



**The IGF Incharge,  
GOI, MOEF&CC,  
Integrated Regional Office, Kolkata,  
1B-198, Salt Lake City,  
Sector III, Kolkata- 700106**

Ref No. - JMB/ENV/PKDM/63/ 297/2024  
May 28<sup>th</sup>, 2024

Ref.: Environmental Clearance letter no. - J-11015/422/2012-IA.II (M), Dated- 05.11.2015  
(Amended on 30.11.2015).

**SUB: Half Yearly Compliance Status Report of Environment Clearance conditions issued  
by MoEFCC, New Delhi to Preamsinghdi Sand Lease, Tata Steel Limited, Dhanbad  
for the period October-23 to March-24.**

Dear Sir,

We are enclosing herewith compliance report for the period **October-23 to March-24** for the EC granted vide letter no.- J-11015/422/2012-IA.II(M), Dated-05.11.2015 (amended on 30.11.2015) 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, 5<sup>th</sup> Floor  
1582, Rajdanga Main Road, Kolkata -700107.

Copy to: Member Secretary, WBPCB, Paribesh Bhavan, 10A, Block-L.A., Sector III, Salt Lake  
City, Kolkata - 700 098

Copy to: Regional Officer, Asansol Regional Office, WBPCB, DDA, Commercial Market  
(2<sup>nd</sup> Floor), Asansol – 713301, Burdwan.

**TATA STEEL LIMITED**

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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](http://www.tatasteel.com)


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Your (**Environment Clearance**) application has been **Submitted** with following details


Proposal No	IA/WB/MIN/8936/2012
Compliance ID	71690884
Compliance Number(For Tracking)	EC/M/COMPLIANCE/71690884/2024
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	30-05-2024
IRO Name	ARTATRANA MISHRA
IRO Email	jhk109@ifs.nic.in
State	WEST BENGAL
IRO Office Address	Integrated Regional Offices, Kolkata

**Note:-** SMS and E-Mail has been sent to ARTATRANA MISHRA, WEST BENGAL with Notification to Project Proponent.

**Half Yearly Compliance Report****2024****01 Jun(01 Oct - 31 Mar)****Acknowledgment**

<b>Proposal Name</b>	Mining of Mineral Sand (Minor Mineral) from the River Bed of Gowai with proposed capacity of 0.2 MTPA (ROM) by M/s Tata Steel Ltd., located at village- Premsinghdih, Poradih, Erandih, Tehsil  Raghunathpur District - Purulia, West Bengal (MLA-44.10 ha)		
<b>Name of Entity / Corporate Office</b>	Tata Steel Ltd.		
<b>Village(s)</b>	N/A		
<b>District</b>	PURULIA		
<b>Proposal No.</b>	IA/WB/MIN/8936/2012	<b>Category</b>	Non-Coal Mining
<b>Plot / Survey / Khasra No.</b>	N/A	<b>Sub-District</b>	N/A
<b>State</b>	WEST BENGAL	<b>Entity's PAN</b>	NA
<b>MoEF File No.</b>	J-11015/422/2012.IA.II(M)	<b>Entity name as per PAN</b>	NA

**Compliance Reporting Details**

<b>Reporting Year</b>	2024
<b>Remarks (if any)</b>	Half Yearly Compliance Submission for October 2023 to March 2024 for Mining of Mineral Sand (Minor Mineral) from the River Bed of Gowai with proposed capacity of 0.2 MTPA (ROM) by M/s Tata Steel Ltd., located at village- Premsinghdih, Poradih, Erandih, Tehsil  Raghunathpur District - Purulia, West Bengal (MLA-44.10 ha).
<b>Reporting Period</b>	01 Jun(01 Oct - 31 Mar)

**Details of Production and Project Area**

<b>Name of Entity / Corporate Office</b>	Tata Steel Ltd.	
	<b>Project Area as per EC Granted</b>	<b>Annual Project Area in Possession</b>
Private	0	0
Revenue Land	0	0
Forest	0	0

Others	0	0				
Total	0	0				
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	0.2	0.0088	
Conditions						
Specific Conditions						
Sr.No.	Condition Type	Condition Details				
1	Statutory compliance	Environmental Clearance is granted subject to final outcome of Hon’ble Supreme Court of India, Hon’ble High Court of West Bengal and any other Court of Law, if any, as may be applicable to this project.				
PPs Submission: Complied All the judgements applicable to this project will be strictly followed.					Date: 28/05/2024	
2	Statutory compliance	This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, applicable for this Mining Project.				
PPs Submission: Complied It is not applicable for this mining project					Date: 28/05/2024	
3	Statutory compliance	No mining activities will be allowed in forest areas, if any, for which the Forest Clearance is not available.				
PPs Submission: Complied There is no forest area involved.					Date: 28/05/2024	
4	Statutory compliance	The Project Proponent shall obtain Consent to Operate from the State Pollution Control Board, West Bengal and effectively implement all the conditions stipulated therein.				
PPs Submission: Complied The Consent to Establish has been granted by WBPCB vide letter no. 1055-2N-02/2015(E) dated 17.12.2015. The Consent to Operate (CTO) has been granted by WBPCB vide Consent Letter No:CO118281; Memo No.- 552 –WPBA/ Red(ppl) / cont (404)/18; dated-29.12.2020 with validity up to 31.12.2025. The mining has started after the grant of CTO and all the conditions stipulated therein are being effectively implemented.					Date: 28/05/2024	
5	MISCELLANEOUS	Excavation will be carried out up to a maximum depth of 3 meters from surface of mineral deposit and not less than one meter from the water level of the River channel whichever is reached earlier.				

<b>PPs Submission:</b> Complied Excavation is being done as per the Sustainable Sand Mining guidelines as stipulated by MoEF&CC.		Date: 28/05/2024
6	AIR QUALITY MONITORING AND PRESERVATION	Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/ dumpers carrying the mineral should not be allowed to pass through the villages.
<b>PPs Submission:</b> Complied Transportation of sand is done by a dedicated Pucca road starting from the riverbed till the colliery sand bunker. The trucks/ dumpers will not pass through the village roads.		Date: 28/05/2024
7	Statutory compliance	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
<b>PPs Submission:</b> Complied The transportation road is pucca throughout and it will be ensured that the road is not damaged. In case small repairs are required, it will be done by the company.		Date: 28/05/2024
8	PUBLIC HEARING	Implementation of Action Plan on the issues raised during the Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing.
<b>PPs Submission:</b> Complied All the points mentioned in the action plan have been implemented. They are related to environmental protection measures like water spraying, tree plantation and road repairing activities. Remaining points related to CSR like health care facilities have also been taken up by our CSR wing TSRDS.		Date: 28/05/2024
9	AIR QUALITY MONITORING AND PRESERVATION	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing center; Washing of all transport vehicle should be done inside the mining lease.
<b>PPs Submission:</b> Complied Water sprinkling on the transportation road is being done regularly to minimize the pollution. The vehicles used are being regularly checked and maintained. Only vehicles having valid PUC certificates are allowed to ply. Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded. The washing of trucks is being done in garages/ workshop located away from the riverbed as this is a river-bed sand mining project and washing of trucks near the river may degrade the river water quality.		Date: 28/05/2024
10	WATER QUALITY MONITORING AND PRESERVATION	Permanent pillars has to be constructed to demarcate width of extraction of ROM leaving 25% of River width from the bank with depth of 1.5m below the ground and 1.2m above the ground to observe its stability.
<b>PPs Submission:</b> Complied Permanent pillars have been erected marking the boundary of the mine lease area.		Date: 28/05/2024
11	Statutory compliance	The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of

		endangered flora/fauna, if any, spotted in the study area. Further, the Project Proponent shall implement the Conservation Plan for the Schedule I species, if any, reported in the Study area. The implementation Report shall be sent regularly to Regional Office of the MOEFCC located at Bhubaneswar.
<b>PPs Submission:</b> Complied All precautionary measures are being taken during mining operation to protect the flora and fauna. As per the last study done, there were no endangered species near to the mining lease area.		Date: 28/05/2024
12	Noise Monitoring & Prevention	The illumination and sound at night at project site disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponent must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/ night hours.
<b>PPs Submission:</b> Complied There are no floodlights erected due to the project. Noise levels is being kept well within the prescribed limits.		Date: 28/05/2024
13	AIR QUALITY MONITORING AND PRESERVATION	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.
<b>PPs Submission:</b> Complied There is no haulage road since it is a river-bed sand excavation project. Only temporary access roads are made on the sand lumps. Further, water spraying activity on transportation roads is being done with the help of water tankers.		Date: 28/05/2024
14	AIR QUALITY MONITORING AND PRESERVATION	Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
<b>PPs Submission:</b> Complied It is being strictly complied. The transportation will not be done through the village roads. A dedicated 'pucca' road network is available which is being used for the sand transportation activity.		Date: 28/05/2024
15	Statutory compliance	The EC holder shall keep a correct account of quantity of mineral mined out, dispatched from the mine, mode of transport, registration number of vehicle, person in-charge of vehicle and mine plan. This should be produced before officers of Central Government and State for inspection.
<b>PPs Submission:</b> Complied All records of quantity of sand mined out and dispatched from the mine are available with our Mine Planning Department. Mode of transport of sand is truck. A copy of challan issued to truck also exists with us in which the registration number and person-in-charge of vehicle are mentioned. These documents are being properly maintained and shall be produced during any inspection.		Date: 28/05/2024
16	MISCELLANEOUS	Likewise, Alteration or re-routing of foot paths, pagdandies, cart

		roads, and village infrastructure/ public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternate arrangements shall be made first and then only the area acquired. In these types of cases, Inspection Reports by site visit by experts may be insisted upon which should be done through reputed Institutes.
<b>PPs Submission:</b> Complied There is no such acquisition required for this project.		Date: 28/05/2024
17	Statutory compliance	CSR activities by Companies including the Mining Establishments have become mandatory up to 2% of their financial Turn-over. Socio Economic Development of the neighborhood Habitats could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/ Workers. The report shall be submitted to the Ministry of Environment and Forest and its Regional Office located at Bhubaneshwar on six monthly basis.
<b>PPs Submission:</b> Complied The CSR activities are being done and the 2% mandate is being fulfilled at the company level. The CSR report of our division is being enclosed with this compliance report. The CSR expenditure for FY24 (H1) is Rs.447.35 Lakhs.		Date: 28/05/2024
18	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, crèche, etc. The housing may be in the form of temporary structures to be removed after the completion of the Project.
<b>PPs Submission:</b> Complied Since all the workers are being engaged from the nearby villages, there is no requirement of separate housing for this project.		Date: 28/05/2024
19	Statutory compliance	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the MOEFCC 5 years in advance of final mine closure for approval.
<b>PPs Submission:</b> Complied The Mine Plan along with MCP has been approved in 2014. This is a river-bed sand mining project and the sand gets replenished every year so there is no requirement for any mine closure activity except for the removal of temporary infrastructure or machinery available on the site.		Date: 28/05/2024
20	MISCELLANEOUS	In the case of private land not owned by the lease holder an affidavit should be obtained regarding consent of the concerned land owner(s) for carrying out the mining operation.
<b>PPs Submission:</b> Complied Not applicable as no private land is involved in this project.		Date: 28/05/2024
21	MISCELLANEOUS	Stakeholder awareness and ability to raise concerns and getting it to be addressed.
<b>PPs Submission:</b> Complied All stakeholders are given opportunity to raise their concerns with General Manager, Coal on weekly basis (every Monday).		Date: 28/05/2024
22	PUBLIC HEARING	Implementation of Action Plan on the issues raised during the

		Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing.
<b>PPs Submission:</b> Complied All the points mentioned in the action plan have been implemented. They are related to environmental protection measures like water spraying, tree plantation and road repairing activities. Remaining points related to CSR like health care facilities have also been taken up by our CSR wing TSRDS.		Date: 28/05/2024
23	MISCELLANEOUS	Having valid lease and all the permits is very much needed.
<b>PPs Submission:</b> Complied The project has valid lease as well as all necessary permits required from the statutory authorities.		Date: 28/05/2024
24	MISCELLANEOUS	To establish a Monitoring Committee including Local Panchayat, to check on traffic due to transportation and submit an annual report on the same.
<b>PPs Submission:</b> Complied A Monitoring Committee has been appointed to monitor the replenishment study, traffic management, levels of production, River Bank erosion, maintenance of Road, etc on regular basis. The committee comprises officials from the Mine Planning, Survey, Environment and CSR Departments. Feedback from the Panchayat officials of nearby villages is also considered.		Date: 28/05/2024
25	Statutory compliance	The directions given by the Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP(C) Nos.19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No. 171/2013 may be strictly followed.
<b>PPs Submission:</b> Complied All the directions in the above cases will be strictly followed.		Date: 28/05/2024
26	Statutory compliance	All the provisions made and restrictions imposed as covered in the Minor Mineral Rule, shall be complied with, particularly regarding Environment Management Practices and its fund management and Payment of compensation to the land owners.
<b>PPs Submission:</b> Complied This is not applicable as sand used for stowing is a major mineral.		Date: 28/05/2024
27	Statutory compliance	District level Survey Report should be prepared and area suitable for mining and area prohibited for mining be identified.
<b>PPs Submission:</b> Complied This is a major mineral hence this survey report is not required.		Date: 28/05/2024
28	Statutory compliance	The depth of mining in Riverbed shall not exceed one meter or water level whichever is less, provided that where the Joint Inspection Committee certifies about excessive deposit or over accumulation of mineral in certain reaches requiring channelization, it can go up to 3 meters on defined reaches of the River.
<b>PPs Submission:</b> Complied The depth of mining will not exceed 3 meters.		Date: 28/05/2024
29	WATER QUALITY	No River sand mining be allowed in rainy season.



