The Deputy Director General of Forest (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, (IRO) – Ranchi
2nd floor, Headquarter, Jharkhand State Housing Board Harmu Chowk,
Harmu Housing Colony, Argora, Jharkhand – 834002.

Ref No. - JMB/ENV/DIG/37/ 711 /2024
November 27th, 2024

Ref.: Environmental Clearance letter No.-J-11015/372/2010-IA.II(M)dated-30th September 2013.

SUB: Half Yearly Compliance Status Report of Environment Clearance conditions issued by MoEFCC, New Delhi to Digwadih Colliery, Tata Steel Limited, Dhanbad for the period April-24 to September-24.

Dear Sir,

We are enclosing herewith compliance report for the period **April-24 to September-24** for the EC granted vide letter no.- J-11015/372/2010-IAII(M) dated- 30th September 2013 issued by Ministry of Environment, Forest and Climate Change, New Delhi.

We trust the information furnished is in line with your requirement.

Thanking you,

Yours faithfully,

Head (Planning)
Jharia Division, Tata Steel Ltd.

Encl: As above.

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

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

Copy to: Regional Officer, JSPCB, HIG -1 Sardar Patel Nagar, Housing Colony, Hirapur, Dhanbad

TATA STEEL LIMITED
Jharia Collieries Jamadoba 828 112 Dhanbad India
Tel 91 326 2320263/2320265/2320267 Fax 91 326 2320268
Regd. Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	IA/JH/CMIN/19215/2010
Compliance ID	111482628
Compliance Number(For Tracking)	EC/M/COMPLIANCE/111482628/2024
Reporting Year	2024
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	29-11-2024
RO/SRO Name	ARTATRANA MISHRA
RO/SRO Email	jhk109@ifs.nic.in
State	JHARKHAND
RO/SRO Office Address	Integrated Regional Offices, Ranchi
Note:- SMS and E-Mail has been sent to ARTATRANA MISHRA, JHARKHAND with Notification to Project Proponent.	

Back

View Half Yearly Compliance Report at Project Proponent

Proposal Details

Proposal No
IA/JH/CMIN/19215/2010
Category
Coal Mining
Name of Project
Digwadih Colliery of M/s Tata Steel Ltd. for (Expansion from 0.38 MTPA to 0.6 MTPA in ML area 314.57 ha), dist. Dhanbad, Jharkhand
Plot / Survey/ Khasra No.
Village(s)
Sub-District(s)
State
JHARKHAND
District
DHANBAD
MoEF File No
J-11015/372/2010-IA.II (M)
Name of the Entity/ Corporate Office
Tata Steel Ltd.
Entity's PAN
*****2803M
Entity Name as per PAN
UTSAV KASHYAP
Entity details mentioned above is correct ?
Agree

Covering Letter

Covering Letter

Click to View

Compliance Reporting Details

Reporting Year
2024
Reporting Period
01 Dec(01 Apr - 30 Sep)
Remark(if any)
Half Yearly Compliance Submission for April 2024 to September 2024.

Details of Production and Project Area

Date of Commencement of Project/Activity
01-01-1918

	Project Area as per EC Granted(ha.)	Actual Project Area in Possession(ha.)
Private	148.798	148.798
Revenue Land	13.652	13.652
Forest	0	0
Others	152.12	152.12
Total	314.57	314.57

Land Documents
NA

Sr.No.	Name of the Product	Units	As per EC Granted	As per CTO Granted	CTO ID	Valid Up To	Production during last financial year
1	Raw Coal	Million Tons per Annum (MTPA)	0.6			null	0

Conditions

Specific Conditions

Sr.No.	Condition Heading	Condition Details	Status of Compliance,Remarks / Reason and Supporting Documents

1	Statutory compliance	The maximum production from the mines shall not exceed beyond that for which environmental clearance has been granted.	PPs Submission	The production from the colliery has stopped since February 2021. The EC capacity is for 0.6 MTPA raw coal while the raw coal production for Digwadih Colliery was well below the limit. Complied 28-11-2024 Attachment:NA
2	Statutory compliance	The impact on the Damodar river due to mining activity which is at a distance of 2 km be studied through a reputed 3rd Party and submitted to the SPCB and the regional office of the MoEF for monitoring.	PPs Submission	The underground coal mines operated by Tata Steel Ltd are adjacent to the Damodar River. Other coal mines of BCCL and SAIL are also in close proximity to the river basin. Major source of pollution of Damodar River is the flow of industrial effluents and untreated sewage water into the river. A number of OB dumps lie close to the river banks causing the flow of sediments into the river. As per the hydrology study conducted by Indian School

							of Mines, Dhanbad, the impact of the underground mines of Tata Steel Ltd is minimal. This is due to the following reasons The mining activity does not require any diversion of river/streams or natural drain. As land profile does not change appreciably in case of underground mines with backfilling of mined out areas, there is no change in surface drainage till date and unlikely to occur in future. Surface water quality also does not undergo any change, as there is no discharge to surface drainage in dry season. In Monsoon, the excess mine water discharged gets mixed with storm water. Large settling tanks are available for storage and sedimentation of mine water before its discharge to conform to the				

							norms. The industrial wastewater generated during vehicle washing from the central workshop catering to all the mines is treated in oil and grease trap followed by recycling of water. The two coal washeries of Tata Steel are operating on Zero Liquid discharge (ZLD) principle. Sewage water generated from our townships is treated in STP. For Sijua group, one STP of 200 KLD and another STP of 50 KLD has been installed in Bhelatand Colonies, 10 KLD has been installed at Sijua canteen and Bhelatand canteen individually. For Jamadoba group, 10 KLD STP/ETP installed in washery, Canteen, Garage and Hospital individually, other than that 60 KLD and 30 KLD installed at Digwadih Colony, 50 KLD installed at Railway Colony. Complied			

				14-11-2024 Attachment:NA
3	Statutory compliance	Details of underground transportation of coal from mine to coal yard/ rail yard be submitted to the MoEF for record.	PPs Submission	The production from the colliery has stopped since February 2021.Coal from the mine was sent to the captive Jamadoba coal washery for beneficiation purpose through a network of underground conveyor belts. The detailed diagram of transportation network had already been submitted in earlier compliance reports. Complied 28-11-2024 Attachment:NA
4	WASTE MANAGEMENT	Adequate care be taken to prevent sand spillages from the trucks/tippers.	PPs Submission	The trucks that are being used for the transportation of sand are properly covered using tarpaulin sheets. Larger trucks have been engaged for reducing no of cycles. To ensure the compliance, every vehicle is checked as per vehicle checklist on PUC, Tyre /body

				condition, emission check at every entry point. Quality checks are done on trucks to ensure its health. Complied 14-11-2024 Attachment:NA
5	WASTE MANAGEMENT	The test results of the study of leaching of heavy metals from bottom-ash be submitted to SPCB and the regional office of the MoEF for monitoring.	PPs Submission	A study conducted in 2013, by Indian School of Mines, Dhanbad to assess the leachability characteristics of fly ash and bottom ash samples taken from us, has determined that the concentration of heavy metals in the leachates were invariably well below the permissible limits for discharge of effluents as per the Indian standards IS 2490 (1993). The test results have already been submitted in December-2013 and also re-submitted in April-2018. Complied 14-11-2024 Attachment:NA

6	Corporate Environmental Responsibility	The CSR activities shall be need based and detailed CSR plan be prepared for implementation.	PPs Submission	The CSR plan for each financial year is prepared by TSRDS (Tata Steel Rural Development Society) only after proper discussions to assess the needs have been held with the elected/ senior members of the communities where our CSR activities are to be undertaken. Complied 14-11-2024 Attachment:NA
7	Corporate Environmental Responsibility	The detailed breakup of funds during 2012-13 be submitted to the MoEF for record. A social audit to be got done annually by a reputed institute and uploaded on the company's website.	PPs Submission	The detailed breakup has already been submitted to MOEF. The Corporate Sustainability Reports viz. Integrated Reports are made annually for the company which is certified by an assurance agency. It also includes the Social Audit of the company. All the reports are uploaded on the Tata Steel website. Further, an internal Social audit is also conducted once in five years

				Complied 14-11-2024 Attachment:NA
8	WASTE MANAGEMENT	There should be no OB dumps at the end of the mining.	PPs Submission	Since this is an underground mine, it is not applicable. Complied 14-11-2024 Attachment:NA
9	MISCELLANEOUS	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.	PPs Submission	Regular monitoring of subsidence is done by Central Institute for Mining and Fuel Research, Dhanbad. According to the subsidence reports, the impact of subsidence is negligible since the underground mine workings are now at great depth and proper filling of voids through sand stowing is being done. Complied 14-11-2024 Attachment:NA
10	Statutory compliance	If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.	PPs Submission	It will be strictly followed. Complied 14-11-2024 Attachment:NA
11	Statutory compliance	Mining shall be carried out as per statuette at a safe distance from	PPs Submission	Since this is an underground

		the river/nallah flowing adjacent to the lease boundary.		project, there is hardly any impact on the river/ nallah. The closest jore is at a distance of about 2kms from the mine office area. Therefore, no impact on the course of flow in the jore is anticipated. Complied 14-11-2024 Attachment:NA
12	GREENBELT	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	PPs Submission	Impact on land by subsidence has been found to be negligible as per the subsidence monitoring reports prepared by CIMFR, Dhanbad. Complied 14-11-2024 Attachment:NA
13	Statutory compliance	Coal extraction shall also be optimized in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring & coal extraction should be carried out below habitation, H.T. Lines & beneath road, water bodies.	PPs Submission	It will be strictly followed. Complied 14-11-2024 Attachment:NA

14	Statutory compliance	Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement with the landowners.	PPs Submission	Regular monitoring of subsidence is being done by CIMFR, Dhanbad. Complied 14-11-2024 Attachment:NA
15	GREENBELT	3-tier plantation should be developed 2 km stretch of road from the mine using native species.	PPs Submission	Plantation along stretches of road has been done. 3-tier plantation is not feasible due to presence of private land around the periphery of colliery. However, plantation has been done on vacant plots and areas Complied 14-11-2024 Attachment:NA
16	WATER QUALITY MONITORING AND PRESERVATION	Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	PPs Submission	Garland drains of adequate size and gradient already exist around the colliery area to channelize the surface runoff. The details of size of garland drain mapped in surface plan has been submitted earlier in April-2018. Complied 14-11-2024 Attachment:NA

17	AIR QUALITY MONITORING AND PRESERVATION	The locations of monitoring stations in the Jharia Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Board. The smoke/dust emission varies from source to source (fuel wood, coal, flyash from TPPs, silica from natural dust, etc). Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM10 and PM2.5) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.	PPs Submission	The locations of monitoring stations for our colliery have already been finalized in consultation with JSPCB, Dhanbad. The mineralogical composition study has been carried out by an independent laboratory (recognized by JSPCB and NABL) and the results are provided in Annexure-II. Complied 28-11-2024 Attachment: Click to View
18	AIR QUALITY MONITORING AND PRESERVATION	Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.	PPs Submission	Water spraying arrangement is present in the underground mines at all transfer points. Water spraying via tankers is done on sand transportation routes. Major approach roads have been black-topped and maintained regularly. Complied 14-11-2024 Attachment:NA
19	AIR QUALITY MONITORING AND PRESERVATION	Transportation of coal from the mine to railway siding should be by 20T mechanically covered trucks.	PPs Submission	Not applicable due to transportation of coal via underground belt conveyor network

				system directly to washery. Complied 14-11-2024 Attachment:NA
20	GREENBELT	A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO/Agriculture Department.	PPs Submission	Tree plantation activities are carried out every year on the barren/ degraded areas, areas along road-side, infrastructure, etc of the colliery leasehold. Apart from these, fruit plants are distributed to employees and also to villagers, schools, institutions, etc. The environment department is responsible for implementing the afforestation plan which is prepared along with the mine management. High root density trees of native species are planted under annual plantation program and around 12452 Nos of saplings were planted in the FY24. Complied

				14-11-2024 Attachment:NA
21	WATER QUALITY MONITORING AND PRESERVATION	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall 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 shall be submitted to the MoEF&CC and to the CPCB quarterly within one month of monitoring.	PPs Submission	The regular monitoring of groundwater level and quality is done as per the requirement. The groundwater quality report and groundwater level reports are provided in Annexure II. Complied 28-11-2024 Attachment: Click to View
22	WATER QUALITY MONITORING AND PRESERVATION	Acid Water Treatment Plant, volume of water to be treated and disposal of brine should be provided.	PPs Submission	Not applicable. Complied 14-11-2024 Attachment:NA
23	WATER QUALITY MONITORING AND PRESERVATION	Mine discharge water outside the ML shall be monitored, particularly for TDS and treated to conform to prescribed levels before discharge into the natural environment.	PPs Submission	There is one mine-water outlet point in the colliery which is regularly monitored by the Environmental Laboratory. Complied 14-11-2024 Attachment:NA
24	WATER QUALITY MONITORING AND PRESERVATION	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	PPs Submission	Most of the water pumped out during underground mining activity is re-circulated back into the mine for the purpose of stowing. Backfilling of

				mine voids by stowing is done using sand which is having the porosity to hold the underground water thus helping aquifer to retain the underground water. Further, there are a number of ponds existing on the surface of the mining lease which act as natural reservoirs for recharging ground water. These ponds/ tanks are regularly cleaned and maintained by our CSR department. As per the hydro-geological report, the variation in the ground water level is only seasonal. The water requirement of the nearby villages is being met by the company already. Now piped drinking water is being provided. Complied 14-11-2024 Attachment:NA
25	Human Health Environment	Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged in active mining	PPs Submission	The periodic health checkup of the workers is done regularly by

		operations shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.		our Occupational Health Department, Tata Central Hospital, Jamadoba. We have a PME (Periodic Medical Examination) Centre approved by DGMS where 20 percentage of the workers identified from workforce engaged in active mining operations are subjected to full medical checkup including hearing impairment checkup, etc. These results are regularly submitted to DGMS as per mines rules. Some sample reports and as well as past records have been submitted in previous compliance reports. Complied 14-11-2024 Attachment:NA
26	Statutory compliance	The mining in the existing mines would be phased out after expiry of the current mining lease and after reclamation of mined over area. The operating mines may be analyzed and monitored for compliance of conditions, having bearing with movement of wild life until such time they are closed/ phased out.	PPs Submission	It is not applicable in our case. Complied 14-11-2024 Attachment:NA

27	Corporate Environmental Responsibility	Project specific CSR for an amount of Rs 5/Tonne of coal production should be provided for the activities under CSR undertaken for the neighboring villages shall be for not less than Rs 10 per tonne of coal and the progress made thereon shall be uploaded by the company annually on the company website. Monitoring of the impacts of activities under CSR shall be carried out periodically.	PPs Submission	The proposed CSR expenditure for the entire company is decided as per the new Company Rules. Once the CSR budget for company is fixed, a share of that amount is dedicated and utilized for implementing the CSR activities at our Jharia Division level. The CSR expenditure for FY23 was Rs. 11.84 crores. For FY24 the expenditure is Rs. 21.81 crores. CSR data submitted is for Jharia Division which comprises all 5 collieries and 2 washeries. Jamadoba Washery, Digwadih Colliery and 6 and 7 Pits Colliery are adjacent to each other and fall under same leasehold area i.e. Jamadoba group of collieries. The core zone and buffer zone of all above units overlap to each other and in many cases, the villages are same where

				CSR work is going on. Therefore, we have a central budget for CSR which is managed by a team of experts who are dedicatedly involved in providing benefits and improving standard of living in over 50 plus villages and municipal wards. Hence, separate CSR expenditure for individual unit cannot be estimated. For calculation/ statutory reporting purpose, the consolidated CSR expenditure can be divided into unit-wise based on size of leasehold area of individual units. The progress report is uploaded every year on the company website. Internal social audits are carried out regularly to assess the impact of CSR activities. Complied 28-11-2024 Attachment:NA

28	Statutory compliance	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	PPs Submission	Mine Closure Plan has been approved by Ministry of Coal, New Delhi. Details on deposition of closure cost in escrow account along with expenditure incurred for progressive closure is regularly submitted to Office of Coal controller. Final mine closure along with details of corpus fund will be submitted to MoEF and CC 5 years in advance. Complied 14-11-2024 Attachment:NA
29	Corporate Environmental Responsibility	Corporate Environment Responsibility: a)The Company shall have a well laid down Environment Policy approved by the Board of Directors. b)The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. c)The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished. d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-	PPs Submission	The Company already has an Environment Policy approved by the Managing Director and it addresses all the issues mentioned. The status of adherence to the policy and compliance to Environmental laws and regulations is regularly discussed at higher levels. Any non-compliance noticed is

		compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.		corrected at divisional level. If any issue is beyond our control, it is brought to the notice of higher management. Moreover, Digwadih Colliery is IMS (Integrated Management System: Quality Management System, Environment Management System and OHSAS) certified unit addressing all environment aspects, impacts and needs and expectation of interested parties with respect to environment protection. Complied 14-11-2024 Attachment:NA

General Conditions

Sr.No.	Condition Heading	Condition Details	Status of Compliance,Remarks / Reason and Supporting Documents	
1	MISCELLANEOUS	No change in technology and scope of working shall be made without prior approval of the MoEF.	PPs Submission	It is being strictly followed. Board and Pillar method is being used for mining. Complied 14-11-2024 Attachment:NA

2	MISCELLANEOUS	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	PPs Submission	It will be strictly followed. Complied 14-11-2024 Attachment:NA
3	AIR QUALITY MONITORING AND PRESERVATION	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in RSPM etc. shall be carried out at least once in six months.	PPs Submission	The Air quality monitoring stations are: (i)Jamadoba Group Office (Core Zone) (ii)New Village Colony, Jamadoba (Buffer Zone) (iii)Digwadih 12 No. Colony (Buffer Zone) (iv)6 and 7 Pits Kalimandir area (Buffer Zone) Monitoring of heavy metals in ambient air is being performed by an independent laboratory (recognized by JSPCB and NABL) on quarterly basis. The results are enclosed as Annexure II. Complied 28-11-2024 Attachment: Click to View
4	AIR QUALITY MONITORING AND PRESERVATION	Data on ambient air quality (PM10, PM2.5, SO2 and NOx and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the SPCB and the CPCB once in six months. Random verification of samples through analysis from independent laboratories recognised under the EP Rules, 1986 shall be furnished as part of the compliance report.	PPs Submission	Ambient air quality report (PM10, PM 2.5, SO2 and NOx) for the period from April-24 to September-24 is attached as Annexure II. Additionally, third party monitoring is being done through a JSPCB and NABL recognized Laboratory for PM10, PM 2.5, SO2, NOx, CO, NH3, O3 and heavy metals (As, Ni, Cd and Cr). The results are

				enclosed as Annexure II. Complied 28-11-2024 Attachment: Click to View
5	Noise Monitoring & Prevention	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	PPs Submission	Regular noise survey is being conducted in the underground work environment. Workers are provided with ear-plugs/ muffs in high noise areas. Complied 14-11-2024 Attachment:NA
6	WATER QUALITY MONITORING AND PRESERVATION	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	PPs Submission	No industrial wastewater is generated in Digwadih Colliery premises. There is a central workshop and garage in Jamadoba where Effluent Treatment Plant having oil and grease trap facility has been provided. Complied 14-11-2024 Attachment:NA
7	AIR QUALITY MONITORING AND PRESERVATION	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	PPs Submission	Only the vehicles having valid PUC certificates are being allowed to operate for sand transportation. Coal transportation is done through underground belt network. Only sand transportation is done through trucks which are covered with tarpaulins as well as optimally loaded. Complied

