



**The Deputy Director General of Forests (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/MSBSL/61/ 7/14/2024
November 27th, 2024

Ref.: Environmental Clearance letter No.-J-11015/162/2008-IA.II (M), Dated-19th January 2012.

**SUB: Half Yearly Compliance Status Report of Environment Clearance conditions issued
by MoEFCC, New Delhi to Mahal Saharjuri Bagula Sand Lease, 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-11015/162/2008-IA.II (M), Dated-19th January 2012 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/MIN/7568/2008
Compliance ID	111271779
Compliance Number(For Tracking)	EC/M/COMPLIANCE/111271779/2024
Reporting Year	2024
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	30-11-2024
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.

**Half Yearly Compliance Report
2024
01 Dec(01 Apr - 30 Sep)**

Acknowledgement

Proposal Name	Mahal, Saharjuri, Bagula Sand Lease Mining Project of M/s Tata Steel Limited located in Village(s) Lagla and Mahal, District Bokaro, Jharkhand		
Name of Entity / Corporate Office	Tata Steel Ltd.		
Village(s)	N/A		
District	BOKARO		
Proposal No.	IA/JH/MIN/7568/2008	Category	Non-Coal Mining
Plot / Survey / Khasra No.	N/A	Sub-District	N/A
State	JHARKHAND	Entity's PAN	*****2803M
MoEF File No.	J-11015/162/2008-IA.II(M)	Entity name as per PAN	UTSAV KASHYAP

Compliance Reporting Details

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

Details of Production and Project Area

Name of Entity / Corporate Office Tata Steel Ltd.

	Project Area as per EC Granted	Actual Project Area in Possession
Private	0	0
Revenue Land	0	0
Forest	0	0
Others	17.40	17.40
Total	17.4	17.4

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Sand	Million Tons per Annum (MTPA)	N/A	0.1	0	

Conditions		
Specific Conditions		
Sr.No.	Condition Type	Condition Details
1	Statutory compliance	The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board, and effectively implement all the conditions stipulated therein.
PPs Submission: Complied The Consent to Establish has been granted by JSPCB vide letter no. JSPCB/RO/DHN/CTO-9250363/2021/36 dated 25.03.2021. The current CTO is valid till 31.03.2026. All the conditions as stipulated in the consent are being complied with.		Date: 11/11/2024
2	Statutory compliance	The project proponent shall comply with section 3 of the Mines Act.
PPs Submission: Complied It is being complied.		Date: 11/11/2024
3	Statutory compliance	The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.
PPs Submission: Complied 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. The environment management cell directly reports to General Manager and it is reviewed on weekly basis. We have an online system to monitor the statutory requirements and compliance in time. This is reviewed by Board of Directors at companies level.		Date: 11/11/2024
4	MISCELLANEOUS	Sand collection shall be done at the middle/ main stream and not at the bank of the river to avoid any change of the river course due to the project.
PPs Submission: Complied Sand excavation is done by leaving 1/5th of the width of the river intact for maintaining the embankment. It will be ensured that no change in the river course takes place.		Date: 11/11/2024
5	AIR QUALITY MONITORING AND PRESERVATION	Particulate level (PM2.5) shall be monitored regularly and the result placed in the public domain.
PPs Submission: Complied Monitoring of PM2.5 has been carried out in this period. The report is given as Annexure-I.		Date: 29/11/2024
6	GREENBELT	The project proponent shall identify the degraded area within the mine lease and undertake plantation/afforestation in the area identified by planting the native species.

<p>PPs Submission: Complied</p> <p>The mine lease area is a riverbed. Hence, we approach the villagers and assist them in planting the native species as well as fruit plants in the villages. Some of the native species are Pipal, Ber, Jamun, Alostromia, Palash, Karanj, Kadamb etc.</p>		<p>Date: 11/11/2024</p>
7	<p>WATER QUALITY MONITORING AND PRESERVATION</p>	<p>The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite of water (surface water and groundwater), if any, required for the project.</p>
<p>PPs Submission: Complied</p> <p>No water is required for the operation of project. Drinking water required by the workers is arranged by the company.</p>		<p>Date: 11/11/2024</p>
8	<p>MISCELLANEOUS</p>	<p>Appropriate mitigative measures shall be taken to prevent pollution of the river in consultation with the State Pollution Control Board. It shall be ensured that there is no leakage of oil and grease in the river from the vehicles used for transportation.</p>
<p>PPs Submission: Complied</p> <p>Adequate monitoring of the health of the vehicles used for transportation of sand is ensured to avoid any oil and grease leakage. Higher capacity trucks have been deployed. Without valid fitness certificates and PUC, the vehicles are not allowed to ply and it is regularly checked.</p>		<p>Date: 11/11/2024</p>
9	<p>AIR QUALITY MONITORING AND PRESERVATION</p>	<p>Vehicular emissions shall be kept under control and regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.</p>
<p>PPs Submission: Complied</p> <p>The vehicles used are regularly checked and maintained. Only vehicles having PUC certificates can ply. Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded. This is monitored whenever vehicles enter premises at weighbridge gate.</p>		<p>Date: 11/11/2024</p>
10	<p>AIR QUALITY MONITORING AND PRESERVATION</p>	<p>No drilling and blasting operation shall be carried out.</p>
<p>PPs Submission: Complied</p> <p>Not applicable as it is a sand mining project.</p>		<p>Date: 11/11/2024</p>
11	<p>AIR QUALITY MONITORING AND PRESERVATION</p>	<p>Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.</p>
<p>PPs Submission: Complied</p> <p>Sand being coarse in nature and having high moisture content during gathering and transportation does not get air borne. Sand stored in the sand yards is transferred to underground voids through surface bunkers in a slurry form. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.</p>		<p>Date: 11/11/2024</p>
12	<p>Human Health Environment</p>	<p>Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.</p>
<p>PPs Submission: Complied</p>		<p>Date:</p>