	MONITORING AND PRESERVATION	
<b>PPs Submission:</b> Complied Sand mining does not take place during rainy season. Mining activity is suspended during the monsoon period.		Date: 28/05/2024
30	Statutory compliance	To submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/ production levels shall be decreased/ stopped accordingly till the replenishment is completed.
<b>PPs Submission:</b> Complied The annual sand replenishment study has already been completed for the project by a reputed institution, Indian School of Mines Dhanbad. The report was submitted along with the EIA/EMP report to MOEFCC for the grant of EC. The findings are provided here- Replenishment Calculation per Km stretch of Damodar in JCF S1 Estimation /Assessment Values i) Per km stretch of Damodar the silt load per year 4,78,260m <sup>3</sup> /km/yr ii) Bulk density of sand 1.6 T/m <sup>3</sup> iii) Tonnage of sedimentation per km stretch per year 7,65,216 T/km/yr iv) In a 2.6 Km stretch of the Core the sedimentation ≈19.9 Lakh Ton/yr v) In South Bank only (ML) = S1 No (iv)/2 ≈9.95Lakh Tonne So therefore, there is potential for safe excavation of around 9.95 LT of riverbed sand, while the capacity of our project is only 2 LT.		Date: 28/05/2024
31	WATER QUALITY MONITORING AND PRESERVATION	Ultimate working depth shall be up to 3m from the Riverbed level and not less than one meter from the water level of the River channel whichever is reached earlier. In hilly terrain this depth be preferably restricted to one meter.
<b>PPs Submission:</b> Complied The depth of mining will not exceed 3 meters and not less than one meter from the water level of the River channel if it is reached earlier.		Date: 28/05/2024
32	MISCELLANEOUS	In River flood plain mining a buffer of 3 meters to be left from the River bank for mining.
<b>PPs Submission:</b> Complied This is not applicable.		Date: 28/05/2024
33	MISCELLANEOUS	In mining from agricultural field a buffer of 3 meters to be left from the adjacent field.
<b>PPs Submission:</b> Complied This is not applicable.		Date: 28/05/2024
34	MISCELLANEOUS	Mining shall be done in layers of 1 m depth to avoid ponding effect and after first layer is excavated, the process will be repeated for the next layers.
<b>PPs Submission:</b> Complied Sand excavation activity is being done as per these guidelines to avoid ponding effect.		Date: 28/05/2024
35	WATER QUALITY MONITORING AND PRESERVATION	To maintain safety and stability of Riverbanks i.e. 3 meters or 10% of the width of the River whichever is more will be left intact as no mining zone.

<b>PPs Submission:</b> Complied 10% of the width has been left intact as no mining zone.		Date: 28/05/2024
36	WATER QUALITY MONITORING AND PRESERVATION	No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations.
<b>PPs Submission:</b> Complied It will be strictly followed.		Date: 28/05/2024
37	WATER QUALITY MONITORING AND PRESERVATION	No blasting shall be resorted to in river mining and without permission at any other place.
<b>PPs Submission:</b> Complied No blasting is involved.		Date: 28/05/2024
38	MISCELLANEOUS	Depending upon the location, thickness of sand, deposition, agricultural land/river bed, the method of mining may be manual, semi-mechanized or mechanized; however, manual method of mining shall be preferred over any other method.
<b>PPs Submission:</b> Complied Semi mechanized method of mining are used for excavation of sand		Date: 28/05/2024
39	MISCELLANEOUS	Mining should be done only in area/ stretch identified in the District Level Survey Report suitable for mining and so certified by the Sub-Divisional Level Committee after site visit.
<b>PPs Submission:</b> Complied The District survey report is not applicable for major mineral projects.		Date: 28/05/2024
40	MISCELLANEOUS	Mining should begin only after pucca pillar marking the boundary of lease area is erected at the cost of the lease holder after certification by the mining official and its geo coordinates are made available to the District Level Committee.
<b>PPs Submission:</b> Complied Pillars have been erected marking the boundary of the mine lease area. Authentication by DGPS survey has also been conducted and the SHAPE file has been submitted through CD along with our letter (Ref. No- JMB/115/233A/2017) dt. 31.01.2017 to Regional Office, MoEFCC, Bhubaneswar. It is also mailed at roez.bsr-mef@nic.in on 31.01.2017.		Date: 28/05/2024
41	LAND RECLAMATION	The top soil in case of surface land mining shall be stored temporarily in an earmarked site and concurrently used for land reclamation.
<b>PPs Submission:</b> Complied This is not applicable as no top soil generation is involved.		Date: 28/05/2024
42	MISCELLANEOUS	For each mining lease site, the access should be controlled in a way that vehicles carrying mineral from that area are tracked and accounted for.
<b>PPs Submission:</b> Complied		Date:

It is being strictly followed. The entire mineral being transported is accounted for. All trucks carry valid mining challans issued by the office of the Chief Mining Officer.		28/05/2024
43	Statutory compliance	The State/ District Level Environment Committee should use technology like Bar Coding, Information and Communications Technology (ICT), Web based and ICT enabled services, mobile SMS App etc. to account for weight of mineral being taken out of the lease area and the number of trucks moving out with the mineral.
<b>PPs Submission:</b> Complied Regulation of sand transport from our lease area is being done by Chief Mining Officer, Asansol. Manual permits are being issued as online facility for issuing the permit has not been implemented yet in West Bengal.		Date: 28/05/2024
44	Statutory compliance	There should be regular monitoring of the mining activities in the State to ensure effective compliance of stipulated EC conditions and of the provisions under the Minor Mineral Concessions Rules framed by the State Government.
<b>PPs Submission:</b> Complied We will effectively comply with all the applicable EC conditions. Monitoring committee inspects the lease area on regular basis.		Date: 28/05/2024
45	Noise Monitoring & Prevention	Noise arising out of mining and processing shall be abated and controlled at source to keep within permissible limit.
<b>PPs Submission:</b> Complied Noise generation is expected only during the operation of shovel and dumpers and during transportation. We will ensure that the machinery are kept in good conditions and are regularly maintained so that noise from their engines is minimized. Every care possible is being taken to keep noise level within permissible limit.		Date: 28/05/2024
46	Noise Monitoring & Prevention	Restricted working hours. Sand mining operation has to be carried out between 6 am to 7 pm.
<b>PPs Submission:</b> Complied Our sand excavation activity takes place only during above mentioned hours.		Date: 28/05/2024
47	AIR QUALITY MONITORING AND PRESERVATION	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly.
<b>PPs Submission:</b> Complied Water sprinkling on the transportation road is being done regularly to minimize the pollution load on the environment.		Date: 28/05/2024
48	AIR QUALITY MONITORING AND PRESERVATION	Air Pollution due to dust, exhaust emission or fumes during mining and processing phase should be controlled and kept in permissible limits specified under environmental laws.
<b>PPs Submission:</b> Complied Ambient Air monitoring is being done to monitor the dust & gaseous pollution due to operation of shovel and dumpers. It will be kept under the permissible limits. The ambient air analysis reports are attached as Annexure.		Date: 29/05/2024
49	AIR QUALITY MONITORING AND PRESERVATION	The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used.

<b>PPs Submission:</b> Complied Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded.		Date: 29/05/2024
50	MISCELLANEOUS	The mining operations are to be done in a systematic manner so that the operations shall not create a major visual impact on the site.
<b>PPs Submission:</b> Complied Mining is being done in a systematic manner. The biodiversity and aesthetic beauty of the area will be maintained always.		Date: 29/05/2024
51	GREENBELT	Restoration of flora affected by mining should be done immediately. Twice the number of trees destroyed by mining to be planted preferably of indigenous species. Each EC holder should plant and maintain for lease period at least 2500 trees per hectare in area near lease.
<b>PPs Submission:</b> Complied It will be ensured that flora is not affected or damaged by the sand mining operations. Tree saplings have been distributed to nearby villagers. Since almost all the area near lease is private land, we undertake plantation activities in consultation with the land-owners.		Date: 29/05/2024
52	Statutory compliance	No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made thereunder.
<b>PPs Submission:</b> Complied Not applicable as no forest area is involved.		Date: 29/05/2024
53	MISCELLANEOUS	Protection of turtle and bird habitats shall be ensured.
<b>PPs Submission:</b> Complied Not applicable as no such habitat exists near our lease area.		Date: 29/05/2024
54	Statutory compliance	No felling of tree near quarry is allowed. For mining lease within 10km of the National Park/ Sanctuary or in Eco-Sensitive Zone of the Protected Area, recommendation of Standing Committee of National Board of Wildlife (NBWL) have to be obtained as per the Hon'ble Supreme Court order in I.A. No. 460 of 2004.
<b>PPs Submission:</b> Complied It is not applicable.		Date: 29/05/2024
55	MISCELLANEOUS	Spring sources should not be affected due to mining activities. Necessary Protection measures are to be incorporated.
<b>PPs Submission:</b> Complied It is not applicable.		Date: 29/05/2024
56	MISCELLANEOUS	Removal, stacking and utilization of top soil in mining should be ensured. Where top soil cannot be used concurrently, it shall be stored separately for future use keeping in view that the bacterial organism should not die and should be spread nearby area.
<b>PPs Submission:</b> Complied It is not applicable as no top soil will be generated.		Date: 29/05/2024

57	MISCELLANEOUS	The EC should stipulate conditions for adequate steps to check soil erosion and control debris flow etc. by constructing engineering structures.
<b>PPs Submission:</b> Complied It is not applicable.		Date: 29/05/2024
58	MISCELLANEOUS	Use of oversize material to control erosion and movement of sediments.
<b>PPs Submission:</b> Complied It is not applicable.		Date: 29/05/2024
59	MISCELLANEOUS	No overhangs shall be allowed to be formed due to mining and mining shall not be allowed in area where subsidence of rocks is likely to occur due to steep angle of slope.
<b>PPs Submission:</b> Complied It will be strictly followed.		Date: 29/05/2024
60	MISCELLANEOUS	No extraction of stone/ boulder/ sand in landslide prone areas.
<b>PPs Submission:</b> Complied There are no landslide prone areas near our lease.		Date: 29/05/2024
61	MISCELLANEOUS	Controlled clearance of riparian vegetation to be undertaken.
<b>PPs Submission:</b> Complied No riparian vegetation is proposed to be disturbed.		Date: 29/05/2024
62	WASTE MANAGEMENT	Site clearance and tidiness is very much needed to have less visual impact of mining.
<b>PPs Submission:</b> Complied Housekeeping and tidiness of the area will always be maintained.		Date: 29/05/2024
63	WASTE MANAGEMENT	Dumping of waste shall be done in earmarked places as approved in Mining Plan.
<b>PPs Submission:</b> Complied No waste will be generated.		Date: 29/05/2024
64	WASTE MANAGEMENT	Rubbish burial shall not be done in the Rivers.
<b>PPs Submission:</b> Complied No such burial will be done in the river.		Date: 29/05/2024
65	MISCELLANEOUS	The EC holder shall take all possible precautions for the protection of environment and control of pollution.
<b>PPs Submission:</b> Complied All necessary precautions will be taken as mentioned in earlier points.		Date: 29/05/2024
66	MISCELLANEOUS	Effluent discharge should be kept to the minimum and it should

		meet the standards prescribed.
<b>PPs Submission:</b> Complied No water for industrial purpose is required for the sand excavation activity. Further there will be no township as all manpower will be from the nearby villages. Hence, no generation of effluent is envisaged.		Date: 29/05/2024
67	Statutory compliance	Mining shall not be undertaken in a mining lease located in 200-500 meter of bridge, 200 meter upstream and downstream of water supply/ irrigation scheme, 100 meters from the edge of National Highway and railway line, 50 meters from a reservoir, canal or building, 25 meter from the edge of State Highway and 10 meters from the edge of other roads except on special exemption by the Sub-Divisional level Joint Inspection Committee.
<b>PPs Submission:</b> Complied It is being strictly followed.		Date: 29/05/2024
68	MISCELLANEOUS	For carrying out mining in proximity to any bridge or embankment, appropriate safety zone (not less than 200 meters) should be worked out on case to case basis, taking into account the structural parameters, location aspects and flow rate, and no mining should be carried out in the safety zone so worked out.
<b>PPs Submission:</b> Complied It is being strictly followed.		Date: 29/05/2024
69	MISCELLANEOUS	Mining activities shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical and archeological importance.
<b>PPs Submission:</b> Complied No such danger is posed by our mining lease.		Date: 29/05/2024
70	Statutory compliance	Vehicles used for transportation of sand are to be permitted only with fitness and PUC Certificates.
<b>PPs Submission:</b> Complied Only vehicles having valid PUC and fitness certificates can ply.		Date: 29/05/2024
71	MISCELLANEOUS	Junction at takeoff point of approach road with main road be properly developed with proper width and geometry required for safe movement of traffic by concession holder at his own cost.
<b>PPs Submission:</b> Complied The approach roads are of adequate width and there is no risk of traffic congestion in the area. This has been validated in the traffic density study conducted previously.		Date: 29/05/2024
72	Statutory compliance	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
<b>PPs Submission:</b> Complied The transportation road is pucca throughout and it will be ensured that the road is not damaged. In case small repairs are required, it will be done by the company.		Date: 29/05/2024
73	MISCELLANEOUS	No stacking allowed on road side along National Highways.