				14-11-2024 Attachment:NA
8	Statutory compliance	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with SPCB and data got analysed through a laboratory recognised under EP Rules, 1986.	PPs Submission	We have a fully equipped Environment Cell Laboratory with qualified personnel. The monitoring and analysis is also done at regular intervals by a JSPCB and NABL accredited laboratory We have also installed a Continuous Ambient Air Quality Monitoring Station at Jamadoba for real time monitoring. Complied 14-11-2024 Attachment:NA
9	Statutory compliance	Monitoring of outlet points should be carried out and records of same should be maintained and submitted to the Regional Office of the MOEF as part of the Compliance Report.	PPs Submission	There is one mine-water outlet point in the colliery which is regularly monitored by the Environmental Laboratory. The analysis results have been provided as Annexure II. Complied 28-11-2024 Attachment: Click to View
10	Human Health Environment	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust	PPs Submission	Persons working in dusty area have been provided with dust masks and have been given awareness training on safety and health aspects. Regular PME (Periodic Medical Examinations) are being done. Complied

		and to take corrective measures, if needed.		14-11-2024 Attachment:NA
11	MISCELLANEOUS	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	PPs Submission	We have a separate Environmental Management Cell with qualified personnel. The reporting of Environmental Cell is directly to General Manager of the Division. Environment policy has been attached as Annexure III. Complied 28-11-2024 Attachment:NA
12	Corporate Environmental Responsibility	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.	PPs Submission	The Environment Cell has a separate fund for Environmental protection measures and for complying with legal requirements. The annual environmental expenditure for the financial year 2023-2024 is Rs. 321.33 lakhs. Complied 14-11-2024 Attachment:NA
13	MISCELLANEOUS	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State	PPs Submission	It has been complied with. Attached as Annexure-IV. Complied 28-11-2024 Attachment: Click to View

		Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.		
14	Statutory compliance	A copy of the environmental clearance letter shall be marked to concerned Panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.	PPs Submission	It has been complied with. Attached as Annexure. Complied 28-11-2024 Attachment: Click to View
15	Statutory compliance	A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.	PPs Submission	It has been complied with. Complied 14-11-2024 Attachment:NA
16	Statutory compliance	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM10, PM2.5, SO2 and NOx (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises	PPs Submission	The clearance letter has been uploaded on the companies website. The compliance status (as Half-yearly compliance report) is being uploaded in companies website. The display of information near the mines office has been done. Complied 14-11-2024 Attachment:NA

		and mines office and in corporate office and on the company's website.		
17	Statutory compliance	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.	PPs Submission	It is being complied Complied 14-11-2024 Attachment:NA
18	Statutory compliance	The Regional Office of this Ministry located at Bhopal 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.	PPs Submission	It will be complied with. Complied 14-11-2024 Attachment:NA
19	Statutory compliance	The environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the project proponent tot the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.	PPs Submission	The environmental statement for financial year 2023-24 has been submitted to JSPCB vide letter no. JMB/ENV/ESSA/05/565/2024 on 27th September 2024 and it is also uploaded on the company website. The soft copy of Environment Statement is also sent to MOEF by email at ro.ranchi-mefgov.in. Complied 14-11-2024 Attachment:NA

Document uploaded by the PP

Last Site Visit Report (if available)
NA
Last Site Visit Report Date (if available)
Additional Attachment (if any)
NA

Additional Remarks (if any)

- [x] I 'Tata Steel Ltd. ' hereby give undertaking that the data and information given in the filed compliance and enclosures are true to be best of my knowledge and belief and I am aware that if any part of the data and information found to be false or misleading at any stage, the clearance given to the project will be revoked at our risk and cost. In addition to above, I hereby give undertaking that no activity such as change in project layout, construction, expansion, etc. has been taken up without due approval.

Cover Letter From RO/SRO

Cover Letter From RO/SRO

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HALF YEARLY COMPLIANCE REPORT
(PERIOD: APRIL'24 – SEPTEMBER'24)

DIGWADIH COLLIERY
(CAPACITY: EXPANSION FROM 0.38 TO 0.6 MTPA RAW COAL)
TEHSIL: JHARIA, DIST: DHANBAD, JHARKHAND

TATA STEEL LIMITED, JHARIA DIVISION

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

ENVIRONMENTAL CLEARANCE GRANTED VIDE LETTER NO. - J-11015/372/2010-IA.II(M) DATED- 30.09.2013 ISSUED BY GOVT. OF INDIA, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW DELHI.

Compliance status of Digwadih Colliery of M/s Tata Steel Ltd. for (Expansion from 0.38 MTPA to 0.6 MTPA in ML area 314.57 ha), dist. Dhanbad, Jharkhand vide MoEFCC Letter no J-11015/372/2010-IA.II (M) dated September 30, 2013

S. No.	Condition	Compliance Status
Specific Condition		
(i)	The maximum production from the mines shall not exceed beyond that for which environmental clearance has been granted.	The production from the colliery has stopped since February 2021. The EC capacity is for 0.6 MTPA raw coal while the raw coal production for Digwadih Colliery was well below the limit.
(ii)	The impact on the Damodar river due to mining activity which is at a distance of 2 km be studied through a reputed 3rd Party and submitted to the SPCB and the regional office of the MoEF for monitoring.	The underground coal mines operated by Tata Steel Ltd are adjacent to the Damodar River. Other coal mines of BCCL & SAIL are also in close proximity to the river basin. Major source of pollution of Damodar River is the flow of industrial effluents and untreated sewage water into the river. A number of OB dumps lie close to the river banks causing the flow of sediments into the river. As per the hydrology study conducted by Indian School of Mines, Dhanbad, the impact of the underground mines of Tata Steel Ltd is minimal. This is due to the following reasons • The mining activity does not require any diversion of river/streams or natural drain. As land profile does not change appreciably in case of underground mines with backfilling of mined out areas, there is no change in surface drainage till date and unlikely to occur in future. • Surface water quality also does not undergo any change, as there is no discharge to surface drainage in dry season. In Monsoon, the excess mine water discharged gets mixed with storm water. • Large settling tanks are available for storage and sedimentation of mine water before its discharge to conform to the norms. The industrial wastewater generated during vehicle washing from the central workshop catering to all the mines is treated in oil and grease trap followed by recycling of water.

		• The two coal washeries of Tata Steel are operating on Zero Liquid discharge (ZLD) principle. • Sewage water generated from our townships is treated in STP. For Sijua group, one STP of 200 KLD and another STP of 50 KLD has been installed in Bhelatand Colony, 10 KLD has been installed at Sijua canteen and Bhelatand canteen individually. For Jamadoba group, 10 KLD STP/ETP installed in washery, Canteen, Garage and Hospital individually, other than that 60 KLD and 30 KLD installed at Digwadih Colony & 50 KLD installed at Railway Colony.
(iii)	Details of underground transportation of coal from mine to coal yard/ rail yard be submitted to the MoEF for record.	The production from the colliery has stopped since February 2021.Coal from the mine was sent to the captive Jamadoba coal washery for beneficiation purpose through a network of underground conveyor belts. The detailed diagram of transportation network had already been submitted in earlier compliance reports.
(iv)	Adequate care be taken to prevent sand spillages from the trucks/tippers.	The trucks that are being used for the transportation of sand are properly covered using tarpaulin sheets. Larger trucks have been engaged for reducing no of cycles. To ensure the compliance, every vehicle is checked as per vehicle checklist on PUC, Tyre /body condition, emission check at every entry point. Quality checks are done on trucks to ensure its health.
(v)	The test results of the study of leaching of heavy metals from bottom-ash be submitted to SPCB and the regional office of the MoEF for monitoring.	A study conducted in 2013, by Indian School of Mines, Dhanbad to assess the leachability characteristics of fly ash and bottom ash samples taken from us, has determined that the concentration of heavy metals in the leachates were invariably well below the permissible limits for discharge of effluents as per the Indian standards IS 2490 (1993). The test results have already been submitted in

		December'13 and also re-submitted in April'18.
(vi)	The CSR activities shall be need based and detailed CSR plan be prepared for implementation.	The CSR plan for each financial year is prepared by TSRDS (Tata Steel Rural Development Society) only after proper discussions to assess the needs have been held with the elected/ senior members of the communities where our CSR activities are to be undertaken.
(vii)	The detailed breakup of funds during 2012-13 be submitted to the MoEF for record. A social audit to be got done annually by a reputed institute and uploaded on the company's website.	The detailed breakup has already been submitted to MOEF. The Corporate Sustainability Reports viz. Integrated Reports are made annually for the company which is certified by an assurance agency. It also includes the Social Audit of the company. All the reports are uploaded on the Tata Steel website. Further, an internal Social audit is also conducted once in five years
(viii)	There should be no OB dumps at the end of the mining.	Since this is an underground mine, it is not applicable.
(ix)	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.	Regular monitoring of subsidence is done by Central Institute for Mining and Fuel Research, Dhanbad. According to the subsidence reports, the impact of subsidence is negligible since the underground mine workings are now at great depth and proper filling of voids through sand stowing is being done.
(x)	If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.	It will be strictly followed.
(xi)	Mining shall be carried out as per statuette at a safe distance from the	Since this is an underground project, there is hardly any impact on the river/ nallah. The

	river/nallah flowing adjacent to the lease boundary.	closest jore is at a distance of about 2kms from the mine office area. Therefore, no impact on the course of flow in the jore is anticipated.
(xii)	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Impact on land by subsidence has been found to be negligible as per the subsidence monitoring reports prepared by CIMFR, Dhanbad.
(xiii)	Coal extraction shall also be optimized in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring & coal extraction should be carried out below habitation, H.T. Lines & beneath road, water bodies.	It will be strictly followed.
(xiv)	Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement with the landowners.	Regular monitoring of subsidence is being done by CIMFR, Dhanbad.
(xv)	3-tier plantation should be developed 2 km stretch of road from the mine using native species.	Plantation along stretches of road has been done. 3-tier plantation is not feasible due to presence of private land around the periphery of colliery. However, plantation has been done on vacant plots and areas.
(xvi)	Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	Garland drains of adequate size and gradient already exist around the colliery area to channelize the surface runoff. The details of size of garland drain mapped in surface plan has been submitted earlier in April'18.
(xvii)	The locations of monitoring stations in the Jharia Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Board. The smoke/dust emission varies from source to source (fuel wood, coal, flyash from	The locations of monitoring stations for our colliery have already been finalized in consultation with JSPCB, Dhanbad. The mineralogical composition study has been carried out by an independent laboratory

	TPPs, silica from natural dust, etc). Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM10 and PM2.5) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.	(recognized by JSPCB and NABL) and the results are provided in **Annexure-II.**
(xix)	Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.	Water spraying arrangement is present in the underground mines at all transfer points. Water spraying via tankers is done on sand transportation routes. Major approach roads have been black-topped and maintained regularly.
(xx)	Transportation of coal from the mine to railway siding should be by 20T mechanically covered trucks.	Not applicable due to transportation of coal via underground belt conveyor network system directly to washery.
(xxi)	A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO/Agriculture Department.	Tree plantation activities are carried out every year on the barren/ degraded areas, areas along road-side, infrastructure, etc of the colliery leasehold. Apart from these, fruit plants are distributed to employees and also to villagers, schools, institutions, etc. The environment department is responsible for implementing the afforestation plan which is prepared along with the mine management. High root density trees of native species are planted under annual plantation program and around 25093 Nos of saplings were planted in the FY23 & 12452 Nos. in FY24.
(xxii)	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May.	The regular monitoring of groundwater level and quality is done as per the requirement. The groundwater quality report & groundwater level reports are provided in **Annexure-II.**

	Data thus collected shall be submitted to the MoEF&CC and to the CPCB quarterly within one month of monitoring.	
(xxiii)	Acid Water Treatment Plant, volume of water to be treated and disposal of brine should be provided.	Not applicable.
(xxiv)	Mine discharge water outside the ML shall be monitored, particularly for TDS and treated to conform to prescribed levels before discharge into the natural environment.	There is one mine-water outlet point in the colliery which is regularly monitored by the Environmental Laboratory.
(xxv)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	Most of the water pumped out during underground mining activity is re-circulated back into the mine for the purpose of stowing. Backfilling of mine voids by stowing is done using sand which is having the porosity to hold the underground water thus helping aquifer to retain the underground water. Further, there are a number of ponds existing on the surface of the mining lease which act as natural reservoirs for recharging ground water. These ponds/ tanks are regularly cleaned and maintained by our CSR department. As per the hydro-geological report, the variation in the ground water level is only seasonal. The water requirement of the nearby villages is being met by the company already. Now piped drinking water is being provided.
(xxvi)	Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	The periodic health checkup of the workers is done regularly by our Occupational Health Department, Tata Central Hospital, Jamadoba. We have a PME (Periodic Medical Examination) Centre approved by DGMS where 20 % of the workers identified from workforce engaged in active mining operations are subjected to full medical checkup including hearing impairment checkup, etc. These results are regularly submitted to DGMS as per mines rules. Some sample reports and as well as past records

		have been submitted in previous compliance reports.
(xxvii)	The mining in the existing mines would be phased out after expiry of the current mining lease and after reclamation of mined over area. The operating mines may be analyzed and monitored for compliance of conditions, having bearing with movement of wild life until such time they are closed/ phased out.	It is not applicable in our case.
(xxviii)	Project specific CSR for an amount of Rs 5/Tonne of coal production should be provided for the activities under CSR undertaken for the neighboring villages shall be for not less than Rs 10 per tonne of coal and the progress made thereon shall be uploaded by the company annually on the company website. Monitoring of the impacts of activities under CSR shall be carried out periodically.	The proposed CSR expenditure for the entire company is decided as per the new Company Rules. Once the CSR budget for company is fixed, a share of that amount is dedicated and utilized for implementing the CSR activities at our Jharia Division level. The CSR expenditure for FY23 was Rs. 11.84 crores. For FY24 the expenditure is Rs. 21.81 crores CSR data submitted is for Jharia Division which comprises all 5 collieries and 2 washeries. Jamadoba Washery, Digwadih Colliery and 6&7 Pits Colliery are adjacent to each other and fall under same leasehold area i.e. Jamadoba group of collieries. The core zone and buffer zone of all above units overlap to each other and in many cases, the villages are same where CSR work is going on. Therefore, we have a central budget for CSR which is managed by a team of experts who are dedicatedly involved in providing benefits and improving standard of living in over 50+ villages and municipal wards. Hence, separate CSR expenditure for individual unit cannot be estimated. For calculation/ statutory reporting purpose, the consolidated CSR expenditure can be divided into unit-wise based on size of leasehold area of individual units. The progress report is uploaded every year on the company website. Internal social audits

		are carried out regularly to assess the impact of CSR activities.
(xxix)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Mine Closure Plan has been approved by Ministry of Coal, New Delhi. Details on deposition of closure cost in escrow account along with expenditure incurred for progressive closure is regularly submitted to Office of Coal controller. Final mine closure along with details of corpus fund will be submitted to MoEF&CC 5 years in advance.
(xxx)	Corporate Environment Responsibility: a)The Company shall have a well laid down Environment Policy approved by the Board of Directors. b)The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. c)The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished. d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	The Company already has an Environment Policy approved by the Managing Director and it addresses all the issues mentioned. The status of adherence to the policy and compliance to Environmental laws and regulations is regularly discussed at higher levels. Any non-compliance noticed is corrected at divisional level. If any issue is beyond our control, it is brought to the notice of higher management. Moreover, Digwadih Colliery is IMS (Integrated Management System: Quality Management System, Environment Management System and OHSAS) certified unit addressing all environment aspects, impacts and needs and expectation of interested parties with respect to environment protection.

B.	**GENERAL CONDITIONS**

Compliance status of Digwadih Colliery of M/s Tata Steel Ltd. for (Expansion from 0.38 MTPA to 0.6 MTPA in ML area 314.57 ha), dist. Dhanbad, Jharkhand vide MoEFCC Letter no J-11015/372/2010-IA.II (M) dated September 30, 2013

(i)	No change in technology and scope of working shall be made without prior approval of the MoEF.	It is being strictly followed. Board and Pillar method is being used for mining.
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	It will be strictly followed.
(iii)	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in RSPM etc. shall be carried out at least once in six months.	The Air quality monitoring stations are: (i)Jamadoba Group Office (Core Zone) (ii)New Village Colony, Jamadoba (Buffer Zone) (iii)Digwadih 12 No. Colony (Buffer Zone) (iv)6&7 Pits Kalimandir area (Buffer Zone) Monitoring of heavy metals in ambient air is being performed by an independent laboratory (recognized by JSPCB & NABL) on quarterly basis. The results are enclosed as **Annexure-II.**
(iv)	Data on ambient air quality (PM10, PM2.5, SO2 and NOx and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the SPCB and the CPCB once in six months. Random verification of samples through analysis from independent laboratories recognised under the EP Rules, 1986 shall be furnished as part of the compliance report.	Ambient air quality report (PM10, PM 2.5, SO2 and NOx) for the period from Oct'23 to Mar'24 is attached as Additionally, third party monitoring is being done through a JSPCB and NABL recognized Laboratory for PM10, PM 2.5, SO2, NOx, CO, NH3, O3 and heavy metals (As, Ni, Cd and Cr). The results are enclosed as **Annexure-II.**
(v)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Regular noise survey is being conducted in the underground work environment. Workers are provided with ear-plugs/ muffs in high noise areas.

(vi)	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	No industrial wastewater is generated in Digwadih Colliery premises. There is a central workshop and garage in Jamadoba where Effluent Treatment Plant having oil and grease trap facility has been provided.
(vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	Only the vehicles having valid PUC certificates are being allowed to operate for sand transportation. Coal transportation is done through underground belt network. Only sand transportation is done through trucks which are covered with tarpaulins as well as optimally loaded.
(viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with SPCB and data got analysed through a laboratory recognised under EP Rules, 1986.	We have a fully equipped Environment Cell Laboratory with qualified personnel. The monitoring and analysis is also done at regular intervals by a JSPCB & NABL accredited laboratory We have also installed a Continuous Ambient Air Quality Monitoring Station at Jamadoba for real time monitoring.
(ix)	Monitoring of outlet points should be carried out and records of same should be maintained and submitted to the Regional Office of the MOEF as part of the Compliance Report.	There is one mine-water outlet point in the colliery which is regularly monitored by the Environmental Laboratory. The analysis results have been provided as **Annexure-II.**
(x)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust	Persons working in dusty area have been provided with dust masks & have been given awareness training on safety & health aspects. Regular PME (Periodic Medical Examinations) are being done.