As per our policy, PME (Periodical Medical Examination) are conducted at regular intervals.		11/11/2024
13	Human Health Environment	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
PPs Submission: Complied The workers are from the neighboring villages and hence new housing facilities are not required.		Date: 11/11/2024
14	Statutory compliance	The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx in the ambient air within the impact zone shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH, Fecal Coliform and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
PPs Submission: Complied The monitoring of the air parameters has been done in this period. There is no use of water for mining operation hence there is no discharge. Details of air analysis are given in Annexure-I. The monitoring reports are regularly uploaded on company website along with half-yearly EC compliance reports.		Date: 29/11/2024
15	WATER QUALITY MONITORING AND PRESERVATION	The project proponent shall undertake adequate safeguard measures during extraction of river bed material and ensure that due to this activity the hydrogeological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area by establishing a network of existing well and installing new piezometers during the mining operation. The periodic monitoring (at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season) shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
PPs Submission: Complied The extraction of sand is done with utmost care of the environment. There is no extraction of water as well as no change in river course involved hence there will be no impact on the hydrogeological regime. The monitoring report of the ground water level and quality is given as Annexure-I.		Date: 29/11/2024
16	AIR QUALITY MONITORING AND PRESERVATION	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out of haul roads. It should be ensured that the Ambient Air Quality

		parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
PPs Submission: Complied It is being complied. Water spraying is done on the transportation roads on regular basis. The ambient air quality is regularly monitored and analyzed by own as well as NABL and JSPCB recognized lab and conform to the prescribed standards. Reports are enclosed as Annexure-I.		Date: 29/11/2024
General Conditions		
Sr.No.	Condition Type	Condition Details
1	Statutory compliance	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and also be sent to the respective Regional Office of the Ministry on Environment and Forests, Bhubaneswar by e-mail.
PPs Submission: Complied The environmental statement for financial year 2023-24 has been submitted to JSPCB on 27th September 2024 vide letter no. JMB/ENV/ESSA/05/563/2024 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.		Date: 11/11/2024
2	Statutory compliance	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and the Collector's Office / Tehsildar's Office for 30 days.
PPs Submission: Complied The copy of clearance letter has been sent to JSPCB office and its compliance report is also submitted to JSPCB.		Date: 11/11/2024
3	Statutory compliance	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.
PPs Submission: Complied It is being complied with.		Date: 11/11/2024
4	Statutory compliance	No change in the calendar plan including excavation, quantum of sand from river bed and waste should be made.
PPs Submission: Complied It is being complied with.		Date: 11/11/2024
5	Statutory compliance	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.
PPs Submission: Complied No rare species are found in the area.		Date: 11/11/2024
6	AIR QUALITY	Atleast four ambient air quality-monitoring stations should be

	MONITORING AND PRESERVATION	established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.
PPs Submission: Complied The monitoring stations have been established and monitoring jobs are being performed regularly. The ambient air quality analysis reports are attached as Annexure-I.		Date: 29/11/2024
7	AIR QUALITY MONITORING AND PRESERVATION	Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM10) and NOx] should be regularly submitted to the Ministry including its regional office at Bhubaneswar and to the State Pollution Control Board/ Central Pollution Control Board once in six months.
PPs Submission: Complied It is being submitted as Annexure-I in this compliance report.		Date: 29/11/2024
8	AIR QUALITY MONITORING AND PRESERVATION	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
PPs Submission: Complied Sand, being coarse in nature and having high moisture content, does not get air borne during gathering and transportation. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.		Date: 11/11/2024
9	Noise Monitoring & Prevention	Measure should be taken for control of noise levels below 85 dBA in work Environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
PPs Submission: Complied Proper PPEs are provided to all the workers.		Date: 11/11/2024
10	WATER QUALITY MONITORING AND PRESERVATION	Industrial waste water (Workshop and Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422f(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and Grease trap should be installed before discharge of Workshop effluents.
PPs Submission: Complied No waste water generation will take place.		Date: 11/11/2024
11	Human Health Environment	Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational Health Surveillance programme of the worker should be undertaken periodically to observe any contraction due to exposure to dust and take corrective measures, if needed
PPs Submission: Complied It will be complied with.		Date: 11/11/2024
12	MISCELLANEOUS	A separate Environmental Management cell with suitable qualified personnel should be set-up under the control of a senior executive,