<b>PPs Submission:</b> Complied No stacking is being done. The sand is transported directly to the sand yards of our underground mines.		Date: 29/05/2024
74	LAND RECLAMATION	The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
<b>PPs Submission:</b> Complied No land will be affected due to the project		Date: 29/05/2024
75	LAND RECLAMATION	Restoration, reclamation and rehabilitation in cluster should be done systematically and jointly by each EC holder in that cluster. This should be appropriately reflected as EC condition in each EC in cluster.
<b>PPs Submission:</b> Complied This is not applicable as this is a single mine lease and not part of any EC cluster.		Date: 29/05/2024
76	LAND RECLAMATION	Site specific plan with eco-restoration should be in place and implemented.
<b>PPs Submission:</b> Complied Tree plantation activities is being done in the area as part of eco-restoration.		Date: 29/05/2024
77	Human Health Environment	Health and safety of workers should be taken care of.
<b>PPs Submission:</b> Complied All the safety procedures are being implemented including safe driving checks and over-speeding checks. Health care to workers are provided at our Hospital.		Date: 29/05/2024
78	Human Health Environment	Transport of mineral will not be done through villages/ habitations.
<b>PPs Submission:</b> Complied It is being complied with. It will not be done through any village or habitation.		Date: 29/05/2024
79	Human Health Environment	The Project Proponent shall make arrangement for drinking water, first aid facility (along with species specific anti-venom provisioning) in case of emergency for the workers.
<b>PPs Submission:</b> Complied All the above arrangements will be done at the mining site.		Date: 29/05/2024
80	Human Health Environment	Project Proponent shall implement the Disaster Management Plan if the mine lease area is located in Seismic Zone-IV. Project Proponent shall appoint a Committee to have a check over any disaster to warn workers well before for the safety of the workers. Emergency helpline number will be displayed at all levels.
<b>PPs Submission:</b> Complied The mine lease area lies in Seismic Zone-III so it is not applicable.		Date: 29/05/2024
81	Human Health Environment	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also Occupational health check-ups for workers having some ailments like BP, diabetes,

		habitual smokers etc. shall be undertaken once in six months and necessary remedial/ preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted.
<b>PPs Submission:</b> Complied Our central hospital located at Jamadoba, already has an Occupational Health Specialist to cater to the medical checkups/ medical care of the workers. The workers involved in this project will also be provided medical care in our central hospital.		Date: 29/05/2024
82	MISCELLANEOUS	Use of alternate material such as M-sand in place of natural River sand shall be encouraged in order to reduce stress on natural eco-system.
<b>PPs Submission:</b> Complied The information has been provided in earlier points.		Date: 29/05/2024
83	MISCELLANEOUS	The Project Proponent shall report monitoring data on replenishment, traffic management, levels of production, River Bank erosion and maintenance of Road etc.
<b>PPs Submission:</b> Complied We have previously explored the use of BF Slag and LD Slag as replacement for sand but it was not found suitable for underground backfilling due to operational and environmental issues.		Date: 29/05/2024
84	MISCELLANEOUS	Project Proponent must ensure that the security features of Transport Permission viz. (a) Printed on Indian Bank Association (IBA) approved Magnetic Ink Character Recognition Code (MICR) paper; (b) Unique Barcode; (c) Unique Quick Response Code (QR); (d) Fugitive Ink Background; (e) Invisible Ink Mark; (f) Void Pantograph; (g) Watermark.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
85	MISCELLANEOUS	Project proponent must ensure that the CCTV camera, Personal Computer (PC), Internet Connection, Power Back up, access control of mine lease site; and arrangement for weight or approximation of weight of mined out mineral on basis of volume of the trailer of vehicle used at mine lease site are available.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
86	MISCELLANEOUS	Project Proponent must ensure the Scanning of Transport Permit or Receipt and Uploading on Server.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
87	Statutory compliance	The State Mines and Geology Department should print the Transport Permits/ Receipt with security features enumerated at Paragraph (i) above and issue them to the mine lease holder through the District Collector. Once these Transport Permits or Receipts are issued, they would be uploaded on the server against that mine lease area. Each receipt should be preferably with pre-fixed quantity, so the



		total quantity gets determined for the receipts issued. When the Transport Permit or Receipt barcode gets scanned and invoice is generated, that particular barcode gets used and its validity time is recorded on the server. So all the details of transporting of mined out material can be captured on the server and the Transport Permit or Receipt cannot be reused.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
88	MISCELLANEOUS	The staff deployed for the purpose of checking of vehicles carrying mined mineral should be in a position to check the validity of Transport permit or Receipt by scanning them using website, Android Application and SMS.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
89	MISCELLANEOUS	In case the Vehicle breakdown, the validity of Transport Permit or Receipt shall be extended by sending SMS by driver in specific format to report breakdown of vehicle. The server will register this information and register the breakdown. The State can also establish a call centre, which can register breakdowns of such vehicles and extend the validity period. The subsequent restart of the vehicle also should be similarly reported to the server/ call centre.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
90	MISCELLANEOUS	The route of vehicle from source to destination shall be tracked through the system using check points, Radio-frequency identification (RFID) Tags and Global Positioning System (GPS) tracking.
<b>PPs Submission:</b> Complied GPS tracking is being done for every vehicle used for sand transportation from source to destination.		Date: 29/05/2024
91	Statutory compliance	The system shall enable the authorities to develop periodic report on different parameters like daily lifting report, vehicle log/history, lifting against allocation and total lifting. The system can be used to generate auto mails/SMS. This will enable the District Collector/ Magistrate to get all the relevant details and will enable the authority to block the scanning facility of any site found to be indulged in irregularity. Whenever any authority intercepts any vehicle transporting illegal sand, it shall get registered on the server and shall be mandatory for the officer to fill in the report on action taken. Every intercepted vehicle should be tracked.
<b>PPs Submission:</b> Complied Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.		Date: 29/05/2024
92	Human Health Environment	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical checkup and once in six months and necessary medical care/ preventive measures under taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mineworkers would also

		be adopted; Project Proponent shall appoint a Monitoring Committee to monitor the replenishment study, traffic management, levels of production, River Bank erosion and maintenance of Road, etc.
<b>PPs Submission:</b> Complied a. Our central hospital located at Jamadoba, already has an Occupational Health Specialist to cater to the medical checkups/ medical care of the workers. The workers involved in this project will also be provided medical care in our central hospital. b. A Monitoring Committee has been appointed to monitor the replenishment study, traffic management, levels of production, River Bank erosion, maintenance of Road, etc on regular basis. The committee comprises officials from the Mine Planning, Survey, Environment and CSR Departments. Feedback from the Panchayat officials of nearby villages is also considered.		Date: 29/05/2024
<b>General Conditions</b>		
Sr.No.	Condition Type	Condition Details
1	Statutory compliance	The Project Proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC, its Regional Office Bhubaneswar, CPCB and SPCB.
<b>PPs Submission:</b> Complied It is being complied with.		Date: 29/05/2024
2	WASTE MANAGEMENT	No change in the calendar plan including excavation, quantum of mineral and waste should be made.
<b>PPs Submission:</b> Complied It will be complied with.		Date: 29/05/2024
3	WATER QUALITY MONITORING AND PRESERVATION	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project.
<b>PPs Submission:</b> Complied This is not applicable as there will be no drawl of surface water or ground water.		Date: 29/05/2024
4	WATER QUALITY MONITORING AND PRESERVATION	Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new piezometers.
<b>PPs Submission:</b> Complied The ground water table monitoring is being done on regular basis. The water level (below the ground level) and quality analysis has been done and reports are attached as Annexure.		Date: 29/05/2024
5	AIR QUALITY MONITORING AND PRESERVATION	Monitoring of Ambient Air Quality to be carried out based on the 2009 Notification, as amended from time to time by the CPCB. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
<b>PPs Submission:</b> Complied The Ambient Air Quality monitoring is being done as per NAAQS 2009 Notification and reports are attached as Annexure-I. Water spraying by tankers is regularly done on the transportation roads.		Date: 29/05/2024
6	MISCELLANEOUS	The upliftment of SC/ ST population, specific programmes have

		been taken in to consideration specially with respect to education, health care, livelihood generation, infrastructure development & promotion of sports & culture for SC/ST population and that these will be intensified in future.
<b>PPs Submission:</b> Complied CSR activities by TSRDS are taking place in all the villages located nearby to the mine lease. The above points have been taken into consideration by TSRDS.		Date: 29/05/2024
7	GREENBELT	Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants per Ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
<b>PPs Submission:</b> Complied As our lease area is located on the riverbed, tree plantation is taken up in consultation with the village land owners. We have approached the schools and community places to provide space for tree plantation and have planted various forestry and fruit trees during this monsoon.		Date: 29/05/2024
8	WATER QUALITY MONITORING AND PRESERVATION	Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.
<b>PPs Submission:</b> Complied This is not applicable as there is no OB dumps.		Date: 29/05/2024
9	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 PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the CPCB in this regard.
<b>PPs Submission:</b> Complied Emissions are envisaged during the movement of trucks from the sand lease till the colliery site. There will be no emissions during sand mining activity. Water spraying will be done on the transport roads to minimize the dust generated during transportation of sand and ultimately maintain the ambient air quality of the area below the CPCB norm.		Date: 29/05/2024
10	Statutory compliance	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate Change, its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and CPCB.
<b>PPs Submission:</b> Complied The report on surface water quality analysis (upstream and downstream) is being attached as Annexure-I.		Date: 29/05/2024
11	AIR QUALITY MONITORING AND PRESERVATION	The critical parameters such as PM10, PM2.5, NOX, SOX & CO in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also

		be monitored [(TDS, DO, PH 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, Forest and Climate Change, which is available on the website of the Ministry <a href="http://www.envfor.nic.in">www.envfor.nic.in</a> shall also be referred in this regard for its compliance.
<b>PPs Submission:</b> Complied The ambient air quality analysis reports are attached as Annexure-I. There is no water discharge due to mining operation as it is sand excavation project only. The compliance report is being uploaded on company's website every time.		Date: 29/05/2024
12	AIR QUALITY MONITORING AND PRESERVATION	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for PM10, PM2.5, NOX, SOX & CO monitoring. Location of the 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. Data on ambient air quality should be regularly submitted to this Ministry including its regional office located at Bhubaneswar and the State Pollution Control Board/ Central Pollution Control Board once in six months.
<b>PPs Submission:</b> Complied The monitoring stations have been established and monitoring job is being done on regular basis. Data on ambient quality are being sent regularly along with EC and consent compliance reports.		Date: 29/05/2024
13	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.
<b>PPs Submission:</b> Complied 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 will be in place through water tanker, coverage of trucks and optimal loading.		Date: 29/05/2024
14	Noise Monitoring & Prevention	Measures 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.
<b>PPs Submission:</b> Complied Proper PPE's are provided to all the workers.		Date: 29/05/2024
15	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 422(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.
<b>PPs Submission:</b> Complied No industrial waste water generation will take place.		Date: 29/05/2024
16	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.

<b>PPs Submission:</b> Complied It will be complied with.		Date: 29/05/2024
17	Corporate Environmental Responsibility	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.
<b>PPs Submission:</b> Complied We have a separate Environmental Management Cell with qualified personnel. The reporting of Environmental Cell is directly to General Manager of the Division.		Date: 29/05/2024
18	Corporate Environmental Responsibility	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.
<b>PPs Submission:</b> Complied Sand, being coarse in nature and having high moisture content, does not get air borne during transportation. 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.		Date: 29/05/2024
19	Corporate Environmental Responsibility	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.
<b>PPs Submission:</b> Complied The CTE and CTO of the project have been granted by WBPCB. The permission for lifting of sand from the river bed has also been granted by Chief Mining Officer, Asansol.		Date: 29/05/2024
20	Corporate Environmental Responsibility	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.
<b>PPs Submission:</b> Complied It will be complied with.		Date: 29/05/2024
21	Statutory compliance	A copy of clearance letter will be marked to concerned Panchayat, local NGO, if any, from whom suggestions/ representations has been received while processing the proposal.
<b>PPs Submission:</b> Complied It has been done.		Date: 29/05/2024
22	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.
<b>PPs Submission:</b> Complied It has been complied with.		Date: 29/05/2024
23	Corporate Environmental Responsibility	The project authorities should advertise at least in two local newspapers 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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.
<b>PPs Submission:</b> Complied It has been done and copies sent to regional office at Bhubaneshwar.		Date: 29/05/2024
24	Statutory compliance	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forests and Climate Change.
<b>PPs Submission:</b> Complied It will be complied with.		Date: 29/05/2024
25	AIR QUALITY MONITORING AND PRESERVATION	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest & Climate Change and its Regional Office, Bhubaneshwar, Central Ground Water Authority and Regional Director, Central Ground Water Board.
<b>PPs Submission:</b> Complied The ground water table monitoring is being done on regular basis. The water level (below the ground level) and quality analysis has been done and reports are attached as Annexure-I.		Date: 29/05/2024
<div style="text-align: center;"><b>Visit Remarks</b></div>		
<b>Last Site Visit Report Date:</b>		N/A
<b>Additional Remarks:</b>		

# **HALF YEARLY COMPLIANCE REPORT**

**(PERIOD: OCTOBER'23 – MARCH'24)**

## **PREMSINGHDIH SAND LEASE**

**(CAPACITY: 0.2 MTPA SAND FROM RIVERBED OF GOWAI)**  
**TEHSIL: RAGHUNATHPUR II, DIST: PURULIA, WEST BENGAL**



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

**ENVIRONMENTAL CLEARANCE GRANTED VIDE LETTER NO.- J-  
11015/422/2012-IA.II(M) DATED- 05.11.2015 (AMENDED ON 30.11.2015) ISSUED BY  
GOVT. OF INDIA, MINISTRY OF ENVIRONMENT, FOREST & CLIMATE  
CHANGE, NEW DELHI**

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

S. No.	Condition	Compliance Status
<b>Specific Condition</b>		
(i)	Environmental Clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of West Bengal and any other Court of Law, if any, as may be applicable to this project.	All the judgements applicable to this project will be strictly followed.
(ii)	This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, applicable for this Mining Project.	It is not applicable for this mining project.
(iii)	No mining activities will be allowed in forest areas, if any, for which the Forest Clearance is not available.	There is no forest area involved.
(iv)	The Project Proponent shall obtain Consent to Operate from the State Pollution Control Board, West Bengal and effectively implement all the conditions stipulated therein.	<p>The Consent to Establish has been granted by WBPCB vide letter no. 1055-2N-02/2015(E) dated 17.12.2015.</p> <p>The Consent to Operate (CTO) has been granted by WBPCB vide Consent Letter No:CO118281; Memo No.- 552 –WPBA/Red(ppl) / cont (404)/18; dated-29.12.2020 with validity up to 31.12.2025.</p> <p>The mining has started after the grant of CTO and all the conditions stipulated therein are being effectively implemented.</p>
(v)	Excavation will be carried out up to a maximum depth of 3 meters from surface of mineral deposit and not less than one meter from the water level of the River channel whichever is reached earlier.	Excavation is being done as per the Sustainable Sand Mining guidelines as stipulated by MoEF&CC.
(vi)	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical checkup and once in six months and necessary medical care/ preventive measures under taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine	a. Our central hospital located at Jamadoba, already has an Occupational Health Specialist to cater to the medical checkups/ medical care of the workers. The workers involved in this project will also be provided medical care in our central hospital.