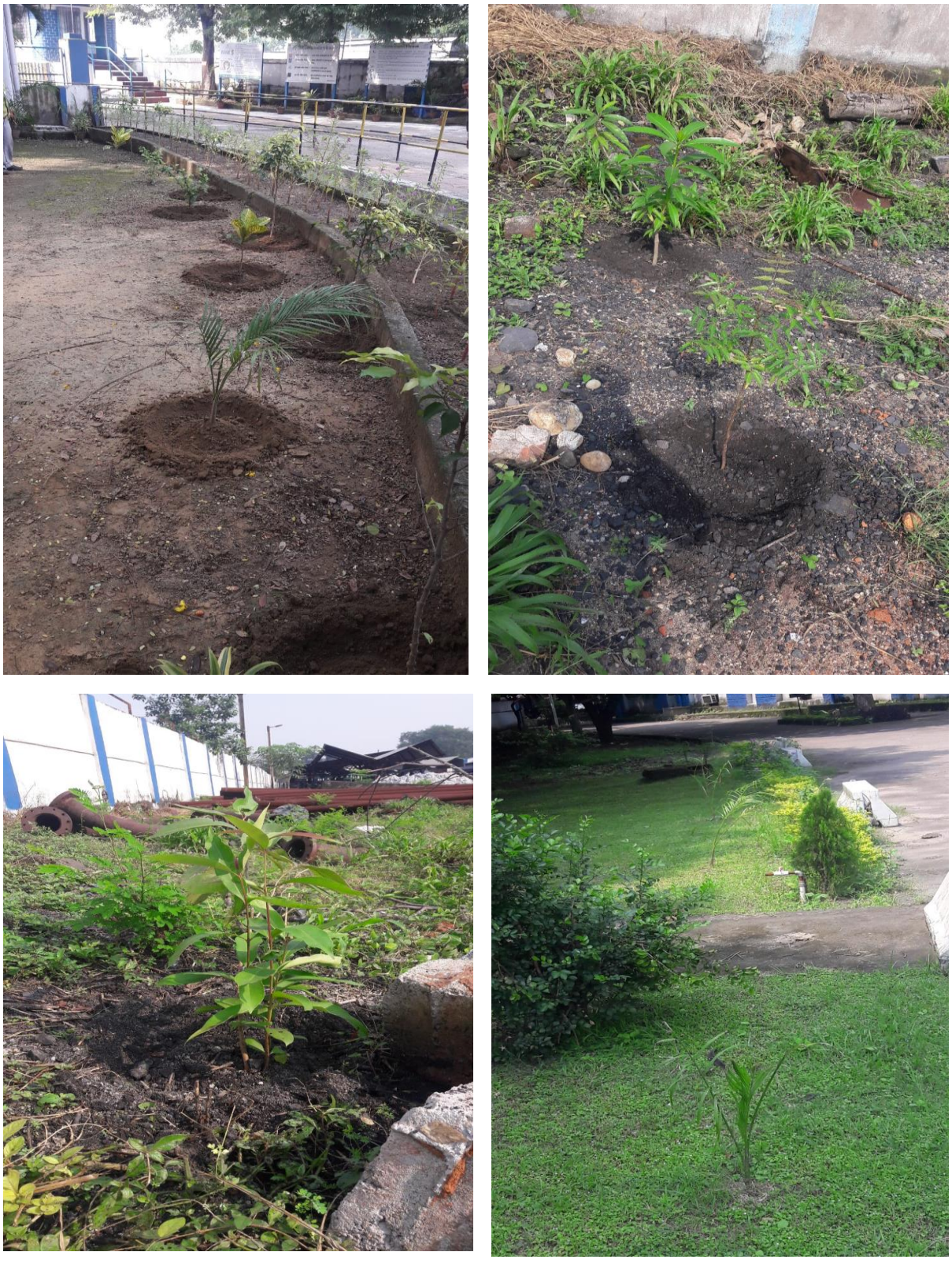
	and to take corrective measures, if needed.	
(xi)	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	We have a separate Environmental Management Cell with qualified personnel . The reporting of Environmental Cell is directly to General Manager of the Division. Environment policy has been attached as Annexure-III.
(xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.	The Environment Cell has a separate fund for Environmental protection measures and for complying with legal requirements. The annual environmental expenditure for the financial year 2023-2024 is Rs. 321.33 lakhs.
(xiii)	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.	It has been complied with. Attached as Annexure-IV.
(xiv)	A copy of the environmental clearance letter shall be marked to concerned Panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.	It has been complied with. Attached as Annexure-IV.
(xv)	A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control	It has been complied with.

	Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.	
(xvi)	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM10, PM2.5, SO2 and NOx (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	The clearance letter has been uploaded on the company's website. The compliance status (as Half-yearly compliance report) is being uploaded in company's website. The display of information near the mine's office has been done.
(xvii)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.	It is being complied
(xviii)	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	It will be complied with.
(xix)	The environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the project proponent tot the concerned State Pollution Control Board as	The environmental statement for financial year 2023-24 has been submitted to JSPCB vide letter no. JMB/ENV/ESSA/05/565/2024 on 27th September 2024 and it is also uploaded on the company website. The soft copy of

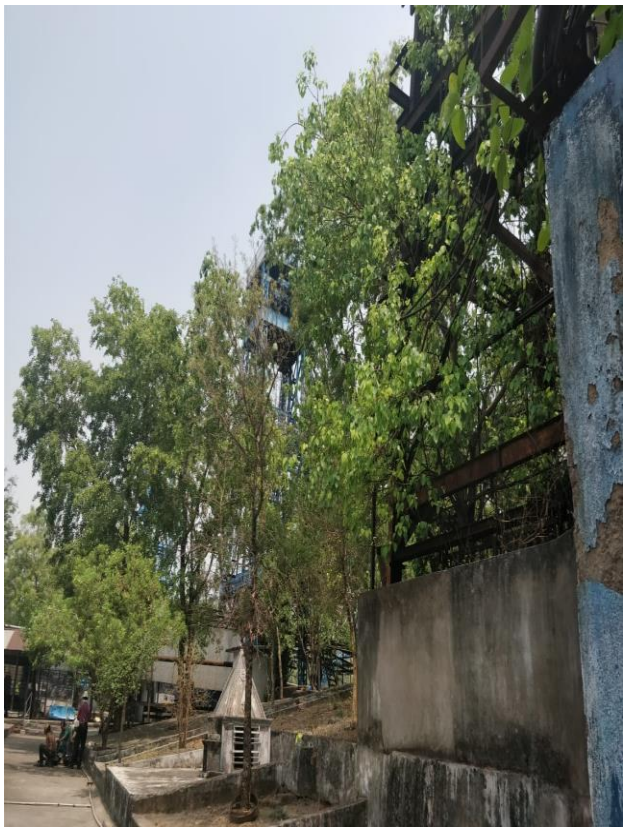
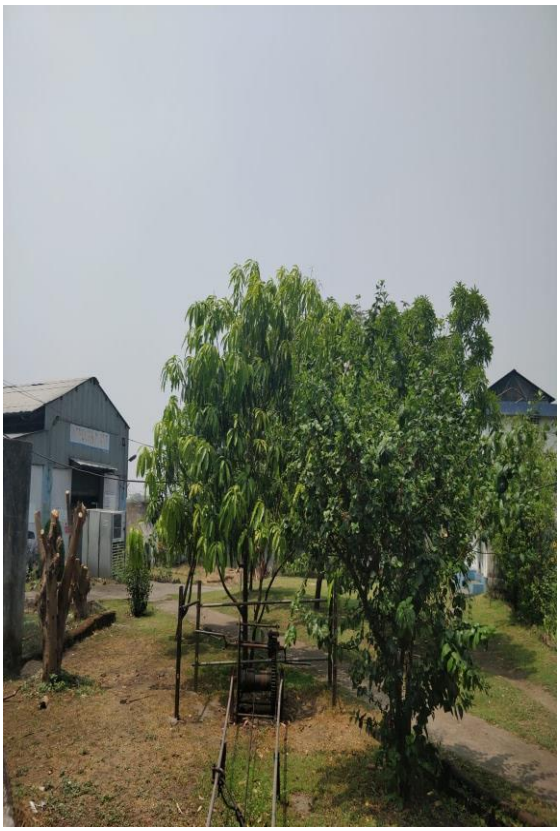
	prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.	Environment Statement is also sent to MOEF by email at ro.ranchi-mef@gov.in.

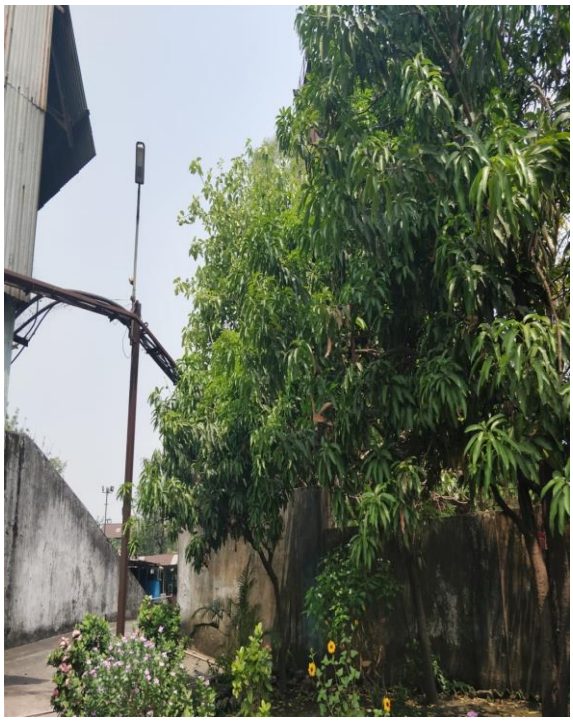
Annexure-I Greenbelt Development Report

Glimpses of already existing green belt and plantation activities done in this monsoon season in and around Digwadih colliery premises to enhance the green cover have been depicted in the pictures below:

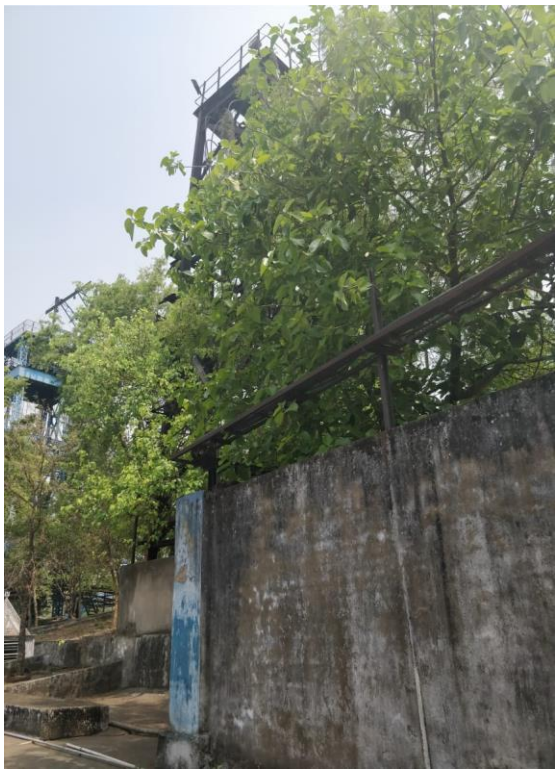


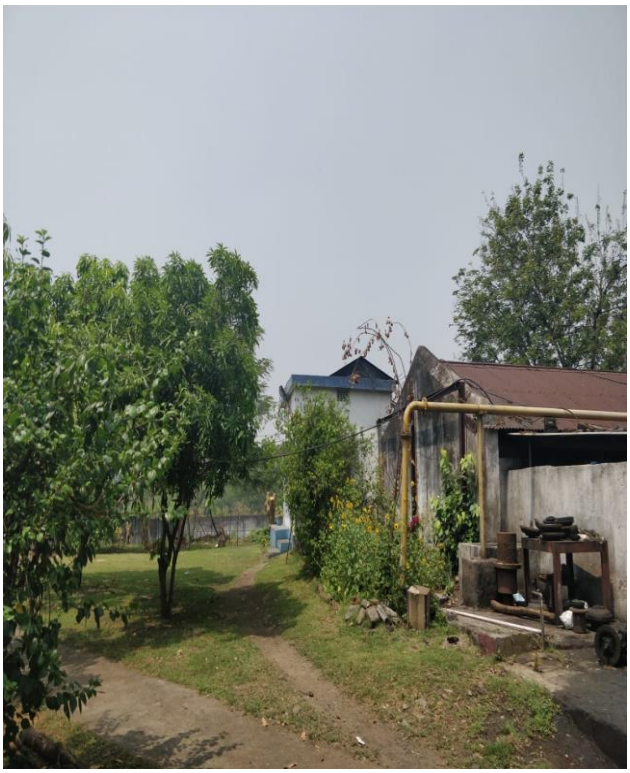
Picture: Plantation done in this monsoon season in and around Digwadih Colliery premises



Picture: Developed Green belt in and around Digwadih Colliery premises





Picture: Developed Green belt in and around Digwadih Colliery premises

Annexure- II

TATA STEEL LIMITED
Internal Communication Form
TATA STEEL LIMITED
JHARIA DIVISION

Sr.Manager, Jamadoba Colliery
Sr.Manager, Digwadih Colliery
Sr.Manager, 6 & 7 Pits Colliery
Head, Jamadoba Coal Washery
CMO, Tata Central Hospital, Jamadoba

Ref: JMB /ENV /LAB /02 / 258 / 24
Date: 08 / 05 / 2024

Re: AIR QUALITY REPORT

We wish to inform you that Air Quality Monitoring was carried out in **JAMADOBA GROUP** in the month of **APRIL'2024**. The results are as given below.

Core zone (as per Ambient Air quality standards for coal mines notified vide notification G.S.R. 742(E) dated-25.09.2000

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	**SPM** 24 Hourly Limit-700 µg/m³	**RSPM** 24 Hourly Limit-300 µg/m³	**SO_2** 24 Hourly Limit-120 µg/m³	**NOx** 24 Hourly Limit-120 µg/m³
1	6&7 Pits Kalimandir area	23°43'15" N/ 86°24'12" E	05.04.24	Clear	245.2	92.6	18.1	22.7

Buffer zone (as per NAAQS 2009 for Ambient Air quality standards)

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	**PM_{10}** 24 Hourly Limit-100 µg/m³	**$PM_{2.5}$** 24 Hourly Limit- 60 µg/m³	**SO_2** 24 Hourly Limit-80 µg/m³	**NOx** 24 Hourly Limit-80 µg/m³
1	Jamadoba Group Office	23°42'15.3" N/ 86°24'11" E	03.04.24	Clear	85.1	45.7	16.8	19.4
2	Digwadih 12 No. Colony	23°41'42" N/ 86°24'45.3" E	04.04.24	Clear	87.9	47.4	17.0	20.3
3	New Village Colony, Jamadoba	23°41'51" N/ 86°23'19" E	09.04.24	Clear	73.5	32.6	18.1	21.7
4	Tata Central Hospital	23°42'36" N/ 86°24'10.4"E	08.04.24	Clear	70.2	29.8	15.9	18.6

Note: PM_{10} - Less than 10-micron Particulate Matter
$PM_{2.5}$ - Less than 2.5-micron Particulate Matter
µg - Microgram

This is for your information and necessary action please.

Lab. Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr.Manager, Jamadoba Colliery
Sr.Manager, Digwadih Colliery
Sr.Manager, 6 & 7 Pits Colliery
Head, Jamadoba Coal Washery
CMO, Tata Central Hospital, Jamadoba

Ref: JMB /ENV /LAB /02 / 330 / 24
Date: 03/06 / 2024

Re: AIR QUALITY REPORT

We wish to inform you that Air Quality Monitoring was carried out in **JAMADOBA GROUP** in the month of **MAY'2024**. The results are as given below.

Core zone (as per Ambient Air quality standards for coal mines notified vide notification G.S.R. 742(E) dated-25.09.2000

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	SPM 24 Hourly Limit-700 µg/m³	RSPM 24 Hourly Limit-300 µg/m³	SO_2 24 Hourly Limit-120 µg/m³	NOx 24 Hourly Limit-120 µg/m³
1	6&7 Pits Kalimandir area	23°43'15" N/ 86°24'12" E	10.05.24	Clear	237.9	89.3	17.8	19.4

Buffer zone (as per NAAQS 2009 for Ambient Air quality standards)

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	PM_{10} 24 Hourly Limit-100 µg/m³	$PM_{2.5}$ 24 Hourly Limit- 60 µg/m³	SO_2 24 Hourly Limit-80 µg/m³	NOx 24 Hourly Limit-80 µg/m³
1	Jamadoba Group Office	23°42'15.3" N/ 86°24'11" E	16.05.24	Clear	78.4	37.2	19.3	21.5
2	Digwadih 12 No. Colony	23°41'42" N/ 86°24'45.3" E	13.05.24	Clear	80.6	40.1	18.2	22.1
3	New Village Colony, Jamadoba	23°41'51" N/ 86°23'19" E	14.05.24	Clear	70.1	30.3	15.9	17.8
4	Tata Central Hospital	23°42'36" N/ 86°24'10.4"E	15.05.24	Clear	72.9	32.6	14.7	17.2

Note: PM_{10} - Less than 10-micron Particulate Matter
$PM_{2.5}$ - Less than 2.5-micron Particulate Matter
µg - Microgram

This is for your information and necessary action please.

P mahato.
Lab. Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr.Manager, Jamadoba Colliery
Sr.Manager, Digwadih Colliery
Sr.Manager, 6 & 7 Pits Colliery
Head, Jamadoba Coal Washery
CMO, Tata Central Hospital, Jamadoba

Ref: JMB /ENV /LAB /02 / 397 / 24
Date: 03 / 07 / 2024

Re: AIR QUALITY REPORT

We wish to inform you that Air Quality Monitoring was carried out in **JAMADOBA GROUP** in the month of **JUNE'2024**. The results are as given below.

Core zone (as per Ambient Air quality standards for coal mines notified vide notification G.S.R. 742(E) dated-25.09.2000

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	SPM 24 Hourly Limit-700 µg/m³	RSPM 24 Hourly Limit-300 µg/m³	SO_2 24 Hourly Limit-120 µg/m³	NOx 24 Hourly Limit-120 µg/m³
1	6&7 Pits Kalimandir area	23°43'15" N/ 86°24'12" E	04.06.24	Clear	241.7	87.1	18.7	21.9

Buffer zone (as per NAAQS 2009 for Ambient Air quality standards)

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	PM_{10} 24 Hourly Limit-100 µg/m³	$PM_{2.5}$ 24 Hourly Limit- 60 µg/m³	SO_2 24 Hourly Limit-80 µg/m³	NOx 24 Hourly Limit-80 µg/m³
1	Jamadoba Group Office	23°42'15.3" N/ 86°24'11" E	07.06.24	Clear	94.2	51.8	20.8	22.1
2	Digwadih 12 No. Colony	23°41'42" N/ 86°24'45.3" E	05.06.24	Clear	86.2	45.9	17.2	20.8
3	New Village Colony, Jamadoba	23°41'51" N/ 86°23'19" E	06.06.24	Clear	82.4	43.6	16.8	19.5
4	Tata Central Hospital	23°42'36" N/ 86°24'10.4"E	10.06.24	Clear	90.8	48.5	15.2	18.6

Note: PM_{10} - Less than 10-micron Particulate Matter
$PM_{2.5}$ - Less than 2.5-micron Particulate Matter
µg - Microgram

This is for your information and necessary action please.