		who will report directly to the Head of the Organization.
<p>PPs Submission: Complied We have a separate Environmental Management Cell with qualified personnel. The reporting of Environmental Cell is directly to General Manager of the Division.</p>		<p>Date: 11/11/2024</p>
13	MISCELLANEOUS	The funds earmarked for environmental protection measures should be kept in separate A/C and should not be diverted for other purposes. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.
<p>PPs Submission: Complied Expenditure on Environmental Protection measures is monitored separately. It is provided in the Environment Statement every year. The annual expenditure for the financial year 2023-24 is Rs. 0.403 lakhs for after spraying activities on transport road, plantation and environment monitoring.</p>		<p>Date: 11/11/2024</p>
14	Statutory compliance	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
<p>PPs Submission: Complied The CTE and CTO of the project have been granted by JSPCB. The permission for lifting of sand from the river bed has also been granted by District Mining Officer, Bokaro.</p>		<p>Date: 11/11/2024</p>
15	MISCELLANEOUS	The regional office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer (s) of the regional office by furnishing the requisite Data/ information/ Monitoring reports.
<p>PPs Submission: Complied It will be complied with.</p>		<p>Date: 11/11/2024</p>
16	Statutory compliance	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environment clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar , the respective zonal office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.
<p>PPs Submission: Complied It is being complied with. We are submitting the six-monthly compliance reports on PARIVESH portal for April-2024 to September-2024</p>		<p>Date: 13/11/2024</p>
17	MISCELLANEOUS	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, Urban local Body and the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
<p>PPs Submission: Complied</p>		<p>Date:</p>

It has been complied with.		11/11/2024
18	Statutory compliance	The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.
PPs Submission: Complied It has been complied with.		Date: 11/11/2024
Visit Remarks		
Last Site Visit Report Date:		N/A
Additional Remarks:		
<p>Note: This acknowledgement is as per the details submitted by project proponent. In no way is this document to be considered as conclusion on any action on the compliance of the project. This is strictly for the project proponent's reference purpose.</p>		

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

**MAHAL SAHARJURI BAGULA SAND
LEASE**

**(CAPACITY: 0.1 MTPA RIVER BED SAND)
VILLAGE: MAHAL, SAHARJURI & BAGULA, DIST:
BOKARO, JHARKHAND**



**TATA STEEL LIMITED, JHARIA DIVISION
P.O. - JAMADOBA, DIST. - DHANBAD,
STATE- JHARKHAND, PIN CODE – 828112**

**ENVIRONMENTAL CLEARANCE GRANTED VIDE LETTER NO. - J-
11015/162/2008-IA.II(M) DATED- 19.01.2012 ISSUED BY GOVT. OF INDIA,
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW
DELHI.**

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

S. No.	Condition	Compliance Status
Specific Condition		
(i)	The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board, and effectively implement all the conditions stipulated therein.	The Consent to Establish has been granted by JSPCB vide letter no. JSPCB/RO/DHN/CTO-9250363/2021/36 dated 25.03.2021. The current CTO is valid till 31.03.2026. All the conditions as stipulated in the consent are being complied with.
(ii)	The project proponent shall comply with section 3 of the Mines Act.	It is being complied.
(iii)	The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.	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. The environment management cell directly reports to General Manager and it is reviewed on weekly basis. We have an online system to monitor the statutory requirements and compliance in time. This is reviewed by Board of Directors at company's level.
(iv)	Sand collection shall be done at the middle/ main stream and not at the bank of the river to avoid any change of the river course due to the project.	Sand excavation is done by leaving 1/5th of the width of the river intact for maintaining the embankment. It will be ensured that no change in the river course takes place.
(v)	Particulate level (PM2.5) shall be monitored regularly and the result placed in the public domain.	Monitoring of PM2.5 has been carried out in this period. The report is given as Annexure-I .
(vi)	The project proponent shall identify the degraded area within the mine lease and undertake plantation/afforestation in the area identified by planting the native species.	The mine lease area is a riverbed. Hence, we approach the villagers and assist them in planting the native species as well as fruit plants in the villages. Some of the native species are Pipal, Ber, Jamun, Alostromia, Palash, Karanj, Kadamb etc.
(vii)	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water	It is being complied. Water spraying is done on the transportation roads on regular basis. The ambient air quality is regularly monitored and analyzed by own as well as NABL & JSPCB recognized lab and

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

	sprinkling shall be carried out of haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	conform to the prescribed standards. Reports are enclosed as Annexure-I .
(viii)	The project proponent shall undertake adequate safeguard measures during extraction of river bed material and ensure that due to this activity the hydrogeological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area by establishing a network of existing well and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.	The extraction of sand is done with utmost care of the environment. There is no extraction of water as well as no change in river course involved hence there will be no impact on the hydrogeological regime. The monitoring report of the ground water level and quality is given as Annexure-I .
(ix)	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite of water (surface water and groundwater), if any, required for the project.	No water is required for the operation of project. Drinking water required by the workers is arranged by the company.
(x)	Appropriate mitigative measures shall be taken to prevent pollution of the river in consultation with the State Pollution Control Board. It shall be ensured that there is no leakage of oil and grease in the river from the vehicles used for transportation.	Adequate monitoring of the health of the vehicles used for transportation of sand is ensured to avoid any oil & grease leakage. Higher capacity trucks have been deployed. Without valid fitness certificates and PUC, the vehicles are not allowed to ply and it is regularly checked.
(xi)	Vehicular emissions shall be kept under control and regularly monitored. The mineral transportation shall be carried out	The vehicles used are regularly checked and maintained. Only vehicles having PUC certificates can ply. Transportation of sand