**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

	workers would also be adopted; Project Proponent shall appoint a Monitoring Committee to monitor the replenishment study, traffic management, levels of production, River Bank erosion and maintenance of Road, etc.	b. A Monitoring Committee has been appointed to monitor the replenishment study, traffic management, levels of production, River Bank erosion, maintenance of Road, etc on regular basis. The committee comprises officials from the Mine Planning, Survey, Environment and CSR Departments. Feedback from the Panchayat officials of nearby villages is also considered.
<b>(vii)</b>	Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/ dumpers carrying the mineral should not be allowed to pass through the villages.	Transportation of sand is done by a dedicated Pucca road starting from the riverbed till the colliery sand bunker. The trucks/ dumpers will not pass through the village roads.
<b>(viii)</b>	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.	The transportation road is pucca throughout and it will be ensured that the road is not damaged. In case small repairs are required, it will be done by the company.
<b>(ix)</b>	Implementation of Action Plan on the issues raised during the Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing.	All the points mentioned in the action plan have been implemented. They are related to environmental protection measures like water spraying, tree plantation and road repairing activities. Remaining points related to CSR like health care facilities have also been taken up by our CSR wing TSRDS.
<b>(x)</b>	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing center; Washing of all transport vehicle should be done inside the mining lease.	Water sprinkling on the transportation road is being done regularly to minimize the pollution. The vehicles used are being regularly checked and maintained. Only vehicles having valid PUC certificates are allowed to ply. Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded. The washing of trucks is being done in garages/ workshop located away from the riverbed as this is a river-bed sand mining project and washing of trucks near the river may degrade the river water quality.
<b>(xi)</b>	Permanent pillars has to be constructed to demarcate width of extraction of ROM leaving 25% of River width from the bank with depth of 1.5m below the	Permanent pillars have been erected marking the boundary of the mine lease area.

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

	ground and 1.2m above the ground to observe its stability.	
<b>(xii)</b>	The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area. Further, the Project Proponent shall implement the Conservation Plan for the Schedule I species, if any, reported in the Study area. The implementation Report shall be sent regularly to Regional Office of the MOEFCC located at Bhubaneswar.	All precautionary measures are being taken during mining operation to protect the flora and fauna. As per the last study done, there were no endangered species near to the mining lease area.
<b>(xiii)</b>	The illumination and sound at night at project site disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponent must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/ night hours.	There are no floodlights erected due to the project. Noise levels is being kept well within the prescribed limits.
<b>(xiv)</b>	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.	There is no haulage road since it is a river-bed sand excavation project. Only temporary access roads are made on the sand lumps. Further, water spraying activity on transportation roads is being done with the help of water tankers.
<b>(xv)</b>	Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the	It is being strictly complied. The transportation will not be done through the village roads. A dedicated 'pucca' road network is available which is being used for the sand transportation activity.

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	Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.	
<b>(xvi)</b>	Likewise, Alteration or re-routing of foot paths, pagdandies, cart roads, and village infrastructure/ public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternate arrangements shall be made first and then only the area acquired. In these types of cases, Inspection Reports by site visit by experts may be insisted upon which should be done through reputed Institutes.	There is no such acquisition required for this project.
<b>(xvii)</b>	CSR activities by Companies including the Mining Establishments have become mandatory up to 2% of their financial Turn-over. Socio Economic Development of the neighborhood Habitats could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/ Workers. The report shall be submitted to the Ministry of Environment and Forest and its Regional Office located at Bhubaneswar on six monthly basis.	The CSR activities are being done and the 2% mandate is being fulfilled at the company level. The CSR report of our division is being enclosed with this compliance report. The CSR expenditure for FY24 (H1) is Rs.447.35 Lakhs.
<b>(xviii)</b>	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, crèche, etc. The housing may be in the form of temporary structures to be removed after the completion of the Project.	Since all the workers are being engaged from the nearby villages, there is no requirement of separate housing for this project.
<b>(xix)</b>	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the MOEFCC 5 years in advance of final mine closure for approval.	The Mine Plan along with MCP has been approved in 2014. This is a river-bed sand mining project and the sand gets replenished every year so there is no requirement for any mine closure activity

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		except for the removal of temporary infrastructure or machinery available on the site.
<b>B1</b>	<b>SPECIAL CONDITIONS</b>	
	<b><u>Impact Category: Stakeholder Engagement</u></b>	
<b>(1)</b>	In the case of private land not owned by the lease holder an affidavit should be obtained regarding consent of the concerned land owner(s) for carrying out the mining operation.	Not applicable as no private land is involved in this project.
<b>(2)</b>	Stakeholder awareness and ability to raise concerns and getting it to be addressed.	All stakeholders are given opportunity to raise their concerns with General Manager, Coal on weekly basis (every Monday).
<b>(3)</b>	Implementation of Action Plan on the issues raised during the Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing.	All the points mentioned in the action plan have been implemented. They are related to environmental protection measures like water spraying, tree plantation and road repairing activities. Remaining points related to CSR like health care facilities have also been taken up by our CSR wing TSRDS.
<b>(4)</b>	Having valid lease and all the permits is very much needed.	The project has valid lease as well as all necessary permits required from the statutory authorities.
<b>(5)</b>	To establish a Monitoring Committee including Local Panchayat, to check on traffic due to transportation and submit an annual report on the same.	A Monitoring Committee has been appointed to monitor the replenishment study, traffic management, levels of production, River Bank erosion, maintenance of Road, etc on regular basis. The committee comprises officials from the Mine Planning, Survey, Environment and CSR Departments. Feedback from the Panchayat officials of nearby villages is also considered.
<b>(6)</b>	The directions given by the Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP(C) Nos.19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No. 171/2013 may be strictly followed.	All the directions in the above cases will be strictly followed.
<b>(7)</b>	All the provisions made and restrictions imposed as covered in the	This is not applicable as sand used for stowing is a major mineral.

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	Minor Mineral Rule, shall be complied with, particularly regarding Environment Management Practices and its fund management and Payment of compensation to the land owners.													
	<b>Impact Category: Sustainable Mining Practices</b>													
(8)	District level Survey Report should be prepared and area suitable for mining and area prohibited for mining be identified.	This is a major mineral hence this survey report is not required.												
(9)	The depth of mining in Riverbed shall not exceed one meter or water level whichever is less, provided that where the Joint Inspection Committee certifies about excessive deposit or over accumulation of mineral in certain reaches requiring channelization, it can go up to 3 meters on defined reaches of the River.	The depth of mining will not exceed 3 meters.												
(10)	No River sand mining be allowed in rainy season.	Sand mining does not take place during rainy season. Mining activity is suspended during the monsoon period.												
(11)	To submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity/ production levels shall be decreased/ stopped accordingly till the replenishment is completed.	<p>The annual sand replenishment study has already been completed for the project by a reputed institution, Indian School of Mines Dhanbad. The report was submitted along with the EIA/EMP report to MOEFCC for the grant of EC. The findings are provided here-</p> <p>Replenishment Calculation per Km stretch of Damodar in JCF</p> <table border="1"> <thead> <tr> <th>Sl</th><th>Estimation /Assessment</th><th>Values</th></tr> </thead> <tbody> <tr> <td>i)</td><td>Per km stretch of Damodar the silt load per year</td><td>4,78,260m<sup>3</sup>/km/yr</td></tr> <tr> <td>ii)</td><td>Bulk density of sand</td><td>1.6 T/m<sup>3</sup></td></tr> <tr> <td>iii)</td><td>Tonnage of sedimentation</td><td>7,65,216 T/km/yr</td></tr> </tbody> </table>	Sl	Estimation /Assessment	Values	i)	Per km stretch of Damodar the silt load per year	4,78,260m <sup>3</sup> /km/yr	ii)	Bulk density of sand	1.6 T/m <sup>3</sup>	iii)	Tonnage of sedimentation	7,65,216 T/km/yr
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		per km stretch per year	
		iv) In a 2.6 Km stretch of the Core the sedimentation	≈19.9 Lakh Ton/yr
		v) In South Bank only (ML) = SI No (iv)/2	≈9.95Lakh Tonne
		So therefore, there is potential for safe excavation of around 9.95 LT of riverbed sand, while the capacity of our project is only 2 LT.	
(12)	Ultimate working depth shall be up to 3m from the Riverbed level and not less than one meter from the water level of the River channel whichever is reached earlier. In hilly terrain this depth be preferably restricted to one meter.	The depth of mining will not exceed 3 meters and not less than one meter from the water level of the River channel if it is reached earlier.	
(13)	In River flood plain mining a buffer of 3 meters to be left from the River bank for mining.	This is not applicable.	
(14)	In mining from agricultural field a buffer of 3 meters to be left from the adjacent field.	This is not applicable.	
(15)	Mining shall be done in layers of 1 m depth to avoid ponding effect and after first layer is excavated, the process will be repeated for the next layers.	Sand excavation activity is being done as per these guidelines to avoid ponding effect.	
(16)	To maintain safety and stability of Riverbanks i.e. 3 meters or 10% of the width of the River whichever is more will be left intact as no mining zone.	10% of the width has been left intact as no mining zone.	
(17)	No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations.	It will be strictly followed.	
(18)	No blasting shall be resorted to in river mining and without permission at any other place.	No blasting is involved.	
(19)	Depending upon the location, thickness of sand, deposition, agricultural land/river bed, the method of mining may be manual, semi-mechanized or	Semi mechanized method of mining are used for excavation of sand.	

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	mechanized; however, manual method of mining shall be preferred over any other method.	
	<b>Impact Category: Identification and Preparation of Mining Site</b>	
(20)	Mining should be done only in area/ stretch identified in the District Level Survey Report suitable for mining and so certified by the Sub-Divisional Level Committee after site visit.	The District survey report is not applicable for major mineral projects.
(21)	Mining should begin only after pucca pillar marking the boundary of lease area is erected at the cost of the lease holder after certification by the mining official and its geo coordinates are made available to the District Level Committee.	Pillars have been erected marking the boundary of the mine lease area. Authentication by DGPS survey has also been conducted and the SHAPE file has been submitted through CD along with our letter (Ref. No- JMB/115/233A/2017) dt. 31.01.2017 to Regional Office, MoEFCC, Bhubaneswar. It is also mailed at <a href="mailto:roez.bsr-mef@nic.in">roez.bsr-mef@nic.in</a> on 31.01.2017.
(22)	The top soil in case of surface land mining shall be stored temporarily in an earmarked site and concurrently used for land reclamation.	This is not applicable as no top soil generation is involved.
(23)	The EC holder shall keep a correct account of quantity of mineral mined out, dispatched from the mine, mode of transport, registration number of vehicle, person in-charge of vehicle and mine plan. This should be produced before officers of Central Government and State for inspection.	All records of quantity of sand mined out and dispatched from the mine are available with our Mine Planning Department. Mode of transport of sand is truck. A copy of challan issued to truck also exists with us in which the registration number and person-in-charge of vehicle are mentioned. These documents are being properly maintained and shall be produced during any inspection.
(24)	For each mining lease site, the access should be controlled in a way that vehicles carrying mineral from that area are tracked and accounted for.	It is being strictly followed. The entire mineral being transported is accounted for. All trucks carry valid mining challans issued by the office of the Chief Mining Officer.
(25)	The State/ District Level Environment Committee should use technology like Bar Coding, Information and Communications Technology (ICT), Web based and ICT enabled services, mobile SMS App etc. to account for weight of mineral being taken out of the	Regulation of sand transport from our lease area is being done by Chief Mining Officer, Asansol. Manual permits are being issued as online facility for issuing the permit has not been implemented yet in West Bengal.