P mahato.
Lab. Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr.Manager, Digwadih Colliery
Sr.Manager, 6 & 7 Pits Colliery
Head, Jamadoba Coal Washery
CMO, Tata Central Hospital, Jamadoba

Ref: JMB /ENV /LAB /02 / 465 / 24
Date: 01 / 08 / 2024

Re: AIR QUALITY REPORT

We wish to inform you that Air Quality Monitoring was carried out in **JAMADOBA GROUP** in the month of **JULY'2024**. The results are as given below.

Core zone (as per Ambient Air quality standards for coal mines notified vide notification G.S.R. 742(E) dated-25.09.2000

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	**SPM** 24 Hourly Limit-700 µg/m³	**RSPM** 24 Hourly Limit-300 µg/m³	**SO_2** 24 Hourly Limit-120 µg/m³	**NOx** 24 Hourly Limit-120 µg/m³
1	6&7 Pits Kalimandir area	23°43'15" N/ 86°24'12" E	03.07.24	Cloudy	186.7	67.2	15.9	18.4

Buffer zone (as per NAAQS 2009 for Ambient Air quality standards)

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	**PM_{10}** 24 Hourly Limit-100 µg/m³	**$PM_{2.5}$** 24 Hourly Limit- 60 µg/m³	**SO_2** 24 Hourly Limit-80 µg/m³	**NOx** 24 Hourly Limit-80 µg/m³
1	Jamadoba Group Office	23°42'15.3" N/ 86°24'11" E	05.07.24	Clear	86.5	44.3	18.2	21.6
2	Digwadih 12 No. Colony	23°41'42" N/ 86°24'45.3" E	04.07.24	Cloudy	65.9	30.2	14.8	16.2
3	New Village Colony, Jamadoba	23°41'51" N/ 86°23'19" E	08.07.24	Cloudy	68.2	31.0	17.5	20.3
4	Tata Central Hospital	23°42'36" N/ 86°24'10.4"E	09.07.24	Clear	72.4	33.1	16.8	19.5

Note: PM_{10} - Less than 10-micron Particulate Matter
$PM_{2.5}$ - Less than 2.5-micron Particulate Matter
µg - Microgram

This is for your information and necessary action please.

Lab. Assistant (Environment)

12.08.24
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr.Manager, Jamadoba Colliery
Sr.Manager, Digwadih Colliery
Sr.Manager, 6 & 7 Pits Colliery
Head, Jamadoba Coal Washery
CMO, Tata Central Hospital, Jamadoba

Ref: JMB /ENV /LAB /02 / 521 / 24
Date: 02 / 09 / 2024

Re: AIR QUALITY REPORT

We wish to inform you that Air Quality Monitoring was carried out in **JAMADOBA GROUP** in the month of **AUGUST'2024**. The results are as given below.

Core zone (as per Ambient Air quality standards for coal mines notified vide notification G.S.R. 742(E) dated-25.09.2000

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	SPM 24 Hourly Limit-700 µg/m³	RSPM 24 Hourly Limit-300 µg/m³	SO_2 24 Hourly Limit-120 µg/m³	NOx 24 Hourly Limit-120 µg/m³
1	6&7 Pits Kalimandir area	23°43'15" N/ 86°24'12" E	16.08.24	Clear	201.9	70.8	16.8	19.7

Buffer zone (as per NAAQS 2009 for Ambient Air quality standards)

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	PM_{10} 24 Hourly Limit-100 µg/m³	$PM_{2.5}$ 24 Hourly Limit- 60 µg/m³	SO_2 24 Hourly Limit-80 µg/m³	NOx 24 Hourly Limit-80 µg/m³
1	Jamadoba Group Office	23°42'15.3" N/ 86°24'11" E	12.08.24	Clear	74.2	36.2	16.5	18.3
2	Digwadih 12 No. Colony	23°41'42" N/ 86°24'45.3" E	13.08.24	Cloudy	57.1	24.0	15.4	17.8
3	New Village Colony, Jamadoba	23°41'51" N/ 86°23'19" E	20.08.24	Cloudy	69.4	32.1	12.7	14.1
4	Tata Central Hospital	23°42'36" N/ 86°24'10.4"E	19.08.24	Cloudy	64.2	29.5	14.6	16.7

Note: PM_{10} - Less than 10-micron Particulate Matter
$PM_{2.5}$ - Less than 2.5-micron Particulate Matter
µg - Microgram

This is for your information and necessary action please.

P mahato.
Lab. Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr.Manager, Jamadoba Colliery
Sr.Manager, Digwadih Colliery
Sr.Manager, 6 & 7 Pits Colliery
Head, Jamadoba Coal Washery
CMO, Tata Central Hospital, Jamadoba

Ref: JMB /ENV /LAB /02 / 581 / 24
Date: 01 / 10 / 2024

Re: AIR QUALITY REPORT

We wish to inform you that Air Quality Monitoring was carried out in **JAMADOBA GROUP** in the month of **SEPTEMBER'2024**. The results are as given below.

Core zone (as per Ambient Air quality standards for coal mines notified vide notification G.S.R. 742(E) dated-25.09.2000

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	SPM 24 Hourly Limit-700 µg/m³	RSPM 24 Hourly Limit-300 µg/m³	SO_2 24 Hourly Limit-120 µg/m³	NOx 24 Hourly Limit-120 µg/m³
1	6&7 Pits Kalimandir area	23°43'15" N/ 86°24'12" E	05.09.24	Cloudy	195.6	68.4	15.7	17.2

Buffer zone (as per NAAQS 2009 for Ambient Air quality standards)

S.No	Location	Latitude/ Longitude	Date of Sampling	Weather Condition	PM_{10} 24 Hourly Limit-100 µg/m³	$PM_{2.5}$ 24 Hourly Limit- 60 µg/m³	SO_2 24 Hourly Limit-80 µg/m³	NOx 24 Hourly Limit-80 µg/m³
1	Jamadoba Group Office	23°42'15.3" N/ 86°24'11" E	06.09.24	Clear	90.6	52.7	17.4	20.1
2	Digwadih 12 No. Colony	23°41'42" N/ 86°24'45.3" E	03.09.24	Clear	72.6	38.1	18.7	21.0
3	New Village Colony, Jamadoba	23°41'51" N/ 86°23'19" E	04.09.24	Clear	70.4	35.2	16.9	19.5
4	Tata Central Hospital	23°42'36" N/ 86°24'10.4"E	07.09.24	Cloudy	65.4	28.9	14.8	16.2

Note: PM_{10} - Less than 10-micron Particulate Matter
$PM_{2.5}$ - Less than 2.5-micron Particulate Matter
µg - Microgram

This is for your information and necessary action please.

Lab. Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Colliery
Head, Jamadoba Coal Washery
Sr. Manager, Digwadih Colliery
Sr. Manager, 6 & 7 Pits Colliery

Ref : JMB/ ENV/ LAB/ 05/228 /24
Dated: 02/05/2024

Re: Ambient Noise Level Report

We wish to inform you that Ambient Noise Level Monitoring was carried out in **JAMADOBA GROUP** in the month of **APRIL'2024**. The results are as given below:

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 55			**CPCB Standard- 45**		
	Residential Area (Buffer Zone)		Min.	Max.	**Avg.**	Min.	Max.	**Avg.**
1	Digwadih 12 No. Colony	25.04.24	43.7	45.5	**44.6**	35.4	37.7	**36.6**
2	New Village Colony, Jamadoba	25.04.24	41.3	43.6	**42.5**	33.6	35.4	**34.5**
3	6&7 Pits Kalimandir Colony	25.04.24	43.2	45.4	**44.3**	35.5	37.8	**36.7**
4	Digwadih 10 No. Colony	25.04.24	44.5	46.7	**45.6**	36.2	38.5	**37.4**

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 75			**CPCB Standard- 70**		
	Industrial Area (Core Zone)		Min.	Max.	**Avg.**	Min.	Max.	**Avg.**
1	2 Pit Main Gate Security Post	25.04.24	57.4	60.7	**59.1**	49.3	51.5	**50.4**
2	2 Pit Top Kalimandir, Jamadoba	25.04.24	53.1	56.4	**54.8**	45.6	47.9	**46.8**
3	Weigh Bridge, Digwadih	25.04.24	48.6	51.3	**50.0**	40.4	42.7	**41.6**
4	Canteen Complex, Digwadih	25.04.24	49.2	50.6	**49.9**	41.7	43.5	**42.6**
5	Head Office Complex, Digwadih	25.04.24	48.6	50.4	**49.5**	40.2	42.6	**41.4**
6	Check Post Security Gate, 6&7 Pits	25.04.24	49.3	51.7	**50.5**	41.1	43.4	**42.3**
7	Canteen Complex, 6&7 Pits	25.04.24	48.5	49.2	**48.9**	40.3	41.5	**40.9**
8	Fan house- Nitrogen Plant, 6&7 Pits	25.04.24	72.3	73.5	**72.9**	64.2	65.4	**64.8**
9	Joota Gate, JCPP	25.04.24	67.7	70.9	**69.3**	59.5	62.2	**60.9**
10	Main Gate Stores, JCPP	25.04.24	54.2	57.5	**55.9**	46.5	48.7	**47.6**
11	Railway Siding Yard, JCPP	25.04.24	50.4	52.7	**51.6**	42.3	44.5	**43.4**

Analysis: All the values are within permissible limit.

This is for your information please.

Lab. Assistant (Environment)

Sr. Manager (Environment)

Copy to: Specialist (OH). TCH

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Colliery
Head, Jamadoba Coal Washery
Sr. Manager, Digwadih Colliery
Sr. Manager, 6 & 7 Pits Colliery

Ref : JMB/ ENV/ LAB/ 05/307 /24
Dated: 03 /06/ 2024

Re: Ambient Noise Level Report

We wish to inform you that Ambient Noise Level Monitoring was carried out in **JAMADOBA GROUP** in the month of **MAY'2024**. The results are as given below:

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 55			**CPCB Standard- 45**		
	Residential Area (Buffer Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	Digwadih 12 No. Colony	09.05.24	44.2	46.5	45.4	36.4	38.7	37.6
2	New Village Colony, Jamadoba	09.05.24	42.7	44.5	43.6	34.5	36.8	35.7
3	6&7 Pits Kalimandir Colony	09.05.24	44.5	46.7	45.6	36.7	38.5	37.6
4	Digwadih 10 No. Colony	09.05.24	42.3	44.8	43.6	34.2	36.5	35.4

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 75			**CPCB Standard- 70**		
	Industrial Area (Core Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	2 Pit Main Gate Security Post	09.05.24	56.6	59.3	58.0	48.4	51.1	49.8
2	2 Pit Top Kalimandir, Jamadoba	09.05.24	52.3	54.5	53.4	44.5	46.7	45.6
3	Weigh Bridge, Digwadih	09.05.24	48.2	50.5	49.4	40.3	42.5	41.4
4	Canteen Complex, Digwadih	09.05.24	48.5	50.7	49.6	40.7	42.9	41.8
5	Head Office Complex, Digwadih	09.05.24	46.1	48.3	47.2	38.3	40.6	39.5
6	Check Post Security Gate, 6&7 Pits	09.05.24	48.3	51.2	49.8	40.5	42.7	41.6
7	Canteen Complex, 6&7 Pits	09.05.24	47.2	48.6	47.9	39.4	41.5	40.5
8	Fan house- Nitrogen Plant, 6&7 Pits	09.05.24	72.2	73.6	72.9	64.4	65.5	65.0
9	Joota Gate, JCPP	09.05.24	68.4	71.7	70.1	60.2	63.4	61.8
10	Main Gate Stores, JCPP	09.05.24	53.5	56.8	55.2	45.7	48.5	47.1
11	Railway Siding Yard, JCPP	09.05.24	51.2	53.4	52.3	43.5	45.8	44.7

Analysis: All the values are within permissible limit.

This is for your information please.

Lab. Assistant (Environment)

Area Manager (Environment)

Copy to: Specialist (OH). TCH

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Colliery
Head, Jamadoba Coal Washery
Sr. Manager, Digwadih Colliery
Sr. Manager, 6 & 7 Pits Colliery

Ref : JMB/ ENV/ LAB/ 05/ 372/24
Dated: 01 /07/ 2024

Re: Ambient Noise Level Report

We wish to inform you that Ambient Noise Level Monitoring was carried out in **JAMADOBA GROUP** in the month of **JUNE'2024**. The results are as given below:

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 55			**CPCB Standard- 45**		
	Residential Area (Buffer Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	Digwadih 12 No. Colony	28.06.24	42.7	44.5	43.6	34.5	36.3	35.4
2	New Village Colony, Jamadoba	28.06.24	41.5	43.8	42.7	33.2	35.4	34.3
3	6&7 Pits Kalimandir Colony	28.06.24	43.2	45.5	44.4	35.4	37.6	36.5
4	Digwadih 10 No. Colony	28.06.24	42.6	44.9	43.8	34.7	36.5	35.6

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 75			**CPCB Standard- 70**		
	Industrial Area (Core Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	2 Pit Main Gate Security Post	28.06.24	54.4	57.7	56.1	46.1	49.5	47.8
2	2 Pit Top Kalimandir, Jamadoba	28.06.24	52.7	55.5	54.1	44.3	47.6	46.0
3	Weigh Bridge, Digwadih	28.06.24	49.5	52.8	51.2	41.7	44.5	43.1
4	Canteen Complex, Digwadih	28.06.24	48.8	50.6	49.7	40.4	42.7	41.6
5	Head Office Complex, Digwadih	28.06.24	45.3	47.5	46.4	37.6	39.9	38.8
6	Check Post Security Gate, 6&7 Pits	28.06.24	49.5	52.7	51.1	41.2	44.7	43.0
7	Canteen Complex, 6&7 Pits	28.06.24	47.6	49.4	48.5	39.5	41.3	40.4
8	Fan house- Nitrogen Plant, 6&7 Pits	28.06.24	72.3	73.7	73.0	64.3	65.5	64.9
9	Joota Gate, JCPP	28.06.24	66.7	69.5	68.1	58.6	61.8	60.2
10	Main Gate Stores, JCPP	28.06.24	52.4	55.6	54.0	44.2	47.5	45.9
11	Railway Siding Yard, JCPP	28.06.24	51.5	53.8	52.7	43.7	45.4	44.6

Analysis: All the values are within permissible limit.

This is for your information please.

Lab. Assistant (Environment)

Area Manager (Environment)

Copy to: Specialist (OH). TCH

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Colliery
Head, Jamadoba Coal Washery
Sr. Manager, Digwadih Colliery
Sr. Manager, 6 & 7 Pits Colliery

Ref : JMB/ ENV/ LAB/ 05/ 444 /24
Dated: 01/08/2024

Re: Ambient Noise Level Report

We wish to inform you that Ambient Noise Level Monitoring was carried out in **JAMADOBA GROUP** in the month of **JULY'2024**. The results are as given below:

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 55			**CPCB Standard- 45**		
	Residential Area (Buffer Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	Digwadih 12 No. Colony	26.07.24	42.3	44.7	43.5	34.5	36.7	35.6
2	New Village Colony, Jamadoba	26.07.24	43.1	45.4	44.3	35.3	37.7	36.5
3	6&7 Pits Kalimandir Colony	26.07.24	42.5	44.8	43.7	34.7	36.5	35.6
4	Digwadih 10 No. Colony	26.07.24	41.8	43.3	42.6	33.4	35.6	34.5

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 75			**CPCB Standard- 70**		
	Industrial Area (Core Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	2 Pit Main Gate Security Post	26.07.24	52.8	55.6	54.2	44.6	46.5	45.6
2	2 Pit Top Kalimandir, Jamadoba	26.07.24	53.5	56.3	54.9	45.2	47.4	46.3
3	Weigh Bridge, Digwadih	26.07.24	48.4	50.7	49.6	40.6	42.9	41.8
4	Canteen Complex, Digwadih	26.07.24	46.6	48.4	47.5	38.4	40.7	39.6
5	Head Office Complex, Digwadih	26.07.24	46.3	49.7	48.0	38.1	40.3	39.2
6	Check Post Security Gate, 6&7 Pits	26.07.24	48.7	51.5	50.1	40.5	45.1	42.8
7	Canteen Complex, 6&7 Pits	26.07.24	46.5	48.6	47.6	38.3	40.5	39.4
8	Fan house- Nitrogen Plant, 6&7 Pits	26.07.24	72.2	73.5	72.9	64.4	65.6	65.0
9	Joota Gate, JCPP	26.07.24	64.7	67.3	66.0	56.2	59.5	57.9
10	Main Gate Stores, JCPP	26.07.24	55.1	58.4	56.8	47.4	49.9	48.7
11	Railway Siding Yard, JCPP	26.07.24	52.4	55.7	54.1	44.1	47.3	45.7

Analysis: All the values are within permissible limit.

This is for your information please.

Lab. Assistant (Environment)

12.08.24
Area Manager (Environment)

Copy to: Specialist (OH). TCH

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Colliery
Head, Jamadoba Coal Washery
Sr. Manager, Digwadih Colliery
Sr. Manager, 6 & 7 Pits Colliery

Ref : JMB/ ENV/ LAB/ 05/ 507 /24
Dated: 02 /09 / 2024

Re: Ambient Noise Level Report

We wish to inform you that Ambient Noise Level Monitoring was carried out in **JAMADOBA GROUP** in the month of **AUGUST'2024**. The results are as given below:

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 55			**CPCB Standard- 45**		
	Residential Area (Buffer Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	Digwadih 12 No. Colony	27.08.24	42.7	44.9	43.8	34.3	36.5	35.4
2	New Village Colony, Jamadoba	27.08.24	43.5	45.6	44.6	35.6	37.8	36.7
3	6&7 Pits Kalimandir Colony	27.08.24	43.2	45.5	44.4	35.4	37.6	36.5
4	Digwadih 10 No. Colony	27.08.24	42.4	44.7	43.6	34.5	36.8	35.7

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 75			**CPCB Standard- 70**		
	Industrial Area (Core Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	2 Pit Main Gate Security Post	27.08.24	52.4	55.7	54.1	44.6	47.8	46.2
2	2 Pit Top Kalimandir, Jamadoba	27.08.24	53.1	56.5	54.8	45.2	48.4	46.8
3	Weigh Bridge, Digwadih	27.08.24	49.3	51.7	50.5	40.5	42.9	41.7
4	Canteen Complex, Digwadih	27.08.24	46.7	48.9	47.8	38.4	40.7	39.6
5	Head Office Complex, Digwadih	27.08.24	47.5	50.3	48.9	39.7	42.6	41.2
6	Check Post Security Gate, 6&7 Pits	27.08.24	49.4	52.7	51.1	41.5	44.7	43.1
7	Canteen Complex, 6&7 Pits	27.08.24	46.3	48.5	47.4	38.1	40.4	39.3
8	Fan house- Nitrogen Plant, 6&7 Pits	27.08.24	72.3	73.6	73.0	64.4	65.8	65.1
9	Joota Gate, JCPP	27.08.24	61.5	64.2	62.9	53.2	56.5	54.9
10	Main Gate Stores, JCPP	27.08.24	53.3	56.6	55.0	45.6	48.7	47.2
11	Railway Siding Yard, JCPP	27.08.24	50.6	53.8	52.2	42.3	45.5	43.9

Analysis: All the values are within permissible limit.