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

	through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	is always done via tarpaulin-covered trucks which are optimally loaded. This is monitored whenever vehicles enter premises at weighbridge gate.
(xii)	No drilling and blasting operation shall be carried out.	Not applicable as it is a sand mining project.
(xiii)	Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Sand being coarse in nature and having high moisture content during gathering & transportation does not get air borne. Sand stored in the sand yards is transferred to underground voids through surface bunkers in a slurry form. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.
(xiv)	Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	As per our policy, PME's (Periodical Medical Examination) are conducted at regular intervals.
(xv)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	The workers are from the neighboring villages and hence new housing facilities are not required.
(xvi)	The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx in the ambient air within the impact zone shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH, Fecal Coliform and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	The monitoring of the air parameters has been done in this period. There is no use of water for mining operation hence there is no discharge. Details of air analysis are given in Annexure-I . The monitoring reports are regularly uploaded on company's website along with half-yearly EC compliance reports.

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

B.	GENERAL CONDITIONS	
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.	It is being complied with.
(ii)	No change in the calendar plan including excavation, quantum of sand from river bed and waste should be made.	It is being complied with.
(iii)	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.	No rare species are found in the area.
(iv)	Atleast four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	The monitoring stations have been established and monitoring jobs are being performed regularly. The ambient air quality analysis reports are attached as Annexure-I .
(v)	Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM10) and NOx] should be regularly submitted to the Ministry including its regional office at Bhubaneswar and to the State Pollution Control Board/ Central Pollution Control Board once in six months.	It is being submitted as Annexure-I in this compliance report.
(vi)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Sand, being coarse in nature and having high moisture content, does not get air borne during gathering & transportation. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.
(vii)	Measure should be taken for control of noise levels below 85 dBA in work Environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	Proper PPE's are provided to all the workers.

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

(viii)	Industrial waste water (Workshop and Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422f(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and Grease trap should be installed before discharge of Workshop effluents.	No waste water generation will take place.
(ix)	Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational Health Surveillance programme of the worker should be undertaken periodically to observe any contraction due to exposure to dust and take corrective measures, if needed	It will be complied with.
(x)	A separate Environmental Management cell with suitable qualified personnel should be set-up under the control of a senior executive, who will report directly to the Head of the Organization.	We have a separate Environmental Management Cell with qualified personnel. The reporting of Environmental Cell is directly to General Manager of the Division.
(xi)	The funds earmarked for environmental protection measures should be kept in separate A/C and should not be diverted for other purposes. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.	Expenditure on Environmental Protection measures is monitored separately. It is provided in the Environment Statement every year. The annual expenditure for the financial year 2023-2024 is Rs. 0.403 lakhs for water spraying activities on transport road, plantation and environment monitoring.
(xii)	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	The CTE and CTO of the project have been granted by JSPCB. The permission for lifting of sand from the river bed has also been granted by District Mining Officer, Bokaro.
(xiii)	The regional office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer (s) of the regional office by furnishing the requisite Data/ information/ Monitoring reports.	It will be complied with.
(xiv)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated	It is being complied with. We are submitting the six-monthly compliance

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

	environment clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar , the respective zonal office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.	reports on PARIVESH portal for Apr'24-Sept'24.
(xv)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, Urban local Body and the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	It has been complied with.
(xvi)	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and the Collector's Office / Tehsildar's Office for 30 days.	The copy of clearance letter has been sent to JSPCB office and its compliance report is also submitted to JSPCB.
(xvii)	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and also be sent to the respective Regional Office of the Ministry on Environment and Forests, Bhubaneswar by e-mail.	The environmental statement for financial year 2023-24 has been submitted to JSPCB on 27th September 2024 vide letter no. JMB/ENV/ESSA/05/563/2024 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-mef@gov.in.

Compliance status of Environmental Clearance of Mahal, Saharjuri, Bagula Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/162/2008-IA.II (M) dated January 12, 2012

<p>(xviii)</p>	<p>The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.</p>	<p>It has been complied with.</p>
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Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirdservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

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

Date: 10.05.2024


TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 03.05.2024 To 04.05.2024
- Date of Testing : 06.05.2024 To 09.05.2024
- Test Procedure : As per IS-5182


TEST RESULTS

LOCATION – LAGLA GRAM PANCHYAT				
	Avg. Ambient Temperature	38 ^o C	Avg. Humidity	24%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	61.23	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	35.27	60 µg/m ³	
3.	SO ₂ , µg/m ³	16.46	80 µg/m ³	
4.	NO ₂ , µg/m ³	28.75	80 µg/m ³	
5.	Ozone, µg/m ³	16.15	180 µg/m ³	
6.	NH ₃ , µg/m ³	18.23	400 µg/m ³	
7.	CO, mg/m ³	0.42	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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Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditirmservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