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	lease area and the number of trucks moving out with the mineral.	
(26)	There should be regular monitoring of the mining activities in the State to ensure effective compliance of stipulated EC conditions and of the provisions under the Minor Mineral Concessions Rules framed by the State Government.	We will effectively comply with all the applicable EC conditions. Monitoring committee inspects the lease area on regular basis.
	<b>Impact Category: Noise Management</b>	
(27)	Noise arising out of mining and processing shall be abated and controlled at source to keep within permissible limit.	Noise generation is expected only during the operation of shovel and dumpers and during transportation. We will ensure that the machinery are kept in good conditions and are regularly maintained so that noise from their engines is minimized. Every care possible is being taken to keep noise level within permissible limit.
(28)	Restricted working hours. Sand mining operation has to be carried out between 6 am to 7 pm.	Our sand excavation activity takes place only during above mentioned hours.
	<b>Impact Category: Air Pollution and Dust Management</b>	
(29)	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly.	Water sprinkling on the transportation road is being done regularly to minimize the pollution load on the environment.
(30)	Air Pollution due to dust, exhaust emission or fumes during mining and processing phase should be controlled and kept in permissible limits specified under environmental laws.	Ambient Air monitoring is being done to monitor the dust & gaseous pollution due to operation of shovel and dumpers. It will be kept under the permissible limits. The ambient air analysis reports are attached as <b>Annexure-I</b> .
(31)	The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used.	Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded.
	<b>Impact Category: Management of Visual Impact</b>	
(32)	The mining operations are to be done in a systematic manner so that the	Mining is being done in a systematic manner. The biodiversity and aesthetic



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	operations shall not create a major visual impact on the site.	beauty of the area will be maintained always.
(33)	Restoration of flora affected by mining should be done immediately. Twice the number of trees destroyed by mining to be planted preferably of indigenous species. Each EC holder should plant and maintain for lease period at least 2500 trees per hectare in area near lease.	It will be ensured that flora is not affected or damaged by the sand mining operations. Tree saplings have been distributed to nearby villagers. Since almost all the area near lease is private land, we undertake plantation activities in consultation with the land-owners.
(34)	No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made thereunder.	Not applicable as no forest area is involved.
(35)	Protection of turtle and bird habitats shall be ensured.	Not applicable as no such habitat exists near our lease area.
(36)	No felling of tree near quarry is allowed. For mining lease within 10km of the National Park/ Sanctuary or in Eco-Sensitive Zone of the Protected Area, recommendation of Standing Committee of National Board of Wildlife (NBWL) have to be obtained as per the Hon'ble Supreme Court order in I.A. No. 460 of 2004.	It is not applicable.
(37)	Spring sources should not be affected due to mining activities. Necessary Protection measures are to be incorporated.	It is not applicable.
	<b>Impact Category: Management of Instability and Erosion</b>	
(38)	Removal, stacking and utilization of top soil in mining should be ensured. Where top soil cannot be used concurrently, it shall be stored separately for future use keeping in view that the bacterial organism should not die and should be spread nearby area.	It is not applicable as no top soil will be generated.
(39)	The EC should stipulate conditions for adequate steps to check soil erosion and control debris flow etc. by constructing engineering structures.	It is not applicable.

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(40)	Use of oversize material to control erosion and movement of sediments.	It is not applicable.
(41)	No overhangs shall be allowed to be formed due to mining and mining shall not be allowed in area where subsidence of rocks is likely to occur due to steep angle of slope.	It will be strictly followed.
(42)	No extraction of stone/ boulder/ sand in landslide prone areas.	There are no landslide prone areas near our lease.
(43)	Controlled clearance of riparian vegetation to be undertaken.	No riparian vegetation is proposed to be disturbed.
	<b>Impact Category: Waste Management</b>	
(44)	Site clearance and tidiness is very much needed to have less visual impact of mining.	Housekeeping and tidiness of the area will always be maintained.
(45)	Dumping of waste shall be done in earmarked places as approved in Mining Plan.	No waste will be generated.
(46)	Rubbish burial shall not be done in the Rivers.	No such burial will be done in the river.
	<b>Impact Category: Pollution Prevention</b>	
(47)	The EC holder shall take all possible precautions for the protection of environment and control of pollution.	All necessary precautions will be taken as mentioned in earlier points.
(48)	Effluent discharge should be kept to the minimum and it should meet the standards prescribed.	No water for industrial purpose is required for the sand excavation activity. Further there will be no township as all manpower will be from the nearby villages. Hence, no generation of effluent is envisaged.
	<b>Impact Category: Protection of Infrastructure</b>	
(49)	Mining shall not be undertaken in a mining lease located in 200-500 meter of bridge, 200 meter upstream and downstream of water supply/ irrigation scheme, 100 meters from the edge of National Highway and railway line, 50 meters from a reservoir, canal or building, 25 meter from the edge of State Highway and 10 meters from the	It is being strictly followed.

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	edge of other roads except on special exemption by the Sub-Divisional level Joint Inspection Committee.	
(50)	For carrying out mining in proximity to any bridge or embankment, appropriate safety zone (not less than 200 meters) should be worked out on case to case basis, taking into account the structural parameters, location aspects and flow rate, and no mining should be carried out in the safety zone so worked out.	It is being strictly followed.
(51)	Mining activities shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical and archeological importance.	No such danger is posed by our mining lease.
	<b>Impact Category: Enhancement of Road Safety</b>	
(52)	Vehicles used for transportation of sand are to be permitted only with fitness and PUC Certificates.	Only vehicles having valid PUC and fitness certificates can ply.
(53)	Junction at takeoff point of approach road with main road be properly developed with proper width and geometry required for safe movement of traffic by concession holder at his own cost.	The approach roads are of adequate width and there is no risk of traffic congestion in the area. This has been validated in the traffic density study conducted previously.
(54)	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.	The transportation road is pucca throughout and it will be ensured that the road is not damaged. In case small repairs are required, it will be done by the company.
(55)	No stacking allowed on road side along National Highways.	No stacking is being done. The sand is transported directly to the sand yards of our underground mines.
	<b>Impact Category: Closure and Reclamation of Mined Out Area</b>	
(56)	The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.	No land will be affected due to the project.

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(57)	Restoration, reclamation and rehabilitation in cluster should be done systematically and jointly by each EC holder in that cluster. This should be appropriately reflected as EC condition in each EC in cluster.	This is not applicable as this is a single mine lease and not part of any EC cluster.
(58)	Site specific plan with eco-restoration should be in place and implemented.	Tree plantation activities is being done in the area as part of eco-restoration.
	<b>Impact Category: Health and Safety</b>	
(59)	Health and safety of workers should be taken care of.	All the safety procedures are being implemented including safe driving checks and over-speeding checks. Health care to workers are provided at our Hospital.
(60)	Transport of mineral will not be done through villages/ habitations.	It is being complied with. It will not be done through any village or habitation.
(61)	The Project Proponent shall make arrangement for drinking water, first aid facility (along with species specific anti-venom provisioning) in case of emergency for the workers.	All the above arrangements will be done at the mining site.
(62)	Project Proponent shall implement the Disaster Management Plan if the mine lease area is located in Seismic Zone-IV. Project Proponent shall appoint a Committee to have a check over any disaster to warn workers well before for the safety of the workers. Emergency helpline number will be displayed at all levels.	The mine lease area lies in Seismic Zone-III so it is not applicable.
(63)	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers etc. shall be undertaken once in six months and necessary remedial/ preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted.	Our central hospital located at Jamadoba, already has an Occupational Health Specialist to cater to the medical checkups/ medical care of the workers. The workers involved in this project will also be provided medical care in our central hospital.

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	<b>Impact Category: Monitoring the Impact of Mining and Mineral Conservation</b>	
<b>(64)</b>	The Project Proponent shall report monitoring data on replenishment, traffic management, levels of production, River Bank erosion and maintenance of Road etc.	The information has been provided in earlier points.
<b>(65)</b>	Use of alternate material such as M-sand in place of natural River sand shall be encouraged in order to reduce stress on natural eco-system.	We have previously explored the use of BF Slag and LD Slag as replacement for sand but it was not found suitable for underground backfilling due to operational and environmental issues.
<b>B2:</b>	<b>PROCEDURE FOR MONITORING OF SAND MINING:</b>	
<b>(i)</b>	Project Proponent must ensure that the security features of Transport Permission viz. (a) Printed on Indian Bank Association (IBA) approved Magnetic Ink Character Recognition Code (MICR) paper; (b) Unique Barcode; (c) Unique Quick Response Code (QR); (d) Fugitive Ink Background; (e) Invisible Ink Mark; (f) Void Pantograph; (g) Watermark.	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.
<b>(ii)</b>	Project proponent must ensure that the CCTV camera, Personal Computer (PC), Internet Connection, Power Back up, access control of mine lease site; and arrangement for weight or approximation of weight of mined out mineral on basis of volume of the trailer of vehicle used at mine lease site are available.	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.
<b>(iii)</b>	Project Proponent must ensure the Scanning of Transport Permit or Receipt and Uploading on Server.	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.
<b>(iv)</b>	The State Mines and Geology Department should print the Transport Permits/ Receipt with security features enumerated at Paragraph (i) above and issue them to the mine lease holder through the District Collector. Once these Transport Permits or Receipts are issued, they would be uploaded on the	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.

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	server against that mine lease area. Each receipt should be preferably with pre-fixed quantity, so the total quantity gets determined for the receipts issued. When the Transport Permit or Receipt barcode gets scanned and invoice is generated, that particular barcode gets used and its validity time is recorded on the server. So all the details of transporting of mined out material can be captured on the server and the Transport Permit or Receipt cannot be reused.	
(v)	The staff deployed for the purpose of checking of vehicles carrying mined mineral should be in a position to check the validity of Transport permit or Receipt by scanning them using website, Android Application and SMS.	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.
(vi)	In case the Vehicle breakdown, the validity of Transport Permit or Receipt shall be extended by sending SMS by driver in specific format to report breakdown of vehicle. The server will register this information and register the breakdown. The State can also establish a call centre, which can register breakdowns of such vehicles and extend the validity period. The subsequent restart of the vehicle also should be similarly reported to the server/ call centre.	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.
(vii)	The route of vehicle from source to destination shall be tracked through the system using check points, Radio-frequency identification (RFID) Tags and Global Positioning System (GPS) tracking.	GPS tracking is being done for every vehicle used for sand transportation from source to destination.
(viii)	The system shall enable the authorities to develop periodic report on different parameters like daily lifting report, vehicle log/history, lifting against allocation and total lifting. The system can be used to generate auto mails/SMS. This will enable the District Collector/ Magistrate to get all	Online facility for transport permission has not been implemented yet in West Bengal for Private lessee. Manual permits are being issued by Chief Mining Officer, Asansol.

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

	the relevant details and will enable the authority to block the scanning facility of any site found to be indulged in irregularity. Whenever any authority intercepts any vehicle transporting illegal sand, it shall get registered on the server and shall be mandatory for the officer to fill in the report on action taken. Every intercepted vehicle should be tracked.	
<b>C:</b>	<b>GENERAL CONDITIONS:</b>	
<b>(i)</b>	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forests and Climate Change.	It will be complied with.
<b>(ii)</b>	No change in the calendar plan including excavation, quantum of mineral and waste should be made.	It will be complied with.
<b>(iii)</b>	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project.	This is not applicable as there will be no drawl of surface water or ground water.
<b>(iv)</b>	Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new piezometers.	The ground water table monitoring is being done on regular basis. The water level (below the ground level) and quality analysis has been done and reports are attached as <b>Annexure-I</b> .
<b>(v)</b>	Monitoring of Ambient Air Quality to be carried out based on the 2009 Notification, as amended from time to time by the CPCB. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.	The Ambient Air Quality monitoring is being done as per NAAQS 2009 Notification and reports are attached as <b>Annexure-I</b> . Water spraying by tankers is regularly done on the transportation roads.
<b>(vi)</b>	The upliftment of SC/ ST population, specific programmes have been taken in to consideration specially with respect to education, health care, livelihood generation, infrastructure	CSR activities by TSRDS are taking place in all the villages located nearby to the mine lease. The above points have been taken into consideration by TSRDS.

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

	development & promotion of sports & culture for SC/ST population and that these will be intensified in future.	
(vii)	Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants per Ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.	As our lease area is located on the riverbed, tree plantation is taken up in consultation with the village land owners. We have approached the schools and community places to provide space for tree plantation and have planted various forestry and fruit trees during this monsoon.
(viii)	Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.	This is not applicable as there is no OB dumps.
(ix)	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the CPCB in this regard.	Emissions are envisaged during the movement of trucks from the sand lease till the colliery site. There will be no emissions during sand mining activity. Water spraying will be done on the transport roads to minimize the dust generated during transportation of sand and ultimately maintain the ambient air quality of the area below the CPCB norm.
(x)	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate Change, its Regional Office, Bhubaneshwar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and CPCB.	The report on surface water quality analysis (upstream and downstream) is being attached as <b>Annexure-I</b> .



**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

(xi)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest & Climate Change and its Regional Office, Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board.	The ground water table monitoring is being done on regular basis. The water level (below the ground level) and quality analysis has been done and reports are attached as <b>Annexure-I</b> .
(xii)	The critical parameters such as PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>x</sub> & CO in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH 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, Forest and Climate Change, which is available on the website of the Ministry <a href="http://www.envfor.nic.in">www.envfor.nic.in</a> shall also be referred in this regard for its compliance.	The ambient air quality analysis reports are attached as <b>Annexure-I</b> . There is no water discharge due to mining operation as it is sand excavation project only. The compliance report is being uploaded on company's website every time.
(xiii)	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>x</sub> & CO monitoring. Location of the stations should be decided based on the	The monitoring stations have been established and monitoring job is being done on regular basis. Data on ambient quality are being sent regularly along with EC and consent compliance reports.

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

	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. Data on ambient air quality should be regularly submitted to this Ministry including its regional office located at Bhubaneswar and the State Pollution Control Board/ Central Pollution Control Board once in six months.	
<b>(xiv)</b>	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 will be in place through water tanker, coverage of trucks and optimal loading.
<b>(xv)</b>	Measures 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.
<b>(xvi)</b>	Industrial waste water (Workshop and Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 <sup>th</sup> May 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time. Oil and Grease trap should be installed before discharge of Workshop effluents.	No industrial waste water generation will take place.
<b>(xvii)</b>	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.	It will be complied with.
<b>(xviii)</b>	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.