This is for your information please.

Lab. Assistant (Environment)

Area Manager (Environment)

Copy to: Specialist (OH). TCH

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Colliery
Head, Jamadoba Coal Washery
Sr. Manager, Digwadih Colliery
Sr. Manager, 6 & 7 Pits Colliery

Ref : JMB/ ENV/ LAB/ 05/ 584/24
Dated: 01/10/2024

Re: Ambient Noise Level Report

We wish to inform you that Ambient Noise Level Monitoring was carried out in **JAMADOBA GROUP** in the month of **SEPTEMBER'2024**. The results are as given below:

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 55			**CPCB Standard- 45**		
	Residential Area (Buffer Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	Digwadih 12 No. Colony	22.09.24	42.4	44.7	43.6	34.2	36.5	35.4
2	New Village Colony, Jamadoba	22.09.24	43.3	45.5	44.4	35.4	37.7	36.6
3	6&7 Pits Kalimandir Colony	22.09.24	43.7	45.9	44.8	35.6	37.9	36.8
4	Digwadih 10 No. Colony	22.09.24	42.8	44.6	43.7	34.5	36.8	35.7

S.No	Monitoring Station	Date	Day (06.00 – 22.00 Hrs.)			Night (22.00-06.00 Hrs)		
			CPCB Standard- 75			**CPCB Standard- 70**		
	Industrial Area (Core Zone)		Min.	Max.	Avg.	Min.	Max.	Avg.
1	2 Pit Main Gate Security Post	22.09.24	52.7	55.9	54.3	44.5	47.8	46.2
2	2 Pit Top Kalimandir, Jamadoba	22.09.24	53.3	56.7	55.0	45.1	48.4	46.8
3	Weigh Bridge, Digwadih	22.09.24	49.5	51.9	50.7	41.4	43.6	42.5
4	Canteen Complex, Digwadih	22.09.24	46.6	48.7	47.7	38.3	40.5	39.4
5	Head Office Complex, Digwadih	22.09.24	47.3	50.6	49.0	39.5	42.7	41.1
6	Check Post Security Gate, 6&7 Pits	22.09.24	49.7	52.9	51.3	41.5	44.8	43.2
7	Canteen Complex, 6&7 Pits	22.09.24	46.1	48.4	47.3	38.4	40.6	39.5
8	Fan house- Nitrogen Plant, 6&7 Pits	22.09.24	72.4	73.7	73.1	64.3	65.7	65.0
9	Joota Gate, JCPP	22.09.24	60.1	63.4	61.8	52.6	55.7	54.2
10	Main Gate Stores, JCPP	22.09.24	52.7	55.6	54.2	44.4	47.3	45.9
11	Railway Siding Yard, JCPP	22.09.24	50.3	53.5	51.9	42.5	45.7	44.1

Analysis: All the values are within permissible limit.

This is for your information please.

Lab. Assistant (Environment)

Area Manager (Environment)

Copy to: Specialist (OH). TCH

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager Jamadoba Colliery
Head, Jamadoba Coal Preparation Plant
C.M.O, TCH, Jamadoba.

Ref. No. - JMB / ENV / LAB / 03 / 253 / 2024
Dated - 08 / 05 / 2024

Sub: ETP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **APRIL'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	ETP, TCH- Inlet	25.04.24	12:50 PM	26	8.2	132	978	26.5	260	1.6
2	ETP, TCH- Outlet	25.04.24	12:55 PM	25	7.7	26	732	5.4	72	0.5
3	ETP, Garage- Inlet	25.04.24	01:50 PM	27	8.0	158	910	28.9	236	3.6
4	ETP, Garage- Outlet	25.04.24	01:55 PM	26	7.8	23	742	7.3	84	1.4
5	Final Settling Pond JCPP	25.04.24	10:05 AM	Dry Pond						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

P mahato.
Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager, Jamadoba Colliery
Sr. Manager,Digwadih Colliery
Sr. Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 251 / 2024
Dated - 08/05 / 2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **APRIL'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	25.04.24	09:35 AM	31	7.6	36	740	2.5	64	1.4
2	3 Pit Jamadoba Colliery	25.04.24	09:50 AM	No Discharge						
3	2 Incline Jamadoba Colliery	25.04.24	10:25 AM	No Discharge						
4	6 & 7 Pits Colliery	25.04.24	12:35 PM	32	7.5	14	784	2.1	74	0
5	Digwadih Colliery	25.04.24	11:20 AM	32	7.6	23	1024	2.6	54	0

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

P mahato.
Lab.Assistant (Environment)

Pradeep
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager Jamadoba Colliery
Head, Jamadoba Coal Preparation Plant
Sr. Manager Digwadih Colliery

Ref. No. - JMB / ENV / LAB / 03 / 252 / 2024
Dated - 08/05 / 2024

Sub: STP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **APRIL'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	STP, Jmb. Canteen- Inlet	25.04.24	01:30 PM	27	7.8	106	982	33.1	326	2.8
2	STP, Jmb. Canteen- Outlet	25.04.24	01:35 PM	26	7.4	24	722	6.2	74	0.7
3	STP, JCPP Canteen- Inlet	25.04.24	01:10 PM	27	7.9	122	879	32.9	284	2.3
4	STP, JCPP Canteen- Outlet	25.04.24	01:15 PM	26	7.2	34	687	6.9	54	0.4
5	STP, Railway Colony- Inlet	25.04.24	10:45 AM	27	8.1	144	1036	36.2	310	3.4
6	STP, Railway Colony-Outlet	25.04.24	10:50 AM	26	7.5	28	725	6.4	94	0.8
7	STP, Digwadih 12 No. Officer's colony-Inlet	25.04.24	11:40 AM	26	8.2	136	1024	30.5	320	2.8
8	STP, Digwadih 12 No. Officer's colony- Outlet	25.04.24	11:45 AM	25	7.4	37	684	5.7	86	1.2
9	STP,Digwadih 12 No. Supervisor flat – Inlet	25.04.24	12:05 PM	27	7.8	137	974	34.8	326	3.1
10	STP,Digwadih 12 No. Supervisor flat -Outlet	25.04.24	12:10 PM	26	7.6	18	736	5.2	64	0.9

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

P mahato
Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager Jamadoba Colliery
Head, Jamadoba Coal Preparation Plant
C.M.O, TCH, Jamadoba.

Ref. No. - JMB / ENV / LAB / 03 / 328 / 2024
Dated - 03 / 06 / 2024

Sub: ETP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **MAY'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	ETP, TCH- Inlet	09.05.24	11:00 AM	27	8.5	98	798	23.5	210	1.2
2	ETP, TCH- Outlet	09.05.24	11:05 AM	26	8.3	46	716	6.9	66	0.3
3	ETP, Garage- Inlet	09.05.24	01:30 PM	26	8.4	106	890	33.1	310	4.2
4	ETP, Garage- Outlet	09.05.24	01:35 PM	25	8.0	49	814	7.8	112	1.8
5	Final Settling Pond JCPP	09.05.24	12:05 PM	Dry Pond						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager, Jamadoba Colliery
Sr. Manager,Digwadih Colliery
Sr. Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 326 / 2024
Dated - 03 /06 / 2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **MAY'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	09.05.24	12:55 PM	No Discharge						
2	3 Pit Jamadoba Colliery	09.05.24	12:20 PM	31	7.8	36	862	2.1	66	0
3	2 Incline Jamadoba Colliery	09.05.24	11:50 AM	No Discharge						
4	6 & 7 Pits Colliery	09.05.24	10:45 AM	32	7.2	21	927	2.5	80	0.4
5	Digwadih Colliery	09.05.24	10:20 AM	30	8.0	17	958	2.4	58	0

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

P.mahato.

Lab.Assistant (Environment)

Pradeep

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager Jamadoba Colliery
Head, Jamadoba Coal Preparation Plant
Sr. Manager Digwadih Colliery

Ref. No. - JMB / ENV / LAB / 03 / 327 / 2024
Dated - 03 / 06 / 2024

Sub: STP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **MAY'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	STP, Jmb. Canteen- Inlet	09.05.24	01:10 PM	26	7.5	84	893	31.9	316	2.5
2	STP, Jmb. Canteen- Outlet	09.05.24	01:15 PM	25	7.3	22	819	7.3	82	0.8
3	STP, JCPP Canteen- Inlet	09.05.24	12:35 PM	26	8.2	118	1058	33.4	290	2.7
4	STP, JCPP Canteen- Outlet	09.05.24	12:40 PM	25	7.8	19	922	5.2	72	0.9
5	STP, Railway Colony- Inlet	09.05.24	11:25 AM	27	8.3	129	1122	35.7	320	3.6
6	STP, Railway Colony-Outlet	09.05.24	11:30 AM	26	8.0	25	1048	7.8	73	1.0
7	STP, Digwadih 12 No. Officer's colony-Inlet	09.05.24	09:40 AM	27	8.4	158	987	34.9	317	3.2
8	STP, Digwadih 12 No. Officer's colony- Outlet	09.05.24	09:45 AM	26	7.9	24	747	6.8	64	1.6
9	STP,Digwadih 12 No. Supervisor flat – Inlet	09.05.24	10:00 AM	26	8.1	148	1428	35.2	348	3.9
10	STP,Digwadih 12 No. Supervisor flat -Outlet	09.05.24	10:05 AM	25	7.8	46	1216	8.4	110	2.1

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Well Water Quality Report of Jamadoba Group for the month of MAY'2024

JAMADOBA GROUP

S.No	Date	Location	Time	Depth in meter	pH	Electrical Conductivity µS/m
1	10.05.24	Purnadih (Jorapokhar)	11:45 AM	6.38	7.3	1226
2	10.05.24	Bhowra 13 No	12:20 PM	3.85	7.1	1017
3	10.05.24	Mohalbani Basti	02:30 PM	8.24	7.2	1085
4	10.05.24	Digwadih 10 No F & J	01:10 PM	5.10	7.3	1560
5	10.05.24	Kalimela Shivmandir	11:00 AM	11.00	7.2	846
6	10.05.24	Kalimela Kalimandir	11:15 AM	11.15	7.0	1395
7	10.05.24	Lower Dungari	10:35 AM	10.35	7.1	840
8	10.05.24	Upper Dungari	10:10 AM	10.10	7.5	878
9	10.05.24	Pattia Basti	09:30 AM	9.30	7.3	987
10	10.05.24	Kenduadih Basti	09:50 AM	9.50	7.4	1028
11	10.05.24	Jorapokhar Kushtand	11:25 AM	11.25	7.6	1583
12	10.05.24	6&7 Pits (Ayodhya Nagri)	02:00 PM	2.00	7.2	984
13	10.05.24	Jorapokhar Basti Chhattand	01:30 PM	2.30	7.3	1412
14	10.05.24	Jorapokhar Babu Basa	12:05 PM	12.00	7.1	1240

P.mahato.
Lab.Assistant (Environment)

Pradeep
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager Jamadoba Colliery
Head, Jamadoba Coal Preparation Plant
C.M.O, TCH, Jamadoba.

Ref. No. - JMB / ENV / LAB / 03 / 393 / 2024
Dated - 03 / 07 / 2024

Sub: ETP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **JUNE'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	ETP, TCH- Inlet	28.06.24	12:25 PM	27	8.1	126	983	26.5	246	1.5
2	ETP, TCH- Outlet	28.06.24	12:30 PM	26	7.8	42	859	4.6	68	0.6
3	ETP, Garage- Inlet	28.06.24	01:25 PM	26	8.3	164	996	30.7	324	4.6
4	ETP, Garage- Outlet	28.06.24	01:30 PM	25	7.6	38	768	7.4	102	1.6
5	Final Settling Pond JCPP	28.06.24	10:15 AM	Dry Pond						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

P mahato.
Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager, Jamadoba Colliery
Sr. Manager,Digwadih Colliery
Sr. Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 391 / 2024
Dated - 03 / 07 / 2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **JUNE'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	28.06.24	09:30 AM	No Discharge						
2	3 Pit Jamadoba Colliery	28.06.24	09:45 AM	31	7.6	29	784	2.3	72	0
3	2 Incline Jamadoba Colliery	28.06.24	10:05 AM	No Discharge						
4	6 & 7 Pits Colliery	28.06.24	12:10 PM	30	7.7	17	932	2.9	54	0
5	Digwadih Colliery	28.06.24	11:45 AM	No Discharge						

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager Jamadoba Colliery
Head, Jamadoba Coal Preparation Plant
Sr. Manager Digwadih Colliery

Ref. No. - JMB / ENV / LAB / 03 / 392 / 2024
Dated - 03/ 07 / 2024

Sub: STP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **JUNE'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	STP, Jmb. Canteen- Inlet	28.06.24	01:10 PM	27	8.0	123	1028	34.8	320	2.9
2	STP, Jmb. Canteen- Outlet	28.06.24	01:15 PM	26	7.5	41	836	5.9	68	0.3
3	STP, JCPP Canteen- Inlet	28.06.24	12:50 PM	27	8.3	157	1027	32.1	260	3.1
4	STP, JCPP Canteen- Outlet	28.06.24	12:55 PM	26	8.0	35	832	4.8	84	0.5
5	STP, Railway Colony- Inlet	28.06.24	10:30 AM	27	8.4	164	1137	35.8	336	2.9
6	STP, Railway Colony-Outlet	28.06.24	10:35 AM	26	8.1	54	987	6.2	76	1.3
7	STP, Digwadih 12 No. Officer's colony-Inlet	28.06.24	11:05 AM	26	8.3	131	996	33.7	332	3.4
8	STP, Digwadih 12 No. Officer's colony- Outlet	28.06.24	11:10 AM	25	7.8	46	892	5.2	96	1.8
9	STP,Digwadih 12 No. Supervisor flat – Inlet	28.06.24	11:25 AM	27	8.2	146	1219	36.8	284	3.4
10	STP,Digwadih 12 No. Supervisor flat -Outlet	28.06.24	11:30 AM	26	7.9	52	1124	8.9	117	1.5

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Coal Preparation Plant
Sr. Manager Jamadoba Colliery
C.M.O, TCH, Jamadoba

Ref. No. - JMB / ENV / LAB / 03 / 455 / 2024
Dated - 01 / 08 / 2024

Sub: ETP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **JULY'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	ETP, TCH- Inlet	26.07.24	12:20 PM	28	8.4	148	836	28.3	256	1.7
2	ETP, TCH- Outlet	26.07.24	12:25 PM	27	8.2	25	707	4.9	76	0.2
3	ETP, Garage- Inlet	26.07.24	01:20 PM	28	8.5	137	816	29.1	316	4.5
4	ETP, Garage- Outlet	26.07.24	01:25 PM	27	8.2	16	774	6.7	97	1.8
5	Final Settling Pond JCPP	26.07.24	10:05 AM	Dry Pond						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

Lab.Assistant (Environment)

12.08.24
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager, Jamadoba Colliery
Sr. Manager,Digwadih Colliery
Sr. Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 453 / 2024
Dated - 01 / 08 / 2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **JULY'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	26.07.24	09:20 AM	30	7.4	29	790	2.9	67	0.8
2	3 Pit Jamadoba Colliery	26.07.24	09:35 AM	30	7.5	28	816	2.6	58	0
3	2 Incline Jamadoba Colliery	26.07.24	09:50 AM	No Discharge						
4	6 & 7 Pits Colliery	26.07.24	12:05 PM	32	7.8	21	926	3.1	68	0
5	Digwadih Colliery	26.07.24	10:50 AM	No Discharge						

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

Lab.Assistant (Environment)

12.08.24
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Coal Preparation Plant
Sr. Manager Jamadoba Colliery
Sr. Manager Digwadih Colliery

Ref. No. - JMB / ENV / LAB / 03 / 454 / 2024
Dated - 01 / 08 / 2024

Sub: STP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **JULY'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	STP, Jmb. Canteen- Inlet	26.07.24	01:05 PM	28	7.8	117	936	35.1	332	2.4
2	STP, Jmb. Canteen- Outlet	26.07.24	01:10 PM	27	7.2	23	814	5.4	76	0.5
3	STP, JCPP Canteen- Inlet	26.07.24	12:45 PM	27	8.2	154	934	31.7	294	2.8
4	STP, JCPP Canteen- Outlet	26.07.24	12:50 PM	26	7.9	27	846	6.4	54	0.3
5	STP, Railway Colony- Inlet	26.07.24	10:20 AM	28	8.1	179	1145	34.9	342	2.1
6	STP, Railway Colony-Outlet	26.07.24	10:25 AM	27	7.8	22	958	5.8	84	1.5
7	STP, Digwadih 12 No. Officer's colony-Inlet	26.07.24	11:40 AM	27	8.0	191	1025	31.2	310	2.3
8	STP, Digwadih 12 No. Officer's colony- Outlet	26.07.24	11:45 AM	26	7.7	18	986	4.7	68	1.0
9	STP,Digwadih 12 No. Supervisor flat – Inlet	26.07.24	11:20 AM	27	8.3	119	1226	35.3	346	3.5
10	STP,Digwadih 12 No. Supervisor flat -Outlet	26.07.24	11:25 AM	26	7.8	63	919	7.1	99	1.6

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

Prakash.
Lab.Assistant (Environment)

12.08.24
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Coal Preparation Plant
Sr. Manager Jamadoba Colliery
C.M.O, TCH, Jamadoba

Ref. No. - JMB / ENV / LAB / 03 / 527 / 2024
Dated - 02/09 / 2024

Sub: ETP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **AUGUST'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	ETP, TCH- Inlet	27.08.24	10:45 AM	28	8.3	129	725	27.4	264	1.6
2	ETP, TCH- Outlet	27.08.24	10:50 AM	27	8.0	38	624	5.1	84	0.4
3	ETP, Garage- Inlet	27.08.24	01:20 PM	27	8.4	152	967	28.1	254	4.1
4	ETP, Garage- Outlet	27.08.24	01:25 PM	26	8.1	28	846	8.4	116	1.2
5	Final Settling Pond JCPP	27.08.24	09;50 AM	Dry Pond						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Sr. Manager, Jamadoba Colliery
Sr. Manager,Digwadih Colliery
Sr. Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 525 / 2024
Dated - 02/ 09 / 2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **AUGUST'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	27.08.24	09:20 AM	No Discharge						
2	3 Pit Jamadoba Colliery	27.08.24	09:35 AM	31	7.7	24	742	2.4	68	0
3	2 Incline Jamadoba Colliery	27.08.24	10:05 AM	No Discharge						
4	6 & 7 Pits Colliery	27.08.24	11:10 AM	30	7.5	32	872	2.7	72	0
5	Digwadih Colliery	27.08.24	12:15 PM	No Discharge						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

