



Ref No: VII/MINES/24-25/190

Date: 25.11.2024

To,  
Deputy Director General of Forest ©  
Ministry of Environment, Forest and Climate Change,  
Regional Office,  
2<sup>nd</sup> Floor, Headquarter, Jharkhand State Housing Board,  
Harmu Chowk,  
Ranchi, Jharkhand – 834002  
Email- ro.ranchi-mef@gov.in

**Sub: Six Monthly Compliance status of conditions of Environmental Clearance of 2.5 MTPA (Iron Ore Mining) in respect of Vijay II Iron Ore Mine for the period from 01<sup>st</sup> April to 30 Sep 2024.**


**Ref: Environmental clearance letter No.J-11015/507/2007-IA.II (M) Dated 22<sup>nd</sup> December- 2008.**

Respected Sir,

With reference to the above cited subject, we are here by submitting the six monthly compliance status of conditions of 2.5MTPA (Iron Ore Mining) environmental clearance along with the annexure, for the period from **01 April 2024 to 30 Sep. 2024 in respect of Vijay II Iron Ore Mine of M/s Tata Steel Limited.**

This is submitted for your kind information and record.

Thanking you,  
Yours faithfully,  
For M/S Tata Steel Limited,

  
**Mines Manager**  
**Vijay-II Iron Ore Mine,**  
**Ghatkuri R.F.**

Encl. : As above

Copy to : **The Chairman, Central Pollution Control Board, Southern Conclave, Block -502 5<sup>th</sup> & 6<sup>th</sup> Floors, 1582 Rajdanga Main Road, Kolkata- 700107(W.B).**  
: **The Member Secretary, State Pollution Control Board, T.A. Division (Ground Floor), H.E.C. Dhurwa, Ranchi- 834004 (Jharkhand)**  
: **The Regional Officer, JSPCB, MB/12 New Housing Colkony, Adityapur, Jamshedpur**

**TATA STEEL LIMITED**

Mines Division Noamundi 833 217 India

Tel 91 9234301340 Fax 91 6596 290737

Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

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

<b>Proposal No</b>	IA/JH/MIN/224453/2021
<b>Compliance ID</b>	112331718
<b>Compliance Number(For Tracking)</b>	EC/M/COMPLIANCE/112331718/2024
<b>Reporting Year</b>	2024
<b>Reporting Period</b>	01 Dec(01 Apr - 30 Sep)
<b>Submission Date</b>	29-11-2024
<b>RO/SRO Name</b>	ARTATRANA MISHRA
<b>RO/SRO Email</b>	jhk109@ifs.nic.in
<b>State</b>	JHARKHAND
<b>RO/SRO Office Address</b>	Integrated Regional Offices, Ranchi

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

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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Sl. No.	Specific Conditions	Compliance Status
i	The project proponent shall obtain Consent to Establish from the Jharkhand State Pollution Control Board and effectively implement all the conditions stipulated therein.	Consent to Establish has been Obtained from Jharkhand State Pollution Control Board, Ranchi, vide letter no – 3676 dated 11 <sup>th</sup> December 2007 and all conditions stipulated therein have been effectively implemented.
ii.	Necessary Forestry clearance under the Forest (Conservation) Act, 1980 for an area of 155.078 ha forest land shall be obtained before starting mining operation in that area. Till such time mining activities shall be restricted to an area of 29.4648 ha for which forestry clearance has been obtained from the ministry on 12.07.2005. Environmental clearance is subject to grant of forestry clearance.	We have obtained forest clearance under the Forest (Conservation) Act, 1980 for an area of 117.0059 Ha, 29.4648 Ha, vide letter nos. F.No.8-88/2007 FC (pt) dated 9 <sup>th</sup> November, 2012 and 12(21)51/2004 FCE dated 12 <sup>th</sup> July, 2005 respectively. An area of 8.6073Ha.is being maintained as safety zone.
iii.	Environmental clearance is subject to the final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation vs Union of India in writ petition (Civil) No. 460 of 2004, as may be applicable to this project.	NA  There are no National Parks or Wildlife Sanctuaries within the buffer zone of the lease area.
iv.	Environmental clearance is subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.	NA  There are no National Parks or Wildlife Sanctuaries within the buffer zone of the lease area.
v.	The mining operations shall be restricted to above ground water table and it should not intersect ground water table. In case of working below ground table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	Currently the lowest elevation at which mining operation is being carried out is at 670mRL, which is far above the ground water table reported as 470m AMSL. Ultimate pit limit of mining has been planned as 645 AMSL as per approved Mining plan. Mining operations will not intersect the ground water table.