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

<b>(xix)</b>	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.	Sand, being coarse in nature and having high moisture content, does not get air borne during transportation. 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.
<b>(xx)</b>	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 WBPCB. The permission for lifting of sand from the river bed has also been granted by Chief Mining Officer, Asansol.
<b>(xxi)</b>	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.
<b>(xxii)</b>	The Project Proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC, its Regional Office Bhubaneswar, CPCB and SPCB.	It is being complied with.
<b>(xxiii)</b>	A copy of clearance letter will be marked to concerned Panchayat, local NGO, if any, from whom suggestions/ representations has been received while processing the proposal.	It has been done.
<b>(xxiv)</b>	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.	It has been complied with.
<b>(xxv)</b>	The project authorities should advertise at least in two local newspapers 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	It has been done and copies sent to regional office at Bhubaneshwar.

**Compliance status of Environmental Clearance of Mining of mineral sand from the river bed of Gowai (0.2 MTPA) of M/s Tata Steel Ltd., Village Premsinghdih, Poradih, Erandih, Tehsil Raghunathpur II, dist. Purulia, West Bengal (MLA- 44.10 Ha) vide MoEFCC Letter no J-11015/422/2012-IA.II (M) dated November 5, 2015 (corrigendum on 30.11.2015)**

	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.	
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**Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)****Ambient Air Quality Analysis Report****Period-** October'23 to December'23

Name of Industry : Premsinghdih Sand Mining Project

No. of sampling points : 4

Sampling Location	Date of Sampling/ Weather Condition		
	October'23	November'23	December'23
Icchar High School, Kamargora, Icchar, Purulia	25.10.2023/ Clear	16.11.2023/ Clear	06.12.2023/ Cloudy
Near Kali Mandir, Railway Colony, Bhojudih	25.10.2023/ Clear	16.11.2023/ Clear	06.12.2023/ Cloudy
Utkramit Madhya Vidyalaya, Manpur, Chandankyari, Bokaro	26.10.2023/ Clear	17.11.2023/ Clear	07.12.2023/ Cloudy
Santaldih Thermal Power Station, Santaldih	26.10.2023/ Clear	17.11.2023/ Clear	07.12.2023/ Cloudy

Location	Latitude/ Longitude	Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>
			PM <sub>10</sub> Level : 24 Hourly Limit- 100µg/m <sup>3</sup>	PM <sub>2.5</sub> Level : 24 Hourly Limit- 60µg/m <sup>3</sup>	SO <sub>2</sub> Level: 24 Hourly Limit-80µg/m <sup>3</sup>	NO <sub>2</sub> Level: 24 Hourly Limit-80µg/m <sup>3</sup>
Icchar High School, Kamargora, Icchar, Purulia	23°37'21.6"N 86°29'25.1"E	25.10.2023	63.7	35.4	13.5	15.6
		16.11.2023	67.6	38.7	15.2	20.4
		06.12.2023	62.4	34.3	13.2	14.7
Near Kali Mandir, Railway Colony, Bhojudih	23°38'20.7"N 86°26'46.3"E	25.10.2023	67.5	37.5	14.2	18.6
		16.11.2023	75.6	42.5	15.2	22.7
		06.12.2023	62.5	32.8	13.4	14.5
Utkramit Madhya Vidyalaya, Manpur, Chandankyari, Bokaro	23°39'00.9"N 86°23'44.4"E	26.10.2023	65.7	34.2	13.6	14.3
		17.11.2023	67.6	35.6	14.2	15.3
		07.12.2023	63.2	33.2	13.4	14.2
Santaldih Thermal Power Station, Santaldih	23°36'01.5"N 86°28'20.6"E	26.10.2023	72.8	39.8	15.6	20.5
		17.11.2023	77.5	43.3	16.8	23.5
		07.12.2023	64.3	33.5	14.2	14.6
Minimum			62.5	32.8	13.2	14.3
Maximum			77.5	43.3	16.8	23.5
Average			67.53	36.73	14.37	17.40


**Area Manager (Environment)**

**Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)****Ambient Air Quality Analysis Report****Period-** January'24 to March'24

Name of Industry : Premsinghdih Sand Mining Project

No. of sampling points : 4

Sampling Location	Date of Sampling/ Weather Condition		
	January'24	February'24	March'24
Icechar High School, Kamargora, Icechar, Purulia	23.012024/ Clear	22.02.2024/Cloudy	27.03.2024/ Clear
Near Kali Mandir, Railway Colony, Bhojudih	23.012024/ Clear	22.02.2024/Cloudy	27.03.2024/ Clear
Utkramit Madhya Vidyalaya, Manpur, Chandankyari, Bokaro	24.01.2024/ Clear	23.02.2024/ Clear	28.03.2024/ Clear
Santaldih Thermal Power Station, Santaldih	24.01.2024/ Clear	23.02.2024/ Clear	28.03.2024/ Clear

Location	Latitude/ Longitude	Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>
			PM <sub>10</sub> Level : 24 Hourly Limit- 100µg/m <sup>3</sup>	PM <sub>2.5</sub> Level : 24 Hourly Limit- 60µg/m <sup>3</sup>	SO <sub>2</sub> Level: 24 Hourly Limit-80µg/m <sup>3</sup>	NO <sub>2</sub> Level: 24 Hourly Limit-80µg/m <sup>3</sup>
Icchar High School, Kamargora, Icchar, Purulia	23°37'21.6"N 86°29'25.1"E	23.012024	63.7	35.3	14.5	19.8
		22.02.2024	64.8	36.5	15.6	23.7
		27.03.2024	64.5	35.7	15.2	21.4
Near Kali Mandir, Railway Colony, Bhojudih	23°38'20.7"N 86°26'46.3"E	23.012024	70.5	36.3	16.7	20.6
		22.02.2024	73.8	39.5	17.4	23.5
		27.03.2024	72.4	37.5	16.7	21.8
Utkramit Madhya Vidyalaya, Manpur, Chandankyari, Bokaro	23°39'00.9"N 86°23'44.4"E	24.01.2024	65.8	34.7	14.8	19.6
		23.02.2024	64.5	35.8	15.7	22.4
		28.03.2024	63.7	34.2	14.7	19.8
Santaldih Thermal Power Station, Santaldih	23°36'01.5"N 86°28'20.6"E	24.01.2024	63.5	32.8	14.6	18.6
		23.02.2024	64.8	34.6	15.3	21.6
		28.03.2024	63.4	33.2	13.9	18.8
Minimum			63.4	32.8	13.9	18.6
Maximum			73.8	39.5	17.4	23.7
Average			66.28	35.50	15.42	20.96


**Area Manager (Environment)**

**Ambient Air Quality and Ground Water Quality Report (Period – October’23 to March’24)****Ground Water Quality Analysis****Ground water level fluctuation in and around Core & Buffer zone area of sand mining lease  
Post- Monsoon Season- November’23**

S.No	Date	Location	Time	Sample Parameter		
				Depth in meter (m)	pH	Electrical Conductivity, $\mu\text{S/m}$
1	15.11.2023	Premsinghdih	10:40AM	2.18	7.3	615
2	15.11.2023	Lagla	11:45AM	2.10	7.2	495
3	15.11.2023	Alakdih	11:10AM	1.48	7.1	510
4	15.11.2023	Joradih	12:48PM	2.10	7.2	570
5	15.11.2023	SEB Quarters	11:45AM	2.12	7.3	652
6	15.11.2023	Kargali	02:55PM	2.20	7.2	487
7	15.11.2023	Kumargora	01:15PM	1.42	7.1	589
8	15.11.2023	Bhojudih	01:35PM	1.32	7.2	578
9	15.11.2023	Mahal	12:15PM	1.48	7.1	524
10	15.11.2023	Sudamdih	02:10 PM	1.60	7.2	595

**Winter Season- January’24**

S.No.	Date	Location	Time	Sample Parameter		
				Depth in meter (m)	pH	Electrical Conductivity, $\mu\text{S/m}$
1	24.01.2024	Premsinghdih	10:15AM	2.45	7.2	605
2	24.01.2024	Lagla	11:42AM	2.40	7.1	510
3	24.01.2024	Alakdih	10:58AM	2.15	7.2	524
4	24.01.2024	Joradih	01:50PM	2.52	7.2	579
5	24.01.2024	SEB Quarters	11:22AM	2.58	7.0	675
6	24.01.2024	Kargali	01:55PM	2.58	7.2	512
7	24.01.2024	Kumargora	11:40PM	1.83	7.1	615
8	24.01.2024	Bhojudih	12:58PM	1.75	7.2	603
9	24.01.2024	Mahal	12:18PM	1.86	7.1	542
10	24.01.2024	Sudamdih	12:12PM	2.04	7.2	598


**Area Manager (Environment)**

## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

## Surface Water Quality Analysis


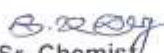


S.No.	Location	Sampling Date	Sampling Time	Temp	pH	TSS	BOD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	30 mg/l	10 mg/l
1.	River Gowai Up Stream	29.03.2024	10:34AM	27.5	7.8	24	2.1	0.7
2.	River Damodar Down Stream	29.03.2024	10:55AM	27.6	7.7	23	2.2	0.6
3.	Lagla (Pond)	29.03.2024	01:38 PM	26.8	7.5	23	2.4	0.4
4.	Alakhdihi(Pond)	29.03.2024	01:42 PM	27.5	7.6	22	2.6	0.3
5.	Joradihi (Pond)	29.03.2024	11:45 AM	26.7	7.6	23	2.8	0.2
6.	SEB Quarters (Pond)	29.03.2024	11:12 AM	28.4	7.5	22	2.7	0.1
7.	Kargali (Pond)	29.03.2024	12:35AM	27.5	7.4	24	2.3	0.1
8.	Kumargora (Pond)	29.03.2024	12:50 PM	26.8	7.5	23	2.6	0.2
9.	Bhojudih (Pond)	29.03.2024	12:40 PM	27.4	7.3	22	2.5	0.1




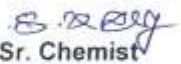


Area Manager (Environment)




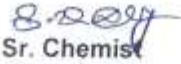


## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&amp;D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	<p>Plot No - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriadi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608</p>																																																																						
Ref. No.: - ARDS/23-24/1436		Date: 18.11.2023																																																																						
<b>TEST REPORT OF AMBIENT AIR QUALITY</b>																																																																								
<ul style="list-style-type: none"> <li>• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. – DHANBA D (JHARKHAND)</li> <li>• Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021</li> <li>• Date of Sample Collection : 13/11/2023 – 14/11/2023</li> <li>• Date of Testing : 15/11/2023 – 16/11/2023</li> <li>• Test Procedure : As per IS-5182</li> </ul>																																																																								
<b>TEST RESULTS</b>																																																																								
LOCATION – ICCHAR HIGH SCHOOL																																																																								
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## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)





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<div style="display: flex; justify-content: space-between;"> <span>Ref. No.: - ARDS/23-24/1437</span> <span>Date: 18.11.2023</span> </div> <h3 style="text-align: center; margin: 10px 0;">TEST REPORT OF AMBIENT AIR QUALITY</h3> <ul style="list-style-type: none"> <li>Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021</li> <li>Date of Sample Collection : 13/11/2023 – 14/11/2023</li> <li>Date of Testing : 15/11/2023 – 16/11/2023</li> <li>Test Procedure : As per IS-5182</li> </ul> <h4 style="text-align: center; margin: 10px 0;">TEST RESULTS</h4> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="4" style="text-align: left; padding: 5px;">LOCATION – LAGLA GRAM PANCHYAT</th> </tr> <tr> <th style="width: 10%;"></th> <th style="width: 40%;">Avg. Ambient Temperature</th> <th style="width: 10%;">30°C</th> <th style="width: 40%;">Avg. Humidity</th> </tr> <tr> <th>SI No.</th> <th>Particulars</th> <th>Value</th> <th>CPCB STANDARD</th> </tr> </thead> <tbody> <tr><td>1.</td><td>Particulate Matter (PM<sub>10</sub>), µg/m<sup>3</sup></td><td>69.10</td><td>100 µg/m<sup>3</sup></td></tr> <tr><td>2.</td><td>Particulate Matter (PM<sub>2.5</sub>), µg/m<sup>3</sup></td><td>40.46</td><td>60 µg/m<sup>3</sup></td></tr> <tr><td>3.</td><td>SO<sub>2</sub>, µg/m<sup>3</sup></td><td>13.25</td><td>80 µg/m<sup>3</sup></td></tr> <tr><td>4.</td><td>NO<sub>2</sub>, µg/m<sup>3</sup></td><td>28.40</td><td>80 µg/m<sup>3</sup></td></tr> <tr><td>5.</td><td>Ozone, µg/m<sup>3</sup></td><td>15.28</td><td>180 µg/m<sup>3</sup></td></tr> <tr><td>6.</td><td>NH<sub>3</sub>, µg/m<sup>3</sup></td><td>19.46</td><td>400 µg/m<sup>3</sup></td></tr> <tr><td>7.</td><td>CO, mg/m<sup>3</sup></td><td>0.60</td><td>4 mg/m<sup>3</sup></td></tr> <tr><td>8.</td><td>Pb, µg/m<sup>3</sup></td><td>BDL</td><td>1 µg/m<sup>3</sup></td></tr> <tr><td>9.</td><td>As, ng/m<sup>3</sup></td><td>BDL</td><td>6 ng/m<sup>3</sup></td></tr> <tr><td>10.</td><td>Ni, ng/m<sup>3</sup></td><td>BDL</td><td>20 ng/m<sup>3</sup></td></tr> <tr><td>11.</td><td>Benzene, µg/m<sup>3</sup></td><td>BDL</td><td>5 µg/m<sup>3</sup></td></tr> <tr><td>12.</td><td>Benzoapyrene ng/m<sup>3</sup></td><td>BDL</td><td>1 ng/m<sup>3</sup></td></tr> </tbody> </table> <p style="font-size: x-small; margin-top: 5px;">NOTE: BDL - Below Detection Limit</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;">   <b>Sr. Chemist</b>            Aditi R&amp;D Services         </div> <div style="text-align: center;">  </div> <div style="text-align: center;">   <b>Technical Manager</b>            Aditi R&amp;D Services, Sindri         </div> </div>			LOCATION – LAGLA GRAM PANCHYAT					Avg. Ambient Temperature	30°C	Avg. Humidity	SI No.	Particulars	Value	CPCB STANDARD	1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	69.10	100 µg/m <sup>3</sup>	2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	40.46	60 µg/m <sup>3</sup>	3.	SO <sub>2</sub> , µg/m <sup>3</sup>	13.25	80 µg/m <sup>3</sup>	4.	NO <sub>2</sub> , µg/m <sup>3</sup>	28.40	80 µg/m <sup>3</sup>	5.	Ozone, µg/m <sup>3</sup>	15.28	180 µg/m <sup>3</sup>	6.	NH <sub>3</sub> , µg/m <sup>3</sup>	19.46	400 µg/m <sup>3</sup>	7.	CO, mg/m <sup>3</sup>	0.60	4 mg/m <sup>3</sup>	8.	Pb, µg/m <sup>3</sup>	BDL	1 µg/m <sup>3</sup>	9.	As, ng/m <sup>3</sup>	BDL	6 ng/m <sup>3</sup>	10.	Ni, ng/m <sup>3</sup>	BDL	20 ng/m <sup>3</sup>	11.	Benzene, µg/m <sup>3</sup>	BDL	5 µg/m <sup>3</sup>	12.	Benzoapyrene ng/m <sup>3</sup>	BDL	1 ng/m <sup>3</sup>
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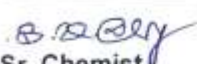