P mahato.
Lab.Assistant (Environment)

Pradeep
Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Coal Preparation Plant
Sr. Manager Jamadoba Colliery
Sr. Manager Digwadih Colliery

Ref. No. - JMB / ENV / LAB / 03 / 526 / 2024
Dated - 02/09/2024

Sub: STP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **AUGUST'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	STP, Jmb. Canteen- Inlet	27.08.24	01:05 PM	27	7.6	110	879	32.9	290	2.8
2	STP, Jmb. Canteen- Outlet	27.08.24	01:10 PM	26	7.3	20	592	7.2	48	0.9
3	STP, JCPP Canteen- Inlet	27.08.24	12:40 PM	27	8.0	137	910	33.7	316	3.6
4	STP, JCPP Canteen- Outlet	27.08.24	12:45 PM	26	7.5	29	676	6.1	76	0.8
5	STP, Railway Colony- Inlet	27.08.24	10:25 AM	28	8.2	158	1039	36.1	315	2.3
6	STP, Railway Colony-Outlet	27.08.24	10:30 AM	26	7.9	34	932	7.5	69	1.0
7	STP, Digwadih 12 No. Officer's colony-Inlet	27.08.24	11:30 AM	27	7.9	117	1064	30.1	260	2.5
8	STP, Digwadih 12 No. Officer's colony- Outlet	27.08.24	11:35 AM	26	7.4	47	954	4.9	46	0.6
9	STP,Digwadih 12 No. Supervisor flat – Inlet	27.08.24	11:50 AM	28	7.8	168	987	34.6	327	2.9
10	STP,Digwadih 12 No. Supervisor flat -Outlet	27.08.24	11:55 AM	27	7.5	30	796	5.7	94	0.7

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

Pmahato

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Well Water Quality Report of Jamadoba Group for the month of AUGUST'2024

JAMADOBA GROUP

S.No	Date	Location	Time	Depth in meter	pH	Electrical Conductivity µS/m
1	27.08.24	Purnadih (Jorapokhar)	04:10 PM	3.92	7.2	1232
2	27.08.24	Bhowra 13 No	03:45 PM	1.04	7.0	1022
3	27.08.24	Mohalbani Basti	12:30 PM	1.16	7.4	1036
4	27.08.24	Digwadih 10 No F & J	02:35 PM	1.37	7.2	1816
5	27.08.24	Kalimela Shivmandir	06:15 PM	0.84	7.0	898
6	27.08.24	Kalimela Kalimandir	06:00 PM	2.04	7.2	1350
7	27.08.24	Lower Dungari	05:45 PM	1.82	7.5	610
8	27.08.24	Upper Dungari	05:25 PM	0.95	7.3	746
9	27.08.24	Pattia Basti	05:10 PM	2.98	7.2	872
10	27.08.24	Kenduadih Basti	04:50 PM	0.93	7.0	946
11	27.08.24	Jorapokhar Kushtand	03:20 PM	2.16	7.3	1530
12	27.08.24	6&7 Pits (Ayodhya Nagri)	02:15 PM	1.45	7.4	1161
13	27.08.24	Jorapokhar Basti Chhattand	02:55 PM	0.59	7.2	1397
14	27.08.24	Jorapokhar Babu Basa	04:25 PM	1.02	7.3	1020

P mahato.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Head, Jamadoba Coal Preparation Plant
Area Manager Jamadoba Colliery
C.M.O, TCH, Jamadoba

Ref. No. - JMB / ENV / LAB / 03 / 577 / 2024
Dated - 01 / 10 / 2024

Sub: ETP WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **SEPTEMBER'2024**.The results are as given below:

S. No	Location (Final Discharge Point)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	ETP, TCH- Inlet	22.09.24	12:20 PM	27	8.2	168	736	29.8	284	1.2
2	ETP, TCH- Outlet	22.09.24	12:25 PM	26	7.9	25	632	5.3	72	0.5
3	ETP, Garage- Inlet	22.09.24	01:30 PM	27	8.3	143	935	30.2	310	4.2
4	ETP, Garage- Outlet	22.09.24	01:35 PM	26	8.0	23	834	7.6	106	1.4
5	Final Settling Pond JCPP	22.09.24	10:05 AM	Dry Pond						

All the parameters are within the limit, and you are requested to maintain the same.
This is for your information and necessary action please.

Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Area Manager, Jamadoba Colliery
Area Manager, Digwadih Colliery
Area Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 575 / 2024
Dated - 01/10/2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **SEPTEMBER'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	22.09.24	09:35 AM	30	7.5	18	754	2.6	52	0
2	3 Pit Jamadoba Colliery	22.09.24	09:50 AM	32	7.6	22	810	2.8	76	0.6
3	2 Incline Jamadoba Colliery	22.09.24	10:25 AM	No Discharge						
4	6 & 7 Pits Colliery	22.09.24	12:05 PM	30	7.4	24	867	2.1	84	0.5
5	Digwadih Colliery	22.09.24	11:55 AM	30	7.9	20	1064	2.5	54	0.8

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

P Mahato
Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

TATA STEEL LIMITED
JHARIA DIVISION

Area Manager, Jamadoba Colliery
Area Manager, Digwadih Colliery
Area Manager,6&7 Pits Colliery

Ref. No. - JMB / ENV / LAB / 03 / 575 / 2024
Dated - 01/10/2024

Sub: MINE WATER ANALYSIS REPORT.

We wish to inform you that Trade Effluent Sampling was carried out in **JAMADOBA GROUP** in the month of **SEPTEMBER'2024**.The results are as given below:

S. No	Location (Final Discharge Point) (Mine's Water)	Sampling Date	Sampling Time	Temp	pH	TSS	TDS	BOD	COD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	2100 mg/l	30 mg/l	250 mg/l	10 mg/l
1	2 Pit Jamadoba Colliery	22.09.24	09:35 AM	30	7.5	18	754	2.6	52	0
2	3 Pit Jamadoba Colliery	22.09.24	09:50 AM	32	7.6	22	810	2.8	76	0.6
3	2 Incline Jamadoba Colliery	22.09.24	10:25 AM	No Discharge						
4	6 & 7 Pits Colliery	22.09.24	12:05 PM	30	7.4	24	867	2.1	84	0.5
5	Digwadih Colliery	22.09.24	11:55 AM	30	7.9	20	1064	2.5	54	0.8

All the parameters are within the limit, and you are requested to maintain the same.

This is for your information and necessary action please.

P Mahato
Lab.Assistant (Environment)

Area Manager (Environment)

Annexure- II

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

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Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/24-25/ AAQ/2 Date: 16.05.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 09.05.2024 to 10.05.2024
- Date of Testing : 11.05.2024 to 15.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – OFFICERS COLONY, 12 NO. DIGWADIH				
	Avg. Ambient Temperature	40°C	Avg. Humidity	28%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	75.86	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	43.60	60 µg/m³	
3.	SO_2, µg/m³	17.38	80 µg/m³	
4.	NO_2, µg/m³	26.54	80 µg/m³	
5.	*Ozone*, µg/m³	17.66	180 µg/m³	
6.	NH_3, µg/m³	14.90	400 µg/m³	
7.	CO, mg/m³	0.60	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O.: DOMGARH DHANBAD SINDRI INDUSTRIAL AREA

Technical Manager
Aditi R&D Services, Sindri

Statements :
1. The test report refers only to the particular 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 measurment.
3. This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.

Annexure- II

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Ref. No.: - ARDS/24-25/ AAQ/3 Date: 16.05.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 09.05.2024 to 10.05.2024
- Date of Testing : 11.05.2024 to 15.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – CENTRAL WORKSHOP AREA , JAMADOBA				
	Avg. Ambient Temperature	40^{0}C	Avg. Humidity	28%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m^3	88.46	100 µg/m^3	
2.	Particulate Matter ($PM_{2.5}$), µg/m^3	52.64	60 µg/m^3	
3.	SO_2, µg/m^3	22.82	80 µg/m^3	
4.	NO_2, µg/m^3	32.64	80 µg/m^3	
5.	*Ozone*, µg/m^3	17.48	180 µg/m^3	
6.	NH_3, µg/m^3	17.60	400 µg/m^3	
7.	CO, mg/m^3	0.93	4 mg/m^3	
8.	Pb, µg/m^3	BDL	1 µg/m^3	
9.	As, ng/m^3	BDL	6 ng/m^3	
10.	Ni, ng/m^3	BDL	20 ng/m^3	
11.	Benzene, µg/m^3	BDL	5 µg/m^3	
12.	Benzoapyrene ng/m^3	BDL	1 ng/m^3	

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

Technical Manager
Aditi R&D Services, Sindri

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Annexure- II

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Ref. No.: - ARDS/24-25/ AAQ/4 Date: 16.05.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 09.05.2024 To 10.05.2024
- Date of Testing : 11.05.2024 To 15.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – TATA CENTRAL HOSPITAL				
	Avg. Ambient Temperature	40°C	Avg. Humidity	28%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	70.08	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	40.57	60 µg/m³	
3.	SO_2, µg/m³	16.18	80 µg/m³	
4.	NO_2, µg/m³	25.80	80 µg/m³	
5.	*Ozone*, µg/m³	16.32	180 µg/m³	
6.	NH_3, µg/m³	17.57	400 µg/m³	
7.	CO, mg/m³	0.88	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O. DOMGARH DHANBAD SINDRI INDUSTRIAL AREA

Technical Manager
Aditi R&D Services, Sindri

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Annexure- II

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Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/24-25/AAQ/1 Date: 16.05.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 09.05.2024 To 10.05.2024
- Date of Testing : 11.05.2024 To 15.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – 6 & 7 PITS COLLIERY OFFICE				
	Avg. Ambient Temperature	40°C	Avg. Humidity	28%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	89.38	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	52.81	60 µg/m³	
3.	SO_2, µg/m³	23.15	80 µg/m³	
4.	NO_2, µg/m³	28.46	80 µg/m³	
5.	*Ozone*, µg/m³	17.83	180 µg/m³	
6.	NH_3, µg/m³	14.88	400 µg/m³	
7.	CO, mg/m³	0.82	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O. DOMGARH DHANBAD SINDRI INDUSTRIAL AREA

Technical Manager
Aditi R&D Services, Sindri

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Ref. No.: - ARDS/24-25/MINER./1 Date: 14.05.2024

TEST REPORT OF MINERALOGICAL COMPOSITION OF PARTICULATE MATTER

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 10.05.2024
- Date of Testing : 11.05.2024 To 13.05.2024

TEST RESULTS

Sl No.	Particulars	Mineralogical Composition (%)			
		SiO_2	FeO	Al_2O_3	CaO
1.	Central Workshop Area, Jamadoba	1.88	0.10	1.36	2.5
2.	Officer's Colony, 12 No Digwadih	2.08	0.12	1.39	2.63

Sr. Chemist
Aditi R&D Services

Technical Manager
Aditi R&D Services, Sindri

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Ref. No.: - ARDS/24-25/SW/1 Date: 17.05.2024

TEST REPORT OF SURFACE WATER

- Name of the industry : M/S TATA STEEL, JAMADOBA,
  TATA STEEL LIMITED
  JAMADOBA GROUP PLANT,
  DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Sample Code : 1. Damodar River Up Stream
  2. Damodar River Down Stream
- Date of Sample Collection: 10.05.2024
- Date of Testing : 11.05.2024 To 16.05.2024
- Test : pH, TDS, Turbidity, DO, BOD, Cl, F, SO_4

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE		Limit as per IS 2296 Class - C	Test Method
		Damodar River Up Stream	Damodar River Dn Stream		
1.	pH	7.8	8.0	6.5 -8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	410	432	1500	IS-3025 (P-16): 1984
3.	Turbidity, NTU	2.0	2.4	-	IS-3025 (P-10):1984
4.	Dissolved Oxygen, mg/l	4.2	4.0	4.0 (Min)	IS-3025 (P-38):1989
5.	Bio chemical Oxygen Demand, mg/l	1.6	2.0	3.0	IS-3025 (P-44):1994
6.	Chloride as Cl, mg/l	36.8	38.8	600 (Max.)	IS-3025 (P-32):1988
7.	Fluoride as F, mg/l	0.59	0.62	1.5	IS-3025 (P-60):2008
8.	Sulphate as SO_4, mg/l	57.3	60.1	400	IS-3025 (P-24):1986

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TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT			
ARDS/24-25/NOISE/1 Date:11.05.2024	M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED, JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)			
Date of Monitoring				
09.05.2024 To 10.05.2024	Avg. Ambient Temperature (°C)	Average Humidity (%)	Weather Condition	Status of the plant
Work Order 4700092573/932 Dt. 20.07.2021	40	28	Clear	Running

MONITORING RESULTS

Sl. No	Place of Monitoring	Day Time (6 AM to 10 PM) Avg. dB(A)			Night Time (10 PM to 6 AM) Avg. dB(A)			Noise level (Ambient standard) for Industrial Area as per CPCB Noise Pollution (Regulation and Control) (Amendment) Rules , 2000 notified vide S.O. 1046(E) Dt. 22.11.2020 Limit in dB(A) Leq	
								Day Time	Night Time
LOCATION	JAMADOBA GROUP	MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Industrial Area	Industrial Area
1.	Central Workshop Area	68.4	53.4	65.52	59.6	42.4	56.67	75	70
2.	6 & 7 Pits Colliery Office	67.6	51.2	64.69	56.6	40.2	53.69		
								Residential Area	Residential Area
3.	Officer Colony 12 No. Digwadih	54.2	46.8	51.92	46.2	42.4	44.7	65	55
								Silence Zone	Silence Zone
4.	Tata Central Hospital	49.4	44.2	47.54	38.4	30.6	36.06	50	40

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Ref. No.: - ARDS/24-25/MWD/1 Date: 16.05.2024

TEST REPORT OF MINE WATER DISCHARGE

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Sample Code : 1. 2 Pit Jamadoba Colliery
  2. 3 Pit Jamadoba Colliery
  3. 6 & 7 Pits Colliery
  4. Digwadih Colliery
- Date of Sample Collection: 09.05.2024 To 10.05.2024
- Date of Testing : 11.05.2024 To 15.05.2024
- Test : pH, TDS, TSS, BOD, COD, OIL & GREASE.

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE				Limit as per IS-2296 Class B (For Bathing)	Test Method
		2 Pit Jamadoba Colliery	3 Pit Jamadoba Colliery	6 & 7 Pits Colliery	Digwadih Colliery		
1.	pH,	8.2	7.8	8.3	8.0	6.5-8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	865	860	980	907	-	IS-3025 (P-16): 1984
3.	Total Suspended Solids, mg/l	38	40	42	35	-	IS-3025(P-17) : 1984
4.	Bio chemical Oxygen Demand, mg/l	1.8	2.0	2.6	2.8	3	IS-3025 (P-44):1994
5.	Chemical Oxygen Demand, mg/l	66	66	80	80	-	IS-3025 (P-58):2006
6.	Oil & Grease, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	-	IS-3025 (P-39):2021

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Ref. No.: - ARDS/24-25/STP/1 Date: 16.05.2024

TEST REPORT OF SEWAGE

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Sample Code : 1. STP Outlet- Railway Colony
  2. STP Outlet -Digwadih 12 No Officers Colony
  3. STP Outlet -Digwadih 12 No. Supervisor flat
  4. STP Outlet- Jmb. Canteen
  5. STP Outlet- JCPP Canteen
- Date of Sample Collection: 09.05.2024 To 10.05.2024
- Date of Testing : 10.05.2024 To 15.05.2024
- Test : pH, TDS, TSS, BOD, COD, OIL & GREASE, and Fecal Coliform.

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE					As per MoEF&CC Notification dated 13th Oct. 2017 for, Sewage Treatment Plant	Test Method
		STP Outlet Railway Colony	STP Outlet Digwadih 12 No Officers Colony	STP Outlet Digwadih 12 No. Supervisor flat	STP Outlet Jmb. Canteen	STP Outlet- JCPP Canteen		
1.	pH,	8.5	8.3	7.9	7.4	8.0	6.5-9.0	IS-3025(P-11):1983
2.	Total Dissolved Solids, mg/l	1170	892	1415	1020	1105	-	IS-3025(P-16):1984
3.	Total Suspended Solids, mg/l	54	46	48	39	40	100	IS-3025(P-17):1984
4.	Bio chemical Oxygen Demand, mg/l	6.6	8.4	9.0	2.4	4.8	30	IS-3025(P-44):1994
5.	Chemical Oxygen Demand, mg/l	88	95	117	44	73	250	IS-3025(P-58):2006
6.	Oil & Grease, mg/l	3.6	2.8	9	0.4	B.D.L	-	IS-3025(P-39):2021
7.	Fecal Coliform (FC) (MPN/100ml)	759	654	600	636	542	<1000 MPN/100ml	IS - 1622

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Ref. No.: - ARDS/24-25/ETP/1 Date: 16.05.2024

TEST REPORT OF EFFLUENT

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
-
- Sample Code : 1. E.T.P. Outlet T.C.H.
  2. E.T.P. Outlet Garage
- Date of Sample Collection: 09.05.2024 To 10.05.2024
- Date of Testing : 10.05.2024 To 15.05.2024
- Test : pH, TDS, TSS, BOD, COD, OIL & GREASE.

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE		General Standard for discharge of Environmental Pollutants , Inland Surface water by the MoEF&C	Test Method
		E.T.P. Outlet T.C.H.	E.T.P. Outlet Garage		
1.	pH,	8.6	8.4	5.5-9.0	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	859	990	-	IS-3025 (P-16): 1984
3.	Total Suspended Solids, mg/l	43	48	100	IS-3025(P-17) : 1984
4.	Bio chemical Oxygen Demand, mg/l	3.0	7.8	30	IS-3025 (P-44):1994
5.	Chemical Oxygen Demand, mg/l	66	102	250	IS-3025 (P-58):2006
6.	Oil & Grease, mg/l	B.D.L	3.1	10	IS-3025 (P-39):2021

Note : BDL - Below Detection Limit

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Ref. No.: - ARDS/24-25/DW/1 Date: 16.05.2024

TEST REPORT OF DRINKING WATER

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Sample Code : 1. Canteen- Jamadoba Colliery
  2. Canteen- Jamadoba Washery
  3. Canteen- Digwadih Colliery
  4. Canteen- 6&7 Pits Colliery
- Date of Sample Collection: 09.05.2024 To 10.05.2024
- Date of Testing : 10.05.2024 To 15.05.2024
- Test :

Colour, Odour, Taste, Turbidity, pH, Total Hardness, Iron, Chloride, Res. Free chlorine, Total Dissolved Solids, Calcium, Copper, Manganese, Sulphate, Nitrate, Fluoride, Phenolic Compound, Mercury, Cadmium, Arsenic, Cyanide, Lead, Zinc, Total Coliform, Total Chromium, Mineral Oil, Alkalinity, Aluminium & Boron.