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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vi.	<p>The project proponent shall ensure that no natural watercourse and / or water resources shall be obstructed due to any mining operations. The first order streams and the seasonal Nalliahs originating from the mining lease areas shall be protected.</p>	<p>There are no natural water courses and first order streams or seasonal nallahs originating from the mining lease. However, in order to manage surface run off, following protection measures has been taken:</p> <ol style="list-style-type: none"> <li>1. 250 meter retaining wall developed during this period.</li> <li>2. 300mtrs Garland drain developed,</li> <li>3. Settling cum percolation pond di-silted during this period.</li> </ol>
vii.	<p>The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.</p>	<p>Top soil is being stored at ear marked area. It is used for plantation within mining lease area.</p>
viii.	<p>The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site only and it should not be kept active for a long period and their phase-wise stabilization shall be carried out. There shall be one external dump in an area of 5.91ha. The maximum height of the dumps shall not exceed 50m having 5 terraces of 10m each and the overall slope of the dump shall be maintained to 28<sup>0</sup>. The proponent shall ensure slope stability based on study carried out in this regard. The OB dump should be scientifically Vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining.</p>	<p>Total over burden generated has been stacked at ear marked dump area as per approved mining plan. Backfilling is being done with terracing of 10 m height each. To prevent erosion and stabilization the slope of the backfilled area has been covered with Coir mat and grass seed sowed on it.</p> <p>Total 1358 number of saplings have been planted in backfilled area during this period and 1583 number of tree in safety zone area. 1500 number of saplings have been planted in barren Zone. Draught hardy grass has also been planted on the dump to prevent erosion and surface run off.</p> <p>Six monthly Compliance reports are submitted to MOEF Ranchi regularly.</p>





Vijay-II Iron Ore Mining Project of  
M/s Tata Steel Limited,  
Barajamda, Tehsil Noamundi,  
District West Singhbhum,  
Jharkhand

Environmental Clearance MOEF Letter  
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	Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.	Photographs of terracing of dump, coir mat installation, Tarpaulin installation, Plantation on dump, Retaining wall & Garland Drain are enclosed as <b>Annexure- 1</b>								
ix.	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dump(s) to prevent run off of water and flow of sediments directly into the Karo River, the Koina River, Seasonal nallahs and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly de-silted particularly after the monsoon and maintained properly.</p> <p>Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dump to prevent run off of water and flow of sediments directly into the Karo River, the Koina River, seasonal nallahs and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.</p>	<p>Catch drains and siltation ponds of appropriate size have been constructed around the mine working, mineral and OB dump(s) to manage run off of water and flow of sediments directly into the Karo River, the Koina River, Seasonal nallahs and other water bodies.</p> <p>Following protection measures have taken to manage run off water:</p> <ol style="list-style-type: none"><li>1. Check dam has been developed out of lease area at foot hill near Baraiburu Village..</li><li>2. Two Settling pits have been developed, one at the toe of OB dump and the other below the mineral stack.</li><li>3. Settling ponds and check dam are regularly di-silted before monsoon season.</li><li>4. One settling pond and one Settling cum percolation pond have been developed near main gate.</li></ol> <p>Photographs of Check dam, Retaining wall, Garland Drain, SCP Pond, Settling Tank, boulder pitching, are enclosed as <b>Annexure -1</b> and <b>Annexure- 2</b>.</p>								
x.	Dimension of the retaining wall at the toe of the over burden dump and the OB benches within the mine to check run-off and siltation shall be based on the rain fall data.	<p>At the toe of OB dump and material stock area, retaining walls have been constructed. with different dimension mentioned below-</p> <table><tr><th>Type of wall</th><th>Length( m)</th><th>Width(m )</th><th>Height( m)</th></tr><tr><td></td><td>40</td><td>2</td><td>2</td></tr></table>	Type of wall	Length( m)	Width(m )	Height( m)		40	2	2
Type of wall	Length( m)	Width(m )	Height( m)							
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Environmental Clearance MOEF Letter  
No.: No. J-11015/507/2007-IA.II (M).  
Period : April. 24 to Sep. 24