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

Date: 10.05.2024

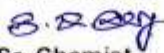
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBA D (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 03.05.2024 To 04.05.2024
- Date of Testing : 06.05.2024 To 09.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION - ICCHAR HIGH SCHOOL				
	Avg. Ambient Temperature	38 ⁰ C	Avg. Humidity	24%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	69.44	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	40.25	60 µg/m ³	
3.	SO ₂ , µg/m ³	19.32	80 µg/m ³	
4.	NO ₂ , µg/m ³	29.88	80 µg/m ³	
5.	Ozone, µg/m ³	15.65	180 µg/m ³	
6.	NH ₃ , µg/m ³	18.36	400 µg/m ³	
7.	CO, mg/m ³	0.46	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


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Aditi R&D Services




Technical Manager
Aditi R&D Services, Sindri

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Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditindservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

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

Date: 10.05.2024

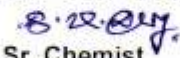
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 03.05.2024 To 04.05.2024
- Date of Testing : 06.05.2024 To 09.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION - SAHARJURI SCHOOL				
	Avg. Ambient Temperature	38 ^o C	Avg. Humidity	24%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	63.97	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	37.37	60 µg/m ³	
3.	SO ₂ , µg/m ³	16.95	80 µg/m ³	
4.	NO ₂ , µg/m ³	25.52	80 µg/m ³	
5.	Ozone, µg/m ³	17.46	180 µg/m ³	
6.	NH ₃ , µg/m ³	15.62	400 µg/m ³	
7.	CO, mg/m ³	0.40	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


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Aditi R&D Services




Technical Manager
Aditi R&D Services, Sindri

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

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

Date: 10.05.2024

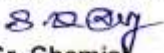
TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 03.05.2024 To 04.05.2024
- Date of Testing : 06.05.2024 To 09.05.2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION - RAILWAY COLONY, BHOJUDIH				
	Avg. Ambient Temperature	38°C	Avg. Humidity	24%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	81.54	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	47.96	60 µg/m ³	
3.	SO ₂ , µg/m ³	22.82	80 µg/m ³	
4.	NO ₂ , µg/m ³	30.12	80 µg/m ³	
5.	Ozone, µg/m ³	15.84	180 µg/m ³	
6.	NH ₃ , µg/m ³	19.63	400 µg/m ³	
7.	CO, mg/m ³	0.52	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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Jharkhand - 828107
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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:06.05.2024	TATA STEEL JHARIA DIVISION			
Date of Monitoring	TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)			
03.05.2024 To 04.05.2024	Avg. Ambient Temperature (°C)	Average Humidity (%)	Weather Condition	Status of the plant
Work Order 4700092573/932 Dt. 20.07.2021	38	24	Clear	Not in operational

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	
		MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Day Time	Night Time
SAND LEASE AREA								Residential Area	Residential Area
1.	Lagla Gram Panchayat	55	47	52.63	48	38	45.4	65.00	55.00
2.	Saharjuri School	52	44	49.63	47	32	44.12		
3.	Ichchar High School	56	40	53.10	44	37	41.78		
4.	Railway Colony, Bhojudih	59	46	56.20	45	32	42.20		

B.R. Singh
Sr. Chemist
Aditi R&D Services

Pratik
Technical Manager
Aditi R&D Services, Sindri



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P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditimservices.com
Phone: 0326-2952377 (O),
Fax: 0326-2952377
Mobile: 09471358492, 09431512608

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


Date: 09.05.2024

TEST REPORT OF MINERALOGICAL COMPOSITION OF PARTICULATE MATTER

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 04.05.2024
- Date of Testing : 06.05.2024 To 08.05.2024

TEST RESULTS

Sl No.	Particulars	Mineralogical Composition (%)			
		SiO ₂	FeO	Al ₂ O ₃	CaO
1.	Lagla Gram Panchayat	1.69	0.04	1.18	2.6
2.	Saharjuri School	1.9	0.10	1.16	2.44


Sr. Chemist
Aditi R&D Services




Technical Manager
Aditi R&D Services, Sindri

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Fax: 0326-2952377
Mobile: 09471358492, 09431512608

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

Date: 10.05.2024

TEST REPORT OF SURFACE WATER

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021
- Sample Code :
 - Gowai River (Up Stream)
 - Gowai River (Dn. Stream)
 - Izri River (Up Stream)
 - Izri River (Dn. Stream)
- Date of Sample Collection : 04.05.2024
- Date of Testing : 06.05.2024 To 09.05.2024
- Test : pH, TDS, Turbidity, DO, BOD, C I, F, SO₄

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE				Limit as per IS 2296 Class - C	Test Method
		Gowai River (Up Stream)	Gowai River (Dn. Stream)	Izri River (Up Stream)	Izri River (Dn. Stream)		
1.	pH	8.2	8.2	7.8	7.9	6.5 - 8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	526	540	645	668	1500 (Max.)	IS-3025 (P-16): 1984
3.	Turbidity, NTU	1.7	2.0	2.4	3.0	-	IS-3025 (P-10): 1984
4.	Dissolved Oxygen, mg/l	5.3	4.7	5.8	5.4	4.0 (Min)	IS-3025 (P-38): 1989
5.	Bio chemical Oxygen Demand, mg/l	1.7	2.1	1.9	2.1	3.0	IS-3025 (P-44): 1994
6.	Chloride as Cl, mg/l	65.9	69.8	168.7	176.5	600 (Max.)	IS-3025 (P-32): 1988
7.	Fluoride as F, mg/l	0.60	0.65	0.56	0.64	1.5	IS-3025 (P-60): 2008
8.	Sulphate as SO ₄ , mg/l	49.3	54	38.1	39.8	400	IS-3025 (P-24): 1986