TEST RESULT

Sl. No	PARAMETERS OF TEST	VALUE				IS as per IS 10500:2012		Test Method
		Canteen-Jamadoba Colliery	Canteen-Jamadoba Washery	Canteen Digwadih Colliery	Canteen-6&7 Pits Colliery	Desirable	Permissible	
1.	Colour, (Hazen Unit)	1	1	1	1	5.00	15.0	IS 3025 (P-4):2021
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS 3025 (P-5):2018
3.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS 3025 (P-7):2017
4.	Turbidity, NTU	NIL	2.0	NIL	NIL	1.0	5.0	IS 3025 (P-10):1984
5.	pH	8.4	8.2	8.2	8.1	6.5-8.5	No. Relax.	IS-3025 (P-11):1983
6.	Total Hardness as $CaCO_3$, mg/l	308	300	304	220	200	600	IS 3025 (P-21):2009
7.	Chloride as Cl, mg/l	71.8	67.88	73.7	27.2	250	1000	IS 3025 (P-32):1988
8.	Res. Free chlorine as Cl_2 mg/l	NIL	NIL	NIL	NIL	0.20	1.0	IS 3025 (P-26):2021
9.	Total Dissolved Solids, mg/l	580	584	605	310	500	2000	IS 3025 (P-16):1984
10.	Calcium as $CaCO_3$, mg/l	67.2	60.8	72	44.8	75	200	IS 3025 (P-40):1991
11	Copper as Cu, mg/l	B.D.L.	B.D.L.	B.D.L.	B.D.L.	0.05	1.5	IS 3025 (P-42):1992

Continued on Page 2

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Sl. No.	PARAMETERS OF TEST	VALUE				IS as per IS 10500:1991		Test Method
		Canteen-Jamadoba Colliery	Canteen Jamadoba Washery	Canteen Digwadih Colliery	Canteen - 6&7 Pits Colliery	Desirable	Permissible	
12.	Manganese as Mn, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.10	0.30	IS 3025 (P-59):2006
13.	Sulphate as SO_4, mg/l	50.14	57.6	59.7	37.9	200	400	IS 3025 (P-24):1986
14.	Nitrate as NO_3, mg/l	4.6	6.2	4.2	3.7	45	No. Relax	IS 3025 (P-34):1988
15.	Fluoride as F, mg/l	0.40	0.32	0.28	0.35	1.0	1.5	IS 3025 (P-60):2008
16.	Phenolic Compound as (C_6H_5OH) mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.001	0.002	IS 3025 (P-43):1992
17.	Mercury as Hg, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.001	No. Relax	IS 3025 (P-48):1994
18.	Cadmium as Cd, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.003	No. Relax	IS 3025 (P-41):1992
19.	Arsenic as As, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.01	No. Relax	IS 3025 (P-37):1988
20.	Cyanide as CN, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.05	No. Relax	IS 3025 (P-27):1986
21.	Lead as Pb, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.01	No. Relax	IS 3025 (P-47):1994
22.	Zinc as Zn, mg/l,	0.18	0.22	0.20	0.12	5	15	IS 3025 (P-42):1992
23.	Total Coliform, No./100ml	Absent	Absent	Absent	Absent	Absent	Absent	IS 3025 (P-49):1994
24.	Total Chromium as Cr, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.05	No. Relax	IS 3025 (P-52):2003
25.	Mineral Oil, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.5	No. Relax	IS 3025 (P-39):1989
26.	Alkalinity as $CaCO_3$, mg/l,	499.2	489.6	518.4	196.8	200	600	IS 3025 (P-23):1983
27.	Aluminium as Al, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.03	0.2	IS 3025 (P-55):2003
28.	Boron as B, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.5	1.0	IS 3025 (P-57):2005

NOTE: BDL - Below Detection Limit

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Ref. No.: - ARDS/23-24/GW/1 Date: 17.05.2024

TEST REPORT OF GROUND WATER

- Name of the industry : M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Sample Code :
  1. Purnadih (Jorapokhar)
  2. Digwadih 10 No F & J
  3. Kenduadih Basti
  4. Upper Dungari
  5. Kalimela Kalimandir
  6. 6&7 Pits (Ayodhya Nagri)
- Date of Sample Collection : 10.05.2024
- Date of Testing : 11.05.2024 To 16.05.2024
- Test : Colour, Odour, Taste, Turbidity, pH, Total Hardness, Iron, Chloride, Res. Free chlorine, Total Dissolved Solids, Calcium, Copper, Manganese, Sulphate, Nitrate, Fluoride, Phenolic Compound, Mercury, Cadmium, Arsenic, Cyanide, Lead, Zinc, Total Coliform, Hexavalent Chromium, Mineral Oil, Alkalinity, Aluminium & Boron.

TEST RESULT

Sl. No	PARAME-TERS OF TEST	VALUE						IS as per IS 10500:1991		Test Method
		Purnadih (Jorapokhar)	Digwadih 10 No F&J	Kenduadih Basti	Upper Dungari	Kalimela Kalimandir	6&7 Pits (Ayodhya Nagri)	Desir-able	Permi-ssible	
1.	Colour, (Hazen Unit)	2	2	1	1	1	2	5	15	IS 3025 (P-4):2021
2.	Temperature ^{0}C	29	30	30	28	29	29	-	-	-
3.	Electrical Conductivity, µmhos/cm	1140	1107	780	880	950	860	-	-	-
4.	Total Dissolved Solids, mg/l	740	720	508	570	620	560	500	2000	IS 3025(P-16):1984
5.	pH	7.7	7.5	7.7	7.5	7.1	7.9	6.5-8.5	No Relax	IS-3025(P-11):1983
6.	Total Hardness as $CaCO_3$, mg/l	580	472	356	336	304	392	200	600	IS 3025(P-21):2009
7.	Calcium as Ca, mg/l	150.4	161.6	57.6	60.8	56	70.4	75	200	IS 3025(P-40):1991
8.	Magnesium as Mg, mg/l	48.96	16.30	50.88	44.2	39.4	51.8	30	100	IS 3025(P-46):1994
9.	Chloride as Cl, mg/l	133.8	139.60	64	67.88	147.4	62.1	250	1000	IS 3025(P-32):1988
10.	Fluoride as F, mg/l	0.49	0.30	0.56	0.62	0.60	0.45	1.0	1.5	IS 3025(P-60):2008

Continued on Page -2

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Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

Sl. No.	PARAMETERS OF TEST	VALUE						IS as per IS 10500:1991		Test Method
		Purnadih (Jorapokhar)	Digwadih 10 No F&J	Kenduadih Basti	Upper Dungari	Kalimela Kalimandir	6&7 Pits (Ayodhya Nagri)	Desir-able	Permis-sible	
11	Sulphate as SO_4, mg/l	52.8	63.6	65.2	62.8	59.98	49.98	200	400	IS 3025(P-24):1986
12.	Nitrate as NO_3, mg/l	9.6	9.2	9.7	8.3	11.9	9.0	45	No. Relax	IS 3025(P-34):1988
13.	Alkalinity as $CaCO_3$, mg/l,	456	427.2	345.6	441.6	374.4	432	200	600	IS 3025(P-23):1983
14.	Lead as Pb, mg/l	B.D.L	B.D.L	B.D.L	B.D.L.	BD.L	BDL	0.01	No. Relax	IS 3025(P-47):1994
15.	Zinc as Zn, mg/l,	0.28	0.18	0.20	0.22	0.32	0.24	5	15	IS 3025(P-42):1992
16.	Iron a Fe, mg/l	0.2	0.24	0.29	0.28	0.26	0.14	1.0	No. Relax	IS 3025(P-53):2003
17.	Copper as Cu, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	BDL	BDL	0.05	1.5	IS3025 (P-42):1992
18.	Mercury as Hg, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	BDL	BDL	0.001	No. Relax	IS 3025(P-48):1994
19.	Cadmium as Cd, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	BDL	BDL	0.003	No. Relax	IS 3025(P-41):1992
20.	Nickel as Ni, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	BDL	B.D.L	0.02	No. Relax	IS 3025(P-37):1992
21.	Arsenic as As, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	0.01	No. Relax	IS 3025(P-37):1988
22.	Cyanide as CN, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	0.05	No. Relax	IS 3025(P-27):1986
23.	Total Chromium as Cr, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	0.05	No. Relax	IS 3025(P-52):2003

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O. DOMGARH DHANBAD SINDRI INDUSTRIAL AREA

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Aditi R&D Services, Sindri

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Ref. No.: - ARDS/24-25/AAQ/1 **Date: 14.08.2024**

TEST REPORT OF AMBIENT AIR QUALITY

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Date of Sample Collection** : **07/08/2024 To 08/08/2024**
- **Date of Testing** : **10/08/2024 To 13/08/2024**
- **Test Procedure** : **As per IS-5182**

TEST RESULTS

LOCATION – 6 & 7 PITS COLLIERY OFFICE				
	Avg. Ambient Temperature	32°C	Avg. Humidity	75%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	76.72	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	44.61	60 µg/m³	
3.	SO_2, µg/m³	17.13	80 µg/m³	
4.	NO_2, µg/m³	25.66	80 µg/m³	
5.	*Ozone*, µg/m³	15.24	180 µg/m³	
6.	NH_3, µg/m³	14.10	400 µg/m³	
7.	CO, mg/m³	0.77	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

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Ref. No.: - ARDS/24-25/ AAQ/2 **Date: 14.08.2024**

TEST REPORT OF AMBIENT AIR QUALITY

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Date of Sample Collection** : **08.08.2024 to 09.08.2024**
- **Date of Testing** : **10.08.2024 to 13.08.2024**
- **Test Procedure** : **As per IS-5182**

TEST RESULTS

LOCATION – OFFICERS COLONY, 12 NO. DIGWADIH				
	Avg. Ambient Temperature	32°C	Avg. Humidity	75%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	70.35	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	39.28	60 µg/m³	
3.	SO_2, µg/m³	18.14	80 µg/m³	
4.	NO_2, µg/m³	29.13	80 µg/m³	
5.	*Ozone*, µg/m³	16.65	180 µg/m³	
6.	NH_3, µg/m³	14.10	400 µg/m³	
7.	CO, mg/m³	0.40	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

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Ref. No.: - ARDS/24-25/ AAQ/3 **Date: 14.08.2024**

TEST REPORT OF AMBIENT AIR QUALITY

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- **Work Order Ref. NO.** : **4700126557/932 Date:- 29/05/2024**
- **Date of Sample Collection** : **08.08.2024 to 09.08.2024**
- **Date of Testing** : **10.08.2024 to 13.08.2024**
- **Test Procedure** : **As per IS-5182**

TEST RESULTS

LOCATION – CENTRAL WORKSHOP AREA , JAMADOBA				
	Avg. Ambient Temperature	32°C	Avg. Humidity	75%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	76.48	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	50.14	60 µg/m³	
3.	SO_2, µg/m³	14.90	80 µg/m³	
4.	NO_2, µg/m³	23.25	80 µg/m³	
5.	*Ozone*, µg/m³	16.38	180 µg/m³	
6.	NH_3, µg/m³	14.76	400 µg/m³	
7.	CO, mg/m³	0.81	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

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Ref. No.: - ARDS/24-25/ AAQ/4 **Date: 14.08.2024**

TEST REPORT OF AMBIENT AIR QUALITY

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Date of Sample Collection** : **07.08.2024 To 08.08.2024**
- **Date of Testing** : **10.08.2024 To 13.08.2024**
- **Test Procedure** : **As per IS-5182**

TEST RESULTS

LOCATION – TATA CENTRAL HOSPITAL

	Avg. Ambient Temperature	32°C	Avg. Humidity	75%
Sl No.	Particulars	Value	NAAQ - CPCB STANDARD	
1.	Particulate Matter (PM_{10}), µg/m³	64.06	100 µg/m³	
2.	Particulate Matter ($PM_{2.5}$), µg/m³	36.38	60 µg/m³	
3.	SO_2, µg/m³	15.92	80 µg/m³	
4.	NO_2, µg/m³	23.07	80 µg/m³	
5.	*Ozone*, µg/m³	14.36	180 µg/m³	
6.	NH_3, µg/m³	13.98	400 µg/m³	
7.	CO, mg/m³	0.76	4 mg/m³	
8.	Pb, µg/m³	BDL	1 µg/m³	
9.	As, ng/m³	BDL	6 ng/m³	
10.	Ni, ng/m³	BDL	20 ng/m³	
11.	Benzene, µg/m³	BDL	5 µg/m³	
12.	Benzoapyrene ng/m³	BDL	1 ng/m³	

NOTE: BDL - Below Detection Limit

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TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING

Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT			
ARDS/24-25/NOISE/1Date: 14.08.2024	M/S TATA STEEL, JAMADOBA,			
Date of Monitoring	TATA STEEL LIMITED, JAMADOBA GROUP PLANT,			
	DIST. - DHANBAD (JHARKHAND)			
07.08.2024 To 09.08.2024	Avg. Ambient Temperature (°C)	Average Humidity (%)	Weather Condition	Status of the plant
Work Order 4700126557/932 Date:- 29/05/2024	32	75	Clear	Running

MONITORING RESULTS

Sl. No	Place of Monitoring	Day Time (6 AM to 10 PM) Avg. dB(A)			Night Time (10 PM to 6 AM) Avg. dB(A)			Noise level (Ambient standard) for Industrial Area as per CPCB Noise Pollution (Regulation and Control) (Amendment) Rules , 2000 notified vide S.O. 1046(E) Dt. 22.11.2020 Limit in dB(A) Leq	
								Day Time	Night Time
LOCATION	JAMADOBA GROUP	MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Industrial Area	Industrial Area
1.	Central Workshop Area	70.4	60.8	67.84	58.4	47.3	55.71	75	70
2.	6 & 7 Pits Colliery Office	68.7	55.2	65.88	56.8	46.5	54.18		
								Residential Area	Residential Area
3.	Officer Colony 12 No. Digwadih	63.9	50.6	61.09	51.2	40.8	48.57	65	55
								Silence Zone	Silence Zone
4.	Tata Central Hospital	50.5	46.7	49.00	39.6	36.4	38.29	50	40

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Ref. No.: - ARDS/24-25/MINER./1 **Date: 14.08.2024**

TEST REPORT OF MINERALOGICAL COMPOSITION OF PARTICULATE MATTER

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.** : **4700126557/932 Date:- 29/05/2024**
- **Date of Sample Collection** : **09.08.2024**
- **Date of Testing** : **12.08.2024 To 14.08.2024**

TEST RESULTS

Sl No.	Particulars	Mineralogical Composition (%)			
		SiO_2	FeO	Al_2O_3	CaO
1.	6 & 7 pits colliery office	1.98	0.14	1.38	2.68
2.	Tata Central Hospital	2.16	0.18	1.34	2.84

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Ref. No.: - ARDS/24-25/SW/1 **Date: 17.08.2024**

TEST REPORT OF SURFACE WATER

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA,**
  TATA STEEL LIMITED
  JAMADOBA GROUP PLANT,
  DIST. - DHANBAD (JHARKHAND)
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Sample Code** : **1. Damodar River Up Stream**
  2. Damodar River Down Stream
- **Date of Sample Collection:** **09.08.2024**
- **Date of Testing** : **10 08.2024 To 16.08.2024**
- **Test** : **pH, TDS, Turbidity, DO, BOD, Cl, F, SO_4**

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE		Limit as per IS 2296 Class - C	Test Method
		Damodar River Up Stream	Damodar River Dn Stream		
1.	pH	7.6	7.6	6.5 -8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	397	431	1500	IS-3025 (P-16): 1984
3.	Turbidity, NTU	5	5	-	IS-3025 (P-10):1984
4.	Dissolved Oxygen, mg/l	4.8	4.9	4.0 (Min)	IS-3025 (P-38):1989
5.	Bio chemical Oxygen Demand, mg/l	1.5	3.0	3.0	IS-3025 (P-44):1994
6.	Chloride as Cl, mg/l	26	22.0	600 (Max.)	IS-3025 (P-32):1988
7.	Fluoride as F, mg/l	0.5	0.5	1.5	IS-3025 (P-60):2008
8.	Sulphate as SO_4, mg/l	250	215	400	IS-3025 (P-24):1986

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Ref. No.: - ARDS/24-25/MWD/1 **Date: 17.08.2024**

TEST REPORT OF MINE WATER DISCHARGE

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Sample Code** : **1. 2 Pit Jamadoba Colliery**
  2. 3 Pit Jamadoba Colliery
  3. 6 & 7 Pits Colliery
  4. Digwadih Colliery
- **Date of Sample Collection:** **07.08.2024 To 08.08.2024**
- **Date of Testing** : **10.08.2024 To 16.08.2024**
- **Test** : **pH, TDS, TSS, BOD, COD, OIL & GREASE.**

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE				Limit as per IS-2296 Class B (For Bathing)	Test Method
		2 Pit Jamadoba Colliery	3 Pit Jamadoba Colliery	6 & 7 Pits Colliery	Digwadih Colliery		
1.	pH,	8.2	8.3	7.9	8.2	6.5-8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	790	770	649	698	-	IS-3025 (P-16): 1984
3.	Total Suspended Solids, mg/l	30.0	28	24	26	-	IS-3025(P-17) : 1984
4.	Bio chemical Oxygen Demand, mg/l	2.3	3.0	2.8	3.0	3	IS-3025 (P-44):1994
5.	Chemical Oxygen Demand, mg/l	122	49	91	79	-	IS-3025 (P-58):2006
6.	Oil & Grease, mg/l	0.8	0.3	0.2	0.2	-	IS-3025 (P-39):2021

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Annexure- II

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,
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Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/24-25/STP/1 **Date: 17.08.2024**

TEST REPORT OF SEWAGE

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Sample Code** : **1. STP Outlet- Railway Colony**
  2. STP Outlet -Digwadih 12 No Officers Colony
  3. STP Outlet -Digwadih 12 No. Supervisor flat
  4. STP Outlet- Jmb. Canteen
  5. STP Outlet- JCPP Canteen
- **Date of Sample Collection:** **07.08.2024 To 09.08.2024**
- **Date of Testing** : **10.08.2024 To 16.08.2024**
- **Test** : **pH, TDS, TSS, BOD, COD, OIL & GREASE, and Fecal Coliform.**