	<h2 style="margin: 0;">ADITI R&amp;D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriadits@gmail.com Website: aditirnds.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608		
Ref. No.: - ARDS/23-24/1438		Date: 18.11.2023		
<b>TEST REPORT OF AMBIENT AIR QUALITY</b>				
<ul style="list-style-type: none"> <li>• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>• Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021</li> <li>• Date of Sample Collection : 13/11/2023 to 14/11/2023</li> <li>• Date of Testing : 15/11/2023 – 16/11/2023</li> <li>• Test Procedure : As per IS-5182</li> </ul>				
<b>TEST RESULTS</b>				
LOCATION – SAHARJURI SCHOOL				
	Avg. Ambient Temperature	30°C	Avg. Humidity	40%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	78.45	100 µg/m <sup>3</sup>	
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	46.12	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	14.36	80 µg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	26.42	80 µg/m <sup>3</sup>	
5.	Ozone, µg/m <sup>3</sup>	16.65	180 µg/m <sup>3</sup>	
6.	NH <sub>3</sub> , µg/m <sup>3</sup>	15.32	400 µg/m <sup>3</sup>	
7.	CO, mg/m <sup>3</sup>	0.64	4 mg/m <sup>3</sup>	
8.	Pb, µg/m <sup>3</sup>	BDL	1 µg/m <sup>3</sup>	
9.	As, ng/m <sup>3</sup>	BDL	6 ng/m <sup>3</sup>	
10.	Ni, ng/m <sup>3</sup>	BDL	20 ng/m <sup>3</sup>	
11.	Benzene, µg/m <sup>3</sup>	BDL	5 µg/m <sup>3</sup>	
12.	Benzoapyrene ng/m <sup>3</sup>	BDL	1 ng/m <sup>3</sup>	
NOTE: BDL - Below Detection Limit				
 Sr. Chemist Aditi R&D Services			 Technical Manager Aditi R&D Services, Sindri	
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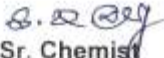


## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

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<p>Ref. No.: - ARDS/23-24/1439</p>		<p>Date: 18.11.2023</p>		
<h3>TEST REPORT OF AMBIENT AIR QUALITY</h3>				
<ul style="list-style-type: none"> <li>• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>• Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021</li> <li>• Date of Sample Collection : 13/11/2023 to 14/11/2023</li> <li>• Date of Testing : 15/11/2023 – 16/11/2023</li> <li>• Test Procedure : As per IS-5182</li> </ul>				
<h3>TEST RESULTS</h3>				
<p>LOCATION – RAILWAY COLONY , BHOJUDIH</p>				
	Avg. Ambient Temperature	30°C	Avg. Humidity	40%
SI No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	80.92	100 µg/m <sup>3</sup>	
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	49.55	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	15.25	80 µg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	28.48	80 µg/m <sup>3</sup>	
5.	Ozone, µg/m <sup>3</sup>	15.30	180 µg/m <sup>3</sup>	
6.	NH <sub>3</sub> , µg/m <sup>3</sup>	18.40	400 µg/m <sup>3</sup>	
7.	CO, mg/m <sup>3</sup>	0.32	4 mg/m <sup>3</sup>	
8.	Pb, µg/m <sup>3</sup>	BDL	1 µg/m <sup>3</sup>	
9.	As, µg/m <sup>3</sup>	BDL	6 µg/m <sup>3</sup>	
10.	Ni, µg/m <sup>3</sup>	BDL	20 µg/m <sup>3</sup>	
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 Sr. Chemist Aditi R&D Services			 Technical Manager Aditi R&D Services, Sindri	
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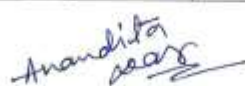


		<b>ADITI R&amp;D SERVICES</b> <b>Testing Laboratory</b> <b>NABL ACCREDITED</b> <b>(A Constituent Board of Quality Council of India)</b> <b>ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</b>		Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608					
<b>TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING</b>									
Ref. No. & Date		NAME AND ADDRESS OF THE CLIENT							
ARDS/23-24/1440 Date: 18.11.2023		TATA STEEL JHARIA DIVISION							
Date of Monitoring		TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)							
13/11/2023 – 14/11/2023		Avg. Ambient Temperature (°C)	Average Humidity (%)	Weather Condition	Status of the plant				
Work Order. 4700092573/932 Dt. 20.07.2021		30	40	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			
LOCATION		MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Residential Area	Residential Area
SAND LEASE AREA									
1.	Saharjuri School	59	43	56.1	42	35	39.78	65.00	55.00
2.	Lagla Gram Panchyat	53	41	50.26	36	32	34.45		
3.	Icchar High School	52	42	49.40	44	38	41.96		
4.	Railway Colony Bhojudih	54	40	51.16	41	33	38.63		
 Sr. Chemist Aditi R&D Services				 Technical Manager Aditi R&D Services, Sindri					
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## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)


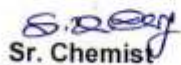


	<h2 style="margin: 0;">ADITI R&amp;D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608																						
<div style="display: flex; justify-content: space-between;"> <span>Ref. No.: - ARDS/23-24/1441</span> <span>Date: 18.11.2023</span> </div> <div style="text-align: center; margin-top: 20px;"> <h3><u>TEST REPORT OF MINERALOGICAL COMPOSITION</u></h3> <h3><u>OF PARTICULATE MATTER</u></h3> </div> <div style="margin-top: 20px;"> <ul style="list-style-type: none"> <li>• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>• Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021</li> <li>• Date of Sample Collection : 14/11/2023</li> <li>• Date of Testing : 15/11/2023 to 16/11/2023</li> </ul> </div> <div style="text-align: center; margin-top: 20px;"> <h3><u>TEST RESULTS</u></h3> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Sl No.</th> <th rowspan="2">Particulars</th> <th colspan="4">Mineralogical Composition (%)</th> </tr> <tr> <th>SiO<sub>2</sub></th> <th>FeO</th> <th>Al<sub>2</sub>O<sub>3</sub></th> <th>CaO</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Lagla Gram Panchyat</td> <td style="text-align: center;">1.89</td> <td style="text-align: center;">0.09</td> <td style="text-align: center;">1.18</td> <td style="text-align: center;">2.6</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Saharjuri School</td> <td style="text-align: center;">1.8</td> <td style="text-align: center;">0.16</td> <td style="text-align: center;">1.38</td> <td style="text-align: center;">2.84</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 30%; text-align: center;">   <b>Sr. Chemist</b>            Aditi R&amp;D Services         </div> <div style="width: 20%; text-align: center;">  </div> <div style="width: 30%; text-align: center;">   <b>Technical Manager</b>            Aditi R&amp;D Services, Sindri         </div> </div>			Sl No.	Particulars	Mineralogical Composition (%)				SiO <sub>2</sub>	FeO	Al <sub>2</sub> O <sub>3</sub>	CaO	1.	Lagla Gram Panchyat	1.89	0.09	1.18	2.6	2.	Saharjuri School	1.8	0.16	1.38	2.84
Sl No.	Particulars	Mineralogical Composition (%)																						
		SiO <sub>2</sub>	FeO	Al <sub>2</sub> O <sub>3</sub>	CaO																			
1.	Lagla Gram Panchyat	1.89	0.09	1.18	2.6																			
2.	Saharjuri School	1.8	0.16	1.38	2.84																			
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## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)


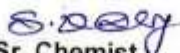


	<b>ADITI R&amp;D SERVICES</b> <b>Testing Laboratory</b> <b>NABL ACCREDITED</b> (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608					
Ref. No.: - ARDS/23-24/1442		Date: 18.11.2023					
<b>TEST REPORT OF SURFACE WATER</b>							
<ul style="list-style-type: none"> <li>• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>• Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021</li> <li>• Sample Code : 1. Izri River (Up Stream) 2. Izri River (Dn. Stream) 3. Gowai River (Up Stream) 4. Gowai River (Dn. Stream)</li> <li>• Date of Sample Collection : 13/11/2023</li> <li>• Date of Testing : 15/11/2023 to 18/11/2023</li> <li>• Test : pH, TDS, Turbidity, DO, BOD, C I, F, SO<sub>4</sub></li> </ul>							
<b>TEST RESULT</b>							
Sl. No.	PARAMETERS OF TEST	VALUE				Limit as per IS 2296 Class - C	Test Method
		Izri River (Up Stream)	Izri River (Dn. Stream)	Gowai River (Up Stream)	Gowai River (Dn. Stream)		
1.	pH	7.4	7.5	7.5	7.7	6.5 - 8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	221	234	240	247	1500 (Max.)	IS-3025 (P-16): 1984
3.	Turbidity, NTU	NIL	1	1	1	-	IS-3025 (P-10):1984
4.	Dissolved Oxygen, mg/l	5.7	5.9	6.1	6.3	4.0 (Min)	IS-3025 (P-38):1989
5.	Bio chemical Oxygen Demand, mg/l	1.8	2.0	1.2	1.0	3.0	IS-3025 (P-44):1994
6.	Chloride as Cl, mg/l	18.6	16.7	18.5	22.3	-	IS-3025 (P-32):1988
7.	Fluoride as F, mg/l	0.54	0.50	0.59	0.64	1.5	IS-3025 (P-60):2008
8.	Sulphate as SO <sub>4</sub> , mg/l	59	49	45	50	400	IS-3025 (P-24):1986
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   <b>Sr. Chemist</b>  <b>Aditi R&amp;D Services</b> </div> <div style="text-align: center;">  </div> <div style="text-align: center;">   <b>Technical Manager</b>  <b>Aditi R&amp;D Services, Sindri</b> </div> </div>							
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## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)


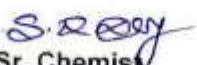


	<h2 style="margin: 0;">ADITI R&amp;D SERVICES</h2> <p style="margin: 0;"><b>Testing Laboratory</b></p> <p style="margin: 0;"><b>NABL ACCREDITED</b></p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;"><b>ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</b></p>	<p>Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirnds-services.com Phone: 0326-2562377 (O) Mobile: 09471358492, 09431512608</p>		
<p>Ref. No.: - ARDS/23-24/1904 <span style="float: right;">Date: 13.02.2024</span></p>				
<h3><u>TEST REPORT OF AMBIENT AIR QUALITY</u></h3>				
<ul style="list-style-type: none"> <li>• Name of the industry</li> <li>• Work Order Ref. NO.:</li> <li>• Date of Sample Collection</li> <li>• Date of Testing</li> <li>• Test Procedure</li> </ul>	<p>: TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. – DHANBA D (JHARKHAND)</p> <p>: 4700092573/932 Dt. 20.07.2021</p> <p>: 07/02/2024 – 08/02/2024</p> <p>: 09/02/2024 – 12/02/2024</p> <p>: As per IS-5182</p>			
<h3><u>TEST RESULTS</u></h3>				
<p><b>LOCATION – ICCHAR HIGH SCHOOL</b></p>				
	Avg. Ambient Temperature	24°C	Avg. Humidity	38%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	66.83	100 µg/m <sup>3</sup>	
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	39.12	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	19.24	80 µg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	30.46	80 µg/m <sup>3</sup>	
5.	Ozone, µg/m <sup>3</sup>	15.38	180 µg/m <sup>3</sup>	
6.	NH <sub>3</sub> , µg/m <sup>3</sup>	18.15	400 µg/m <sup>3</sup>	
7.	CO, mg/m <sup>3</sup>	0.48	4 mg/m <sup>3</sup>	
8.	Pb, µg/m <sup>3</sup>	BDL	1 µg/m <sup>3</sup>	
9.	As, ng/m <sup>3</sup>	BDL	6 ng/m <sup>3</sup>	
10.	Ni, ng/m <sup>3</sup>	BDL	20 ng/m <sup>3</sup>	
11.	Benzene, µg/m <sup>3</sup>	BDL	5 µg/m <sup>3</sup>	
12.	Benzoapyrene ng/m <sup>3</sup>	BDL	1 ng/m <sup>3</sup>	
<p>NOTE: BDL - Below Detection Limit</p>				
 <b>Sr. Chemist</b> Aditi R&D Services			 <b>Technical Manager</b> Aditi R&D Services, Sindri	
<p><b>Statements :</b></p> <ol style="list-style-type: none"> <li>The test report refers only to the particular item(s) submitted for testing.</li> <li>The test results reported in this report are valid at the time of and under the stated condition of measurement.</li> <li>This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.</li> </ol>				



## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

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<p>Ref. No.: - ARDS/23-24/1905 <span style="float: right;">Date: 13.02.2024</span></p>				
<h3><u>TEST REPORT OF AMBIENT AIR QUALITY</u></h3>				
<p>Name of the industry : TATA STEEL JHARIA DIVISION</p> <p style="margin-left: 150px;">TATA STEEL COLLIERY</p> <p style="margin-left: 150px;">(SAND LEASE AREA, BHOJUDIH)</p> <p style="margin-left: 150px;">DIST. - DHANBAD (JHARKHAND)</p>				
<p>Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021</p>				
<p>Date of Sample Collection : 07/02/2024 – 08/02/2024</p>				
<p>Date of Testing : 09/02/2024 – 12/02/2024</p>				
<p>Test Procedure : As per IS-5182</p>				
<h3><u>TEST RESULTS</u></h3>				
<p>LOCATION – LAGLA GRAM PANCHYAT</p>				
	Avg. Ambient Temperature	24°C	Avg. Humidity	38%
SI No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	63.37	100 µg/m <sup>3</sup>	
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	37.05	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	17.29	80 µg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	30.88	80 µg/m <sup>3</sup>	
5.	Ozone, µg/m <sup>3</sup>	16.35	180 µg/m <sup>3</sup>	
6.	NH <sub>3</sub> , µg/m <sup>3</sup>	18.54	400 µg/m <sup>3</sup>	
7.	CO, mg/m <sup>3</sup>	0.56	4 mg/m <sup>3</sup>	
8.	Pb, µg/m <sup>3</sup>	BDL	1 µg/m <sup>3</sup>	
9.	As, ng/m <sup>3</sup>	BDL	6 ng/m <sup>3</sup>	
10.	Ni, ng/m <sup>3</sup>	BDL	20 ng/m <sup>3</sup>	
11.	Benzene, µg/m <sup>3</sup>	BDL	5 µg/m <sup>3</sup>	
12.	Benzoapyrene ng/m <sup>3</sup>	BDL	1 ng/m <sup>3</sup>	
<p>NOTE: BDL - Below Detection Limit</p>				
 <b>Sr. Chemist</b> <b>Aditi R&amp;D Services</b>		  <b>Technical Manager</b> <b>Aditi R&amp;D Services, Sindri</b>		
<p><b>Statements :</b></p> <p>1. The test report refers only to the particular item(s) submitted for testing.</p> <p>2. The test results reported in this report are valid at the time of and under the stated condition of measurement.</p> <p>3. This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.</p>				

## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&amp;D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;"><b>NABL ACCREDITED</b></p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;"><b>ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</b></p>	<p>Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirnds-services.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608</p>
Ref. No.: - ARDS/23-24/1906		Date: 13.02.2024
<b><u>TEST REPORT OF AMBIENT AIR QUALITY</u></b>		
<ul style="list-style-type: none"> <li>• Name of the industry</li> <li>• Work Order Ref. NO.</li> <li>• Date of Sample Collection</li> <li>• Date of Testing</li> <li>• Test Procedure</li> </ul>	<ul style="list-style-type: none"> <li>: TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>: 4700092573/932 Dt. 20.07.2021</li> <li>: 07/02/2024 – 08/02/2024</li> <li>: 09/02/2024 – 12/02/2024</li> <li>: As per IS-5182</li> </ul>	
<b><u>TEST RESULTS</u></b>		
LOCATION – SAHARJURI SCHOOL		
	Avg. Ambient Temperature	24°C
	Avg. Humidity	38%
SI No.	Particulars	Value
		CPCB STANDARD
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	65.24
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	38.15
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	17.83
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	26.95
5.	Ozone, µg/m <sup>3</sup>	17.23
6.	NH <sub>3</sub> , µg/m <sup>3</sup>	15.23
7.	CO, mg/m <sup>3</sup>	0.44
8.	Pb, µg/m <sup>3</sup>	BDL
9.	As, ng/m <sup>3</sup>	BDL
10.	Ni, ng/m <sup>3</sup>	BDL
11.	Benzene, µg/m <sup>3</sup>	BDL
12.	Benzoapyrene ng/m <sup>3</sup>	BDL
<p>NOTE: BDL - Below Detection Limit</p>		
 <b>Sr. Chemist</b> Aditi R&D Services		 <b>Technical Manager</b> Aditi R&D Services, Sindri
<p><b>Statements :</b></p> <ol style="list-style-type: none"> <li>The test report refers only to the particular item(s) submitted for testing.</li> <li>The test results reported in this report are valid at the time of and under the stated condition of measurement.</li> <li>This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.</li> </ol>		



## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

**ADITI R&D SERVICES****Testing Laboratory****NABL ACCREDITED****(A Constituent Board of Quality Council of India)****ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified**

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

Ref. No.: - ARDS/23-24/1907

Date: 13.02.2024

**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 : 07/02/2024 – 08/02/2024
- Date of Testing : 09/02/2024 – 12/02/2024
- Test Procedure : As per IS-5182

**TEST RESULTS**

LOCATION – RAILWAY COLONY, BHOJUDIH

	Avg. Ambient Temperature	24°C	Avg. Humidity	38%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	78.12	100 µg/m <sup>3</sup>	
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	44.83	60 µg/m <sup>3</sup>	
3.	SO <sub>2</sub> , µg/m <sup>3</sup>	21.44	80 µg/m <sup>3</sup>	
4.	NO <sub>2</sub> , µg/m <sup>3</sup>	29.52	80 µg/m <sup>3</sup>	
5.	Ozone, µg/m <sup>3</sup>	15.64	180 µg/m <sup>3</sup>	
6.	NH <sub>3</sub> , µg/m <sup>3</sup>	19.46	400 µg/m <sup>3</sup>	
7.	CO, mg/m <sup>3</sup>	0.49	4 mg/m <sup>3</sup>	
8.	Pb, µg/m <sup>3</sup>	BDL	1 µg/m <sup>3</sup>	
9.	As, ng/m <sup>3</sup>	BDL	6 ng/m <sup>3</sup>	
10.	Ni, ng/m <sup>3</sup>	BDL	20 ng/m <sup>3</sup>	
11.	Benzene, µg/m <sup>3</sup>	BDL	5 µg/m <sup>3</sup>	
12.	Benzo(a)pyrene, ng/m <sup>3</sup>	BDL	1 ng/m <sup>3</sup>	

NOTE: BDL - Below Detection Limit

*S. D. S.*  
Sr. Chemist

Aditi R&amp;D Services






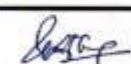
*[Signature]*

Technical Manager  
Aditi R&D Services, Sindri

**Statements :**


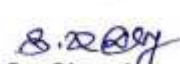


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## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)




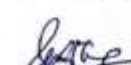
		<b>ADITI R&amp;D SERVICES</b> <b>Testing Laboratory</b> <b>NABL ACCREDITED</b> (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified		Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358482, 09431512608					
<b>TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING</b>									
Ref. No. & Date		NAME AND ADDRESS OF THE CLIENT							
ARDS/23-24/1872 Date: 09.02.2024		TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)							
Date of Monitoring									
07/02/2024 – 08/02/2024		Avg. Ambient Temperature (°C)	Average Humidity (%)	Weather Condition	Status of the plant				
Work Order 4700092573/932 Dt. 20.07.2021		24	38	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 Day Time      Night Time Residential Area      Residential Area			
	LOCATION	MAX	MIN	AVG. dB(A) Leq	AVERAGE dB(A) Leq				
	SAND LEASE AREA								
1.	Saharjuri School	61	44	58.08	46	35	43.32	65.00	55.00
2.	Lagla Gram Panchyat	53	42	50.32	39	30	36.50		
3.	Ichchar High School	58	40	55.06	43	36	40.78		
4.	Railway Colony Bhojidihi	56	45	53.32	44	34	41.40		
 Sr. Chemist Aditi R&D Services				 Technical Manager Aditi R&D Services, Sindri					
<b>Statements :</b> 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 measurement. 3. This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.									



## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<b>ADITI R&amp;D SERVICES</b> <b>Testing Laboratory</b> <b>NABL ACCREDITED</b> (A Constituent Board of Quality Council of India) <b>ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</b>	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirnds-services.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608
<div style="display: flex; justify-content: space-between;"> <span>Ref. No.: - ARDS/23-24/1902</span> <span>Date: 12.02.2024</span> </div>		
<b><u>TEST REPORT OF MINERALOGICAL COMPOSITION</u></b> <b><u>OF PARTICULATE MATTER</u></b>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">•</div> <div style="width: 90%;"> <b>Name of the industry : TATA STEEL JHARIA DIVISION</b>  <b>TATA STEEL COLLIERY</b>  <b>(SAND LEASE AREA, BHOJUDIH)</b>  <b>DIST. - DHANBAD (JHARKHAND)</b> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">•</div> <div style="width: 90%;"> <b>Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021</b> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">•</div> <div style="width: 90%;"> <b>Date of Sample Collection : 08/02/2024</b> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">•</div> <div style="width: 90%;"> <b>Date of Testing : 09/02/2024 to 11/02/2024</b> </div> </div>		
<b><u>TEST RESULTS</u></b>		
Sl No.	Particulars	Mineralogical Composition (%)
		SiO <sub>2</sub> FeO    Al <sub>2</sub> O <sub>3</sub> CaO
1.	Icchar High School	1.62    0.07    1.15    2.4
2.	Railway Colony Bhojudih	1.7    0.12    1.18    2.32
<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">   <b>Sr. Chemist</b>  <b>Aditi R&amp;D Services</b> </div> <div style="text-align: center;">  </div> <div style="text-align: center;">   <b>Technical Manager</b>  <b>Aditi R&amp;D Services, Sindri</b> </div> </div>		
<b>Statements :</b>		
1. The test report refers only to the particular item(s) submitted for testing.		
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## Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&amp;D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;"><b>NABL ACCREDITED</b></p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;"><b>ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</b></p>	<p>Plot No. - I-B-17 (P)</p> <p>Sindri, Industrial Area,</p> <p>P.O.- Domgarh, Dist.- Dhanbad</p> <p>Jharkhand - 828107</p> <p>Email ID: sindriaditi@gmail.com</p> <p>Website: aditirndservices.com</p> <p>Phone: 0326-2952377 (O)</p> <p>Mobile: 09471368492, 09431512608</p>		
Ref. No.: - ARDS/23-24/1923		Date: 15.02.2024		
<b><u>TEST REPORT OF SURFACE WATER</u></b>				
<ul style="list-style-type: none"> <li>• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)</li> <li>• Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021</li> <li>• Sample Code :                <ul style="list-style-type: none"> <li>1. Gowai River (Up Stream)</li> <li>2. Gowai River (Dn. Stream)</li> <li>3. Izri River (Up Stream)</li> <li>4. Izri River (Dn. Stream)</li> </ul> </li> <li>• Date of Sample Collection : 08/02/2024</li> <li>• Date of Testing : 09/02/2024 to 14/02/2024</li> <li>• Test : pH, TDS, Turbidity, DO, BOD, C I, F, SO<sub>4</sub></li> </ul>				
<b><u>TEST RESULT</u></b>				
Sl. No.	PARAMETERS OF TEST	VALUE	Limit as per IS	Test Method
		<div style="display: flex; justify-content: space-around;"> <div>Gowai River (Up Stream)</div> <div>Gowai River (Dn. Stream)</div> <div>Izri River (Up Stream)</div> <div>Izri River (Dn. Stream)</div> </div>	2296 Class - C	
1.	pH	7.8      8.0      8.1      8.2	6.5 - 8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	320      327      312      319	1500 (Max.)	IS-3025 (P-16): 1984
3.	Turbidity, NTU	1.2      1.4      1.0      1.6	-	IS-3025 (P-10): 1984
4.	Dissolved Oxygen, mg/l	5.5      5.7      6.0      6.4	4.0 (Min)	IS-3025 (P-38): 1989
5.	Bio chemical Oxygen Demand, mg/l	1.5      1.9      2.0      2.3	3.0	IS-3025 (P-44): 1994
6.	Chloride as Cl, mg/l	36.1      34.2      39.88      37.98	600 (Max.)	IS-3025 (P-32): 1988
7.	Fluoride as F, mg/l	0.52      0.56      0.45      0.52	1.5	IS-3025 (P-60): 2008
8.	Sulphate as SO <sub>4</sub>	45.8      40.6      30.6      39.2	400	IS-3025 (P-24): 1986
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   <b>Sr. Chemist</b>            Aditi R&amp;D Services         </div> <div style="text-align: center;">  </div> <div style="text-align: center;">   <b>Technical Manager</b>            Aditi R&amp;D Services, Sindri         </div> </div>				
<b>Statements :</b> <ol style="list-style-type: none"> <li>The test report refers only to the particular item(s) submitted for testing.</li> <li>The test results reported in this report are valid at the time of and under the stated condition of measurement.</li> <li>This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory.</li> </ol>				