Sr. Chemist
Aditi R&D Services




Technical Manager
Aditi R&D Services, Sindri

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ADITI R&D SERVICES

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Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 826107
Email ID: sindriadi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

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

Date: 23.08.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. – DHANBA D (JHARKHAND)
- Work Order Ref. NO.: : 4700126557/932 Date:- 29/05/2024
- Date of Sample Collection : 16/08/2024 To 17/08/2024
- Date of Testing : 19/08/2024 To 22/08/2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – ICCHAR HIGH SCHOOL

LOCATION – ICCHAR HIGH SCHOOL			
	Avg. Ambient Temperature	30 ^o C	Avg. Humidity 82%
Sl No.	Particulars	Value	CPCB STANDARD
1.	Particulate Matter (PM ₁₀), µg/m ³	60.47	100 µg/m ³
2.	Particulate Matter (PM _{2.5}), µg/m ³	32.34	60 µg/m ³
3.	SO ₂ , µg/m ³	16.36	80 µg/m ³
4.	NO ₂ , µg/m ³	27.62	80 µg/m ³
5.	Ozone, µg/m ³	15.68	180 µg/m ³
6.	NH ₃ , µg/m ³	14.56	400 µg/m ³
7.	CO, mg/m ³	0.38	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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Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 826107
Email ID: sindriadi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

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

Date: 23.08.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700126557/932 Date:- 29/05/2024
- Date of Sample Collection : 16/08/2024 To 17/08/2024
- Date of Testing : 19/08/2024 To 22/08/2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – LAGLA GRAM PANCHYAT				
	Avg. Ambient Temperature	30 ^o C	Avg. Humidity	82%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	59.60	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	33.45	60 µg/m ³	
3.	SO ₂ , µg/m ³	15.84	80 µg/m ³	
4.	NO ₂ , µg/m ³	27.26	80 µg/m ³	
5.	Ozone, µg/m ³	14.44	180 µg/m ³	
6.	NH ₃ , µg/m ³	15.26	400 µg/m ³	
7.	CO, mg/m ³	0.32	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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Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 826107
Email ID: sindriadi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

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

Date: 23.08.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700126557/932 Date:- 29/05/2024
- Date of Sample Collection : 16/08/2024 To 17/08/2024
- Date of Testing : 19/08/2024 To 22/08/2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – SAHARJURI SCHOOL				
	Avg. Ambient Temperature	30 ^o C	Avg. Humidity	82%
SI No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	60.82	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	34.16	60 µg/m ³	
3.	SO ₂ , µg/m ³	15.08	80 µg/m ³	
4.	NO ₂ , µg/m ³	26.32	80 µg/m ³	
5.	Ozone, µg/m ³	14.38	180 µg/m ³	
6.	NH ₃ , µg/m ³	12.98	400 µg/m ³	
7.	CO, mg/m ³	0.28	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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Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 826107
Email ID: sindriadi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

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

Date: 23.08.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700126557/932 Date:- 29/05/2024
- Date of Sample Collection : 16/08/2024 To 17/08/2024
- Date of Testing : 19/08/2024 To 22/08/2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – RAILWAY COLONY , BHOJUDIH				
	Avg. Ambient Temperature	30°C	Avg. Humidity	82%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	76.84	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	43.76	60 µg/m ³	
3.	SO ₂ , µg/m ³	18.48	80 µg/m ³	
4.	NO ₂ , µg/m ³	28.26	80 µg/m ³	
5.	Ozone, µg/m ³	15.12	180 µg/m ³	
6.	NH ₃ , µg/m ³	16.65	400 µg/m ³	
7.	CO, mg/m ³	0.48	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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Ref. No. & Date		NAME AND ADDRESS OF THE CLIENT							
ARDS/24-25/ NOISE/1 Date:23.08.2024		TATA STEEL JHARIA DIVISION							
Date of Monitoring		TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)							
16.08.2024 To 17.08.2024		Avg. Ambient Temperature (°C)		Average Humidity (%)		Weather Condition		Status of the plant	
Work Order 4700126557/932 Date:- 29/05/2024		30		82		Clear		Not in operational	
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	
		MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Residential Area	Residential Area
SAND LEASE AREA									
1.	Lagla Gram Panchayat	56	48	53.63	49	30	46.04	65.00	55.00
2.	Saharjuri School	60	46	57.16	38	32	35.96		
3.	lochar High School	65	42	62.01	38	30	35.63		
4.	Railway Colony, Bhojudih	60	58	59.11	56	40	53.1		
		 Sr. Chemist Aditi R&D Services					 Technical Manager Aditi R&D Services, Sindri		
Statements :									
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Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 826107
Email ID: sindriaditi@gmail.com
Website: aditirndservices.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