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE					As per MoEF&CC Notification dated 13th Oct. 2017 for Sewage Treatment Plant	Test Method
		STP Outlet Railway Colony	STP Outlet Digwadih 12 No Officers Colony	STP Outlet Digwadih 12 No. Supervisor flat	STP Outlet Jmb. Canteen	STP Outlet- JCPP Canteen		
1.	pH,	7.9	7.5	7.4	7.3	7.5	6.5-9.0	IS-3025(P-11):1983
2.	Total Dissolved Solids, mg/l	939.0	952	791	592	547	-	IS-3025(P-16):1984
3.	Total Suspended Solids, mg/l	40.0	28.0	30.0	35.0	38.0	100	IS-3025(P-17):1984
4.	Bio chemical Oxygen Demand, mg/l	9.0	4.2	3.5	8.0	7.0	30	IS-3025(P-44):1994
5.	Chemical Oxygen Demand, mg/l	54.7	36.5	24.3	48.6	42.6	250	IS-3025(P-58):2006
6.	Oil & Grease, mg/l	1.0	0.8	0.6	0.8	0.9	-	IS-3025(P-39):2021
7.	Fecal Coliform (FC) (MPN/100ml)	580	460	450	560	470	<1000 MPN/100ml	IS - 1622

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O.- DOMGARH DHANBAD

Technical Manager
Aditi R&D Services, Sindri

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Ref. No.: - ARDS/24-25/ETP/1 **Date: 17.08.2024**

TEST REPORT OF EFFLUENT

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Sample Code** : **1. E.T.P. Outlet T.C.H.**
  2. E.T.P. Outlet Garage
- **Date of Sample Collection:** **07.08.2024 To 08.08.2024**
- **Date of Testing** : **10.08.2024 To 16.08.2024**
- **Test** : **pH, TDS, TSS, BOD, COD, OIL & GREASE.**

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE		General Standard for discharge of Environmental Pollutants , Inland Surface water by the MoEF&C	Test Method
		E.T.P. Outlet T.C.H.	E.T.P. Outlet Garage		
1.	pH,	8.4	8.3	5.5-9.0	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	589.0	842.0	-	IS-3025 (P-16): 1984
3.	Total Suspended Solids, mg/l	22.0	30.0	100	IS-3025(P-17) : 1984
4.	Bio chemical Oxygen Demand, mg/l	3.0	18.0	30	IS-3025 (P-44):1994
5.	Chemical Oxygen Demand, mg/l	12.2	139.8	250	IS-3025 (P-58):2006
6.	Oil & Grease, mg/l	0.4	1.2	10	IS-3025 (P-39):2021

Note : BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O.- DOMGARH DHANBAD

Technical Manager
Aditi R&D Services, Sindri

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Ref. No.: - ARDS/24-25/DW/1 **Date: 17.08.2024**

TEST REPORT OF DRINKING WATER

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.:** : **4700126557/932 Date:- 29/05/2024**
- **Sample Code** : **1. Canteen- Jamadoba Colliery**
  2. Canteen- Jamadoba Washery
  3. Canteen- Digwadih Colliery
  4. Canteen- 6&7 Pits Colliery
- **Date of Sample Collection:** **07.08.2024 To 09.08.2024**
- **Date of Testing** : **10.08.2024 To 16.08.2024**
- **Test** :

Colour, Odour, Taste, Turbidity, pH, Total Hardness, Iron, Chloride, Res. Free chlorine, Total Dissolved Solids, Calcium, Copper, Manganese, Sulphate, Nitrate, Fluoride, Phenolic Compound, Mercury, Cadmium, Arsenic, Cyanide, Lead, Zinc, Total Coliform, Total Chromium, Mineral Oil, Alkalinity, Aluminium & Boron.

TEST RESULT

Sl. No	PARAMETERS OF TEST	VALUE				IS as per IS 10500:2012		Test Method
		Canteen-Jamadoba Colliery	Canteen-Jamadoba Washery	Canteen Digwadih Colliery	Canteen-6&7 Pits Colliery	Desirable	Permissible	
1.	Colour, (Hazen Unit)	1	1	1	1	5.00	15.0	IS 3025 (P-4):2021
2.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS 3025 (P-5):2018
3.	Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS 3025 (P-7):2017
4.	Turbidity, NTU	1	1	1	1	1.0	5.0	IS 3025 (P-10):1984
5.	pH	7.7	7.6	7.6	7.5	6.5-8.5	No. Relax.	IS-3025 (P-11):1983
6.	Total Hardness as $CaCO_3$, mg/l	400	450	445	180	200	600	IS 3025 (P-21):2009
7.	Chloride as Cl, mg/l	82.5	74.8	85	25	250	1000	IS 3025 (P-32):1988
8.	Res. Free chlorine as Cl_2 mg/l	N.T.	N.T.	N.T.	N.T.	0.20	1.0	IS 3025 (P-26):2021
9.	Total Dissolved Solids, mg/l	770	760	750	246	500	2000	IS 3025 (P-16):1984
10.	Calcium as $CaCO_3$, mg/l	80	105	85	55	75	200	IS 3025 (P-40):1991
11	Copper as Cu, mg/l	BDL	BDL	BDL	BDL	0.05	1.5	IS 3025 (P-42):1992

Continued on Page 2

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Sl. No.	PARAMETERS OF TEST	VALUE				IS as per IS 10500:1991		Test Method
		Canteen-Jamadoba Colliery	Canteen Jamadoba Washery	Canteen Digwadih Colliery	Canteen - 6&7 Pits Colliery	Desirable	Permissible	
12.	Manganese as Mn, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.10	0.30	IS 3025 (P-59):2006
13.	Sulphate as SO_4, mg/l	86.0	68.0	85.0	27.6	200	400	IS 3025 (P-24):1986
14.	Nitrate as NO_3, mg/l	5.2	5.8	5.4	4.6	45	No. Relax	IS 3025 (P-34):1988
15.	Fluoride as F, mg/l	0.6	0.6	0.3	0.4	1.0	1.5	IS 3025 (P-60):2008
16.	Phenolic Compound as (C6H5OH) mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.001	0.002	IS 3025 (P-43):1992
17.	Mercury as Hg, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.001	No. Relax	IS 3025 (P-48):1994
18.	Cadmium as Cd, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.003	No. Relax	IS 3025 (P-41):1992
19.	Arsenic as As, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.01	No. Relax	IS 3025 (P-37):1988
20.	Cyanide as CN, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.05	No. Relax	IS 3025 (P-27):1986
21.	Lead as Pb, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.01	No. Relax	IS 3025 (P-47):1994
22.	Zinc as Zn, mg/l,	2.8	2.2	1.8	2.0	5	15	IS 3025 (P-42):1992
23.	Total Coliform, No./100ml	Absent	Absent	Absent	Absent	Absent	Absent	IS 3025 (P-49):1994
24.	Total Chromium as Cr, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.05	No. Relax	IS 3025 (P-52):2003
25.	Mineral Oil, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.5	No. Relax	IS 3025 (P-39):1989
26.	Alkalinity as $CaCO_3$, mg/l,	494.5	500.0	473	107.5	200	600	IS 3025 (P-23):1983
27.	Aluminium as Al, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.03	0.2	IS 3025 (P-55):2003
28.	Boron as B, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	0.5	1.0	IS 3025 (P-57):2005

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O.- DOMGARH DHANBAD

Technical Manager
Aditi R&D Services, Sindri

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Ref. No.: - ARDS/23-24/GW/1 **Date: 17.08.2024**

TEST REPORT OF GROUND WATER

- **Name of the industry** : **M/S TATA STEEL, JAMADOBA, TATA STEEL LIMITED JAMADOBA GROUP PLANT, DIST. - DHANBAD (JHARKHAND)**
- **Work Order Ref. NO.** : **4700126557/932 Date:- 29/05/2024**
- **Sample Code** : **1. Jorapokhar Kustand**
  2. Bhowra 13 No.
  3. Mohalbani Basti
  4. Lower Dungari
  5. Jamadoba 3 No.
- **Date of Sample Collection** : **08.08.2024 to 09.08.2024**
- **Date of Testing** : **10.08.2024 To 16.08.2024**
- **Test** : **Colour, Odour, Taste, Turbidity, pH, Total Hardness, Iron, Chloride, Res. Free chlorine, Total Dissolved Solids, Calcium, Copper, Manganese, Sulphate, Nitrate, Fluoride, Phenolic Compound, Mercury, Cadmium, Arsenic, Cyanide, Lead, Zinc, Total Coliform, Chromium, Mineral Oil, Alkalinity, Aluminium & Boron.**

TEST RESULT

Sl. No	PARAME-TERS OF TEST	VALUE					IS as per IS 10500:1991		Test Method
		Jorapokhar Kustand	Bhowra 13 No.	Mohalbani Basti	Lower Dungari	Jamadoba 3 No.	Desir-able	Permi-ssible	
1.	Colour, (Hazen Unit)	2	4	4	3	2	5	15	IS 3025 (P-4):2021
2.	Temperature ^{0}C	27	27	27	27	27	-	-	-
3.	Electrical Conductivity, µmhos/cm	1530	1340	1000	570	960	-	-	-
4.	Total Dissolved Solids, mg/l	858	745	555	320	537	500	2000	IS 3025(P-16):1984
5.	pH	7.4	7.5	7.5	7.6	7.8	6.5-8.5	No Relax	IS-3025(P-11):1983
6.	Total Hardness as $CaCO_3$, mg/l	552	550	572	229	452	200	600	IS 3025(P-21):2009
7.	Calcium as Ca, mg/l	112	140	120	40	112	75	200	IS 3025(P-40):1991
8.	Magnesium as Mg, mg/l	67.9	50.0	68	32.1	43	30	100	IS 3025(P-46):1994
9.	Chloride as Cl, mg/l	150	120	287.4	38	86	250	1000	IS 3025(P-32):1988
10.	Fluoride as F, mg/l	0.8	0.8	0.8	0.4	0.3	1.0	1.5	IS 3025(P-60):2008

Continued on Page -2

ADITI R&D SERVICES P.O.- DOMGARH DHANBAD

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Sl. No.	PARAMETERS OF TEST	VALUE					IS as per IS 10500:1991		Test Method
		Jorapokhar Kustand	Bhowra 13 No.	Mohalbani Basti	Lower Dungari	Jamadoba 3 No.	Desir-able	Permis-sible	
11	Sulphate as SO_4, mg/l	85.0	125.0	180.0	65	60	200	400	IS 3025(P-24):1986
12.	Nitrate as NO_3, mg/l	4.8	5.2	5.4	4.9	5.2	45	No. Relax	IS 3025(P-34):1988
13.	Alkalinity as $CaCO_3$, mg/l,	182.75	331.75	548.3	139.75	190.4	200	600	IS 3025(P-23):1983
14.	Lead as Pb, mg/l	B.D.L	B.D.L	B.D.L	B.D.L.	B.D.L.	0.01	No. Relax	IS 3025(P-47):1994
15.	Zinc as Zn, mg/l,	2.2	2.0	2.3	2.5	2.4	5	15	IS 3025(P-42):1992
16.	Iron a Fe, mg/l	0.6	0.8	0.7	0.5	0.8	1.0	No. Relax	IS 3025(P-53):2003
17.	Copper as Cu, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.05	1.5	IS3025 (P-42):1992
18.	Mercury as Hg, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.001	No. Relax	IS 3025(P-48):1994
19.	Cadmium as Cd, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.003	No. Relax	IS 3025(P-41):1992
20.	Nickel as Ni, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.02	No. Relax	IS 3025(P-37):1992
21.	Arsenic as As, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.01	No. Relax	IS 3025(P-37):1988
22.	Cyanide as CN, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.05	No. Relax	IS 3025(P-27):1986
23.	Total Chromium as Cr, mg/l	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L.	0.05	No. Relax	IS 3025(P-52):2003

NOTE: BDL - Below Detection Limit

Sr. Chemist
Aditi R&D Services

ADITI R&D SERVICES P.O.- DOMGARH DHANBAD

Technical Manager
Aditi R&D Services, Sindri

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TATA STEEL

TATA

ENVIRONMENTAL POLICY

Tata Steel's environmental responsibilities are driven by our commitment to preserve the environment and are integral to the way we do business.

1. We are committed to deal proactively with Climate Change issue by efficient use of natural resources & energy; reducing and preventing pollution; promoting waste avoidance and recycling measures; and product stewardship.
   - We shall identify, assess and manage our environment impact.
   - We shall regularly monitor, review and report publicly our environmental performance.
   - We shall develop & rehabilitate abandoned sites through afforestation and landscaping and shall protect and preserve the biodiversity in the areas of our operations.
   - We shall enhance awareness, skill and competence of our employees and contractors so as to enable them to demonstrate their involvement, responsibility and accountability for sound environmental performance.
2. We are committed to continual improvement in our environmental performance.
   - We shall set objective-targets, develop, implement and maintain management standards and systems, and go beyond compliance of the relevant industry standards, legal and other requirements.
3. We will truly succeed when we sustain our environmental achievement and are valued by the communities in which we work.

Date : November 1, 2017

T V Narendran
CEO & Managing Director

ANNEXURE-III

ANNEXURE-IV

TATA STEEL

FROM THE PRESS

GM (J) ☐ Chief (HR/IR) ☐ _____ ☐ _____ ☐

Publication DAINIK BHASKAR, DHANBAD Date 11-10-13

TATA

TATA STEEL

सूचना

जन साधारण को सूचित किया जाता है कि भारत सरकार, वन एवं पर्यावरण मंत्रालय के पत्रांक संख्या– J -11015/372/2010-IA.II(M) डिगवाडीह कोलियरी (0.38 मिलियन टन प्रति वर्ष से 0.6 मिलियन टन प्रति वर्ष, विस्तारीकरण परियोजना) मेसर्स टाटा स्टील लिमिटेड, डिगवाडीह, जिला–धनबाद को पर्यावरण स्वीकृति प्रदान की गई है। जिसकी प्रतिलिपि क्षेत्रीय कार्यालय, झारखंड राज्य प्रदूषण नियंत्रण परिषद्, धनबाद में उपलब्ध है तथा भारत सरकार, वन एवं पर्यावरण मंत्रालय के इंटरनेट साइट :– http://envfor.nic.in में भी देखी जा सकती है।

महाप्रबंधक (झरिया)
टाटा स्टील, जामाडोबा (धनबाद)

CORPORATE AFFAIRS & COMMUNICATIONS
JHARIA DIVISION

TATA STEEL

FROM THE PRESS

GM (J) ☐ Chief (HR/IR) ☐ _____ ☐ _____ ☐

Publication PRABHAT KHABAR, DHANBAD Date 11-10-13

TATA

TATA STEEL

सूचना

जन साधारण को सूचित किया जाता है कि भारत सरकार, वन एवं पर्यावरण मंत्रालय के पत्रांक संख्या– J -11015/ 372/2010-IA.II(M) डिगवाडीह कोलियरी (0.38 मिलियन टन प्रति वर्ष से 0.6 मिलियन टन प्रति वर्ष, विस्तारीकरण परियोजना) मेसर्स टाटा स्टील लिमिटेड, डिगवाडीह, जिला–धनबाद को पर्यावरण स्वीकृति प्रदान की गई है। जिसकी प्रतिलिपि क्षेत्रीय कार्यालय, झारखंड राज्य प्रदूषण नियंत्रण परिषद्, धनबाद में उपलब्ध है तथा भारत सरकार, वन एवं पर्यावरण मंत्रालय के इंटरनेट साइट :– http://envfor.nic.in में भी देखी जा सकती है।

महाप्रबंधक (झरिया)
टाटा स्टील, जामाडोबा (धनबाद)

TATA STEEL

FROM THE PRESS

GM (J) ☐ Chief (HR/IR) ☐ _____ ☐ _____ ☐

Publication HINDUSTAN, DHANBAD Date 11-10-13

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TATA STEEL

सूचना

जन साधारण को सूचित किया जाता है कि भारत सरकार, वन एवं पर्यावरण मंत्रालय के पत्रांक संख्या– J -11015/ 372/2010-IA.II(M) डिगवाडीह कोलियरी (0.38 मिलियन टन प्रति वर्ष से 0.6 मिलियन टन प्रति वर्ष, विस्तारीकरण परियोजना) मेसर्स टाटा स्टील लिमिटेड, डिगवाडीह, जिला–धनबाद को पर्यावरण स्वीकृति प्रदान की गई है। जिसकी प्रतिलिपि क्षेत्रीय कार्यालय, झारखंड राज्य प्रदूषण नियंत्रण परिषद्, धनबाद में उपलब्ध है तथा भारत सरकार, वन एवं पर्यावरण मंत्रालय के इंटरनेट साइट :– http://envfor.nic.in में भी देखी जा सकती है।

महाप्रबंधक (झरिया)
टाटा स्टील, जामाडोबा (धनबाद)

CORPORATE AFFAIRS & COMMUNICATIONS
JHARIA DIVISION

TATA STEEL

FROM THE PRESS

GM (J) ☐ Chief (HR/IR) ☐ _____ ☐ _____ ☐

Publication DAINIK JAGRAN, DHANBAD Date 11-10-13

TATA

TATA STEEL

सूचना

जन साधारण को सूचित किया जाता है कि भारत सरकार, वन एवं पर्यावरण मंत्रालय के पत्रांक संख्या– J -11015/ 372/2010-IA.II(M) डिगवाडीह कोलियरी (0.38 मिलियन टन प्रति वर्ष से 0.6 मिलियन टन प्रति वर्ष, विस्तारीकरण परियोजना) मेसर्स टाटा स्टील लिमिटेड, डिगवाडीह, जिला–धनबाद को पर्यावरण स्वीकृति प्रदान की गई है। जिसकी प्रतिलिपि क्षेत्रीय कार्यालय, झारखंड राज्य प्रदूषण नियंत्रण परिषद, धनबाद में उपलब्ध है तथा भारत सरकार, वन एवं पर्यावरण मंत्रालय के इंटरनेट साइट :– http://envfor.nic.in में भी देखी जा सकती है।

महाप्रबंधक (झरिया)
टाटा स्टील, जामाडोबा (धनबाद)

Municipal Commissioner,
Dhanbad.

Ref No.: JMB/ENV/DIG/37/ 805 /2018

September 17 , 2018

Sub: Submission of copy of Environmental Clearance granted to units of M/s Tata Steel Limited

Dear Sir,

Please find enclosed the letter of Environmental Clearance (EC) granted by MoEFCC to various units of Tata Steel Limited, Jharia Division, Dhanbad as per the following details-

1. Digwadih Colliery (for expansion from 0.38 MTPA to 0.6 MTPA in ML area 314.57 ha), dist. Dhanbad, Jharkhand.
2. 6 & 7 Pits Colliery (for expansion from 0.28 MTPA to 0.6 MTPA in ML area 168.12 ha), dist. Dhanbad, Jharkhand.
3. Jamadoba Coal Washery (for expansion from 1 MTPA to 2 MTPA in 7 Ha area), dist. Dhanbad, Jharkhand.

The copy of EC letter and its compliance is also uploaded in website (http://www.tatasteel.com/sustainability/environment-compliance-reports/) for your kind perusal.

Thanking You,

Yours faithfully,

Head, Planning
Jharia Division