ leakage from clean coal HRT		35.00
	7	Effluent recycling repair in middling stockpile area for zero discharge outside premises		6.50
	8	Eliminating soild contamination by concret flooring in crushing plant		11.00
	9	Spillage Control to prevent soil contamination in conveyors and other equipment by scrapper and other control mechanism		32.12
	10	Dry Fog System Operation and Maintenance for dust supression		35.65
	11	Tailing pond structural maintenance to maintain zero effluent discharge		17.00
		Sub Total =	0.00	341.00

Environmental Expenditure for FY'25 of Infra and Utility (CEP)				
3	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Bhelgarha cleaning/garbage dumping fogging/ drain cleaning		6.1
	2	Physiography barrier to reduce fugitive emission: Butcher mohallah to 12 no. chowk (length = 500 RM), Near stock yard (Length= 150 Rm) & Bhadani to RML (Length= 250 Rm)		12.24
	3	PCC road Bhuiyadih		50
	6	Mukundabeda Bitumen Road		60
		Sub Total =		128.34

Environmental Expenditure for FY'25 of QSEB				
4	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Effluent recycling system operation/maintenance to reduce effluent generation		11.45
	2	Water tanker operation (including wages) & maintenance cost for dust suppression		531.34
	3	Cleaning of workshop		70.67
	4	Wet drilling operation and maintenance & modification to minimize water consumption		1533.17
	5	Replacement /Repair of oil tray & oil barrel stored to reduce oil spillage		5.4
	6	Procurement of new water tanker	1600	
		New pump for recycling system		0.9
		Sub Total =	1600	2152.93

Environmental Expenditure for FY'25 of Power House				
5	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Dry fog maintenance to prevent dust suppression		8.54
	2	Cleaning and housekeeping maintenance of power house area to prevent fugitive dust		52.34
	3	Tailing pond & ash pond embankment strengthening/toe wall to prevent spillage		2.00
	4	DM plant corrosion resistant painting to avoid seepage/ land contamination & Clarifloculator painting		12.30
	6	Pipeline replacement in existing ash system & recovery lines to reduce water leakages		18.24
	7	ESP field O/H maintenance and Wet Washing to increase efficiency		17.84
	8	Vertical Slurry pumps replaced without Seal water pumps to reduce the ash line failures		32.5
	9	Installation of Secondary Oil Cathment trays in Oil drums.		8.0
	10	Auxiliary Power savings due to Boiler#1 major shutdown.		70.0
	11	Maintenance of Continuous Emission Monitoring Station		0.8
	12	Renewal of Boiler Insulation to reduce heat loss and dust		17.0
		Sub Total =	0	239.56

Environmental Expenditure for FY'25 of Logistic (Dispatch)				
6	SL No	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Water sprinkling on road for dust suppression		3.56
	2	Spillage cleaning for Waste Management		92.67
	3	Cleaning at both the points of LPC (Ghato end & Chainpur end) to reduce fugitive dust generation		22.23
	4	Removal of unwanted Material along the Track line (new and old yard) to reduce water flow		67.43
	5	Boulder and Unwanted Material (removed from empty wagons) Transportation from Stacking place for minimize dust generation		32.21
		Sub Total =	0	218.1

Environmental Expenditure for FY'25 of W-III				
7	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Dust suppression by sprinkling	-	9.6
	3	Effluent Recycling including power cost for zero effluent discharge	-	2.1
	4	Maintenance of Dry Fog System for dust suppression	-	14.39
	5	Cleaning and Housekeeping for fugitive dust suppression	-	58.8
	6	Mechanical Tailing Dewatering to ensure Zero Effluent Discharge	-	1531
	7	Power cost for Tailing Dewatering Plant to ensure Zero Effluent Discharge	-	130.32
	8	Better efficient Light replacement and repair to reduce power consumption	-	7.53
	9	Road construction for Tailing transportation to minimize dust generation	-	0
	10	Spillage control in conveyors	-	24.41
	11	Overhauling of media filter	-	5.61
	12	Housekeeping in office building	-	7.32
		Sub Total =	0	1791.08

Environmental Expenditure for FY'25 of Environment Management Cell				
8	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Annual maintenance of environmental monitoring station (CAAQMS, CEMS & PM10 analyser)		6.4
	2	Support for Environmental Activities and Jobs (Manpower, Vehicle etc.)		17.09
	3	Statutory Paayment Charges		49.35
		Sub Total =	0	72.84

Environmental Expenditure for FY'25 of C&SM				
9	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Town cleaning/garbage dumping fogging/ drain cleaning		200
	2	PCC road at different location of Township		5
	3	Drain repair and development at Township		2
	4	Mechanised cleaning of septic tank and overhead water tank		2
	5	Pre-mixed raod near FRS gate and Banji vilage		10
	6	PCC Road at new new magazine area (140 RM)		3
	7	RCC and PCC road at Parking area (250 RM)		50
	8	RCC road at Tailing pond (Length=50 RM)		15
	9	RCC road at Washery-III (Length= 45 RM)		15
		Sub Total =	0	302

Environmental Expenditure for FY'25 of Water Supply				
10	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Pipeline laying activities at park and other areas		20.25
	2	Development of pumping station for ash pond & recycling water restoration		15
	3	STP/ETP operation and maintenance activities		120
	4	WTP operational cost		350
	5	WTP Automation	50	
		Sub Total =	50	505.25

Environmental Expenditure for FY'25 of QAB				
11	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Effluent recycling system in FRS to reduce effluent generation		3.876
	3	Water tanker operation (includes wages cost) & maintenance cost for dust suppression		857.34
	4	Cleaning of workshop		89.94
		Sub Total =	0	951.16

Environmental Expenditure for FY'25 of TMH				
12	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Handling and Disposal of BMW		11.12
	2	Procurement of BMW Colour Bags for BMW management		1.24
	3	Bleaching Powder for effluent treatment		0.5
	4	Effluent Treatment Plant Operation		15
	5	Cleaning staff (10 contract workers)		22
		Sub Total =	0	49.86

Environmental Expenditure for FY'25 Planning & Horticulture				
13	Sl. No.	Item for expenditure	Rs. In Lakh	
			Capital	Revenue
	1	Parks Maintenance (Maintenance, Security, Material etc.)		119.7
	2	Annual Flower Show Celebration		25
	3	Bush Cleaning		8
	4	Nursery development		10
	5	Poly bags & seeds, pot for Nursery		15
	6	Annual Plantation		12
		Sub Total =	0	189.7

1650.00 6980.14

Expenditure incurred towards environmental safeguard activities of West Bokaro Division Rs. =			8630.14	
--	--	--	----------------	--