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

Date: 23.08.2024

TEST REPORT OF MINERALOGICAL COMPOSITION OF PARTICULATE MATTER

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700126557/932 Date:- 29/05/2024
- Date of Sample Collection : 17.08.2024
- Date of Testing : 19.08.2024 To 22.08.2024

TEST RESULTS

Sl No.	Particulars	Mineralogical Composition (%)			
		SiO ₂	FeO	Al ₂ O ₃	CaO
1.	Icchar High School	1.81	0.03	1.09	2.8
2.	Railway Colony, Bhojudih	1.93	0.11	1.20	2.52

Sr. Chemist
Aditi R&D Services



Technical Manager
Aditi R&D Services, Sindri

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Sindri, Industrial Area,
P.O - Domgarh, Dist - Dhanbad
Jharkhand - 826107
Email ID: sindriadi@gmail.com
Website: aditirnds.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

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

Date: 24.08.2024

TEST REPORT OF SURFACE WATER

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO. : 4700126557/932 Date:- 29/05/2024
- Sample Code :
 1. Gowai River (Up Stream)
 2. Gowai River (Dn. Stream)
 3. Izri River (Up Stream)
 4. Izri River (Dn. Stream)
- Date of Sample Collection : 16.08.2024
- Date of Testing : 19.08.2024 To 23.08.2024
- Test : pH, TDS, Turbidity, DO, BOD, C I, F, SO₄

TEST RESULT

Sl. No.	PARAMETERS OF TEST	VALUE				Limit as per IS 2296 Class - C	Test Method
		Gowai River (Up Stream)	Gowai River (Dn. Stream)	Izri River (Up Stream)	Izri River (Dn. Stream)		
1.	pH	7.8	7.9	8.2	8.0	6.5 - 8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	141	165	160	155	1500 (Max.)	IS-3025 (P-16): 1984
3.	Turbidity, NTU	4	4	3	3	-	IS-3025 (P-10):1984
4.	Dissolved Oxygen, mg/l	5.2	5.2	5.4	5.4	4.0 (Min)	IS-3025 (P-38):1989
5.	Bio chemical Oxygen Demand, mg/l	2.8	2.7	2.1	2.0	3.0	IS-3025 (P-44):1994
6.	Chloride as Cl, mg/l	12	14.0	10.0	14.0	600 (Max.)	IS-3025 (P-32):1988
7.	Fluoride as F, mg/l	0.3	0.3	0.2	0.2	1.5	IS-3025 (P-60):2008
8.	Sulphate as SO ₄ , mg/l	42.0	47.0	22.5	22.5	400	IS-3025 (P-24):1986


Sr. Chemist
Aditi R&D Services




Technical Manager
Aditi R&D Services, Sindri

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Ambient Air Quality Analysis Report

Period- April'24 to June'24

Name of Industry : Mahal Saharjuri Sand Mining Project

No. of sampling points : 4

Sampling Location	Date of Sampling/ Weather Condition		
	April'24	May'24	June'24
Mahal School Near Izri River	18.04.2024/ Clear	21.05.2024/ Clear	27.06.2024/ Clear
Lagla Gram Panchayat	18.04.2024/ Clear	21.05.2024/ Clear	27.06.2024/ Clear
Bagula School	19.04.2024/ Clear	22.05.2024/ Clear	28.06.2024/ Clear
Shahar Juri School	19.04.2024/ Clear	22.05.2024/ Clear	28.06.2024/ Clear

Location	Latitude/ Longitude	Date	PM ₁₀	PM _{2.5}	SO ₂	NO _x
			PM ₁₀ Level : 24 Hourly Limit- 100µg/m ³	PM _{2.5} Level : 24 Hourly Limit-60µg/m ³	SO _x Level: 24 Hourly Limit- 80µg/m ³	NO _x Level: 24 Hourly Limit- 80µg/m ³
Mahal School Near Izri River	23°38'06.1"N / 86°23'41.2" E	18.04.2024	67.5	38.6	16.4	20.4
		21.05.2024	72.4	41.5	15.2	18.7
		27.06.2024	73.5	42.4	17.3	20.6
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	18.04.2024	75.2	42.6	16.2	20.3
		21.05.2024	72.6	41.4	16.5	22.4
		27.06.2024	74.2	43.2	18.5	24.6
Bagula School	23°36'27.3" N/ 86°21'59.7" E	19.04.2024	76.5	42.2	16.8	19.5
		22.05.2024	72.2	43.4	17.5	21.6
		28.06.2024	78.2	42.6	19.6	25.4
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	19.04.2024	72.8	43.4	17.5	21.6
		22.05.2024	73.4	42.6	18.7	22.4
		28.06.2024	77.3	44.8	19.5	23.7
Minimum			67.5	38.6	15.2	18.7
Maximum			77.3	44.8	19.6	25.4
Average			73.74	42.31	17.44	21.77



Area Manager (Environment)

Ambient Air Quality Analysis Report

Period- July'24 to September'24

Name of Industry : Mahal Saharjuri Sand Mining Project

No. of sampling points : 4

Sampling Location	Date of Sampling/ Weather Condition		
	July'24	August'24	September'24
Mahal School Near Izri River	11.07.2024/ Cloudy	28.08.2024/ Clear	23.09.2024/ Cloudy
Lagla Gram Panchayat	11.07.2024/ Cloudy	28.08.2024/ Clear	23.09.2024/ Cloudy
Bagula School	12.07.2024/ Cloudy	29.08.2024/ Cloudy	24.09.2024/ Cloudy
Shahar Juri School	12.07.2024/ Cloudy	29.08.2024/ Cloudy	24.09.2024/ Cloudy

Location	Latitude/ Longitude	Date	PM ₁₀	PM _{2.5}	SO ₂	NO _x
			PM ₁₀ Level: 24 Hourly Limit-100µg/m ³	PM _{2.5} Level: 24 Hourly Limit- 60µg/m ³	SO _x Level: 24 Hourly Limit- 80µg/m ³	NO _x Level: 24 Hourly Limit- 80µg/m ³
Mahal School Near Izri River	23°38'06.1"N / 86°23'41.2" E	11.07.2024	62.4	35.7	15.2	18.2
		28.08.2024	64.5	34.4	13.5	16.5
		23.09.2024	62.7	33.6	12.8	17.4
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	11.07.2024	65.2	35.2	14.3	19.8
		28.08.2024	66.3	33.5	13.5	18.4
		23.09.2024	63.2	34.4	12.8	16.7
Bagula School	23°36'27.3" N/ 86°21'59.7" E	12.07.2024	67.5	35.7	16.7	19.8
		29.08.2024	64.3	34.8	14.2	18.6
		24.09.2024	62.5	35.4	13.5	16.3
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	12.07.2024	64.6	34.6	15.3	21.3
		29.08.2024	65.8	32.4	13.4	18.2
		24.09.2024	63.4	36.5	12.7	17.4
Minimum			62.4	32.4	12.8	16.3
Maximum			67.5	36.5	16.7	21.3
Average			64.37	34.68	13.99	18.22



Area Manager (Environment)

Ground Water Quality Analysis

Ground water level fluctuation in and around Core & Buffer zone area of sand mining lease Pre- Monsoon Season- May'24

S.No	Date	Location	Time	Sample Parameter		
				Depth in meter (m)	pH	Electrical Conductivity, $\mu\text{S/m}$
1	22.05.2024	Prem Singhdih	10:32AM	7.6	7.3	596
2	22.05.2024	Lagla	11:45AM	7.7	7.2	627
3	22.05.2024	Alakdih	11:25AM	7.5	7.4	663
4	22.05.2024	Joradih	12:42PM	7.8	7.0	587
5	22.05.2024	SEB Quarters	12:15PM	7.5	7.2	635
6	22.05.2024	Kargali	02:30PM	7.2	7.3	625
7	22.05.2024	Kumargora	01:55PM	7.4	7.0	610
8	22.05.2024	Bhojudih	01:25PM	7.3	7.2	593
9	22.05.2024	Mahal	12:25PM	7.5	7.1	605
10	22.05.2024	Sudamdih	01:53PM	7.7	7.3	598

Monsoon Season - August'24

S.No	Date	Location	Time	Sample Parameter		
				Depth in meter (m)	pH	Electrical Conductivity, $\mu\text{S/m}$
1	29.08.2024	Prem Singhdih	9:30AM	2.55	7.2	621
2	29.08.2024	Lagla	11:40AM	2.15	7.1	627
3	29.08.2024	Alakdih	11:00AM	2.32	7.1	664
4	29.08.2024	Joradih	01:55PM	2.68	7.3	620
5	29.08.2024	SEB Quarters	11:25AM	2.42	7.2	632
6	29.08.2024	Kargali	01:52PM	2.26	7.0	626
7	29.08.2024	Kumargora	11:35PM	2.12	7.2	643
8	29.08.2024	Bhojudih	12:40PM	2.13	7.1	597
9	29.08.2024	Mahal	12:20PM	1.88	7.0	624
10	29.08.2024	Sudamdih	12:15PM	2.32	7.2	642

Area Manager (Environment)

Surface Water Quality Analysis

Sl. No.	Location	Sampling Date	Sampling Time	Temp	pH	TSS	BOD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	30 mg/l	10 mg/l
1.	River Gowai Up Stream	24.09.2024	10:40 AM	26.3	7.5	28	2.5	03
2.	River Damodar Down Stream	24.09.2024	11.15 AM	25.8	7.4	26	3.2	0.4
3.	Lagla (Pond)	24.09.2024	01:55PM	24.6	7.3	25	2.7	0.4
4.	Alakhdihi(Pond)	24.09.2024	02.:10 PM	25.2	7.6	25	3.4	0.3
5.	Joradihi (Pond)	24.09.2024	11:55 AM	24.3	7.5	24	3.2	0.3
6.	SEB Quarters (Pond)	24.09.2024	11:20 AM	25.7	7.4	25	2.8	0.4
7.	Kargali (Pond)	24.09.2024	12:30 PM	23.5	7.3	24	3.2	0.3
8.	Kumargora (Pond)	24.09.2024	12:50 PM	24.2	7.4	25	3.4	0.4
9.	Bhojudih (Pond)	24.09.2024	12:25 PM	24.6	7.5	24	2.6	0.3

Area Manager (Environment)