		Cemented retaining wall at the toe of OB dump.	35	2	2
		Rubble masonry retaining wall at the toe of OB dump and mineral stack.	41.5	1	1
			60	1	1
			55	1	1
			31	7	3.8
			35	3	3.8
		Cemented retaining wall	150	1.5	2.0
			95	2.5	3.5
		Retaining wall boulder masonry	300	1	1
			50	2.5	3.5
		At the toe of OB dump	370	1.5	2.5
			60	1.5	2.5
		At toe of fines stock	250	1.5	2.5
		<p><b>During this year-</b></p> <p>I. Retaining wall cemented 250m X 2.5m height X 1.5 m width during this period. Photographs are enclosed as <b>Annexure 2.</b></p>			

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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xi.	<p>Plantation shall be raised in an area of 27.8048 ha including a 7.5m wide green belt in the safety zone around the mining lease, over burden dump, backfilled and reclaimed area, mine benches, around crushing and screening plant, 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.</p>	<p>During this year – Total 4441 saplings have been planted during this period. Native plant species such as Karange, Shisham, Kusum, Gamhar, Kaju and Shimarua have been planted. Photographs enclosed in <b>Annexure-2</b>.</p>
xii.	<p>Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM 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 Central Pollution Control Board in this regard.</p>	<p>8 number of water tankers of 8KL which are equipped with sprinkling system are engaged for water spraying on Mine haul road, loading and unloading points and the transportation road. It is being carried out at regular intervals to suppress dust.</p> <p>The Ambient Air Quality monitoring is carried out by NABL accredited lab, M/S Anacon laboratories Pvt. Ltd. A CAAQMS station has been installed at Mines which is directly connected to JSPCB server. Latest AAQ monitoring report is enclosed as <b>Annexure-3</b></p>
xiii.	<p>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.</p>	<p>Flow rate of the springs and perennial nallahs flowing around the mine lease is being regularly monitored and records are being maintained.</p>
xiv.	<p>The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.</p>	<p>Settling cum percolation pond and garland drain have been developed. Rainwater is channelized, so as to drain into the mine sump at the bottom part of the mine from where it recharges ground water resource.</p>
xv.	<p>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</p>	<p>Monitoring of groundwater level and quality is being carried out from network of existing wells around project area. A Piezometer has been installed at Hati Chawk which is located outside the lease area.</p>

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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	<p>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 the Ministry of Environment and Forests and its Regional Office, Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.</p>	<p>Ground water quality monitoring report and Ground water level reports are enclosed as <b>Annexure- 04.</b></p>
<p>xvi.</p>	<p>The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.</p>	<p>We have obtained permission 0.055 MCM surface water drawl per annum from Water Resources Department, Ranchi, Jharkhand vide letter no. 2/PMC/Water supply -87/2007/477 dated 02.04.2008.</p> <p>No ground water drawl is envisaged for the Mine. As mentioned earlier the Mining will not intersect the ground water table till life of the Mine.</p>
<p>xvii.</p>	<p>Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.</p>	<p>Settling pond and garland drain have been developed.</p> <p>Rain water is channelized so as to drain into the mines sump at the bottom part of the mine from where it recharges ground water resource.</p>
<p>xviii.</p>	<p>Appropriate mitigative measures shall be taken to prevent pollution of the Karo River, the Koina River in consultation with the State Pollution Control Board.</p>	<p>Mining is being done in western limb of the lease hold area from where Karo river is 4.5km &amp; Koina River 5.7km. However following measures have been taken to prevent surface run off:</p> <ul style="list-style-type: none"> <li>• Adequate length retaining wall below the OB dump and mineral stack has</li> </ul>

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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		<p>been constructed as mentioned above in compliance to condition no. x.</p> <ul style="list-style-type: none"> <li>• All Garland drain in the lease area have been desilted before onset of monsoon season.</li> <li>• 10088 sqm OB dump/back filled area covered with Coir mat during this period.</li> </ul> <p>A Catchment Area Treatment Plan has been approved by Principal Chief Conservator of Forests (HOFF), Jharkhand , Ranchi.</p> <p>As per this approved Plan we have already deposited 196.377Lakhs in CAMPA account for Bio-Conservation, Eco- Restoration and Infrastructure.</p> <p>95m Gabion wall with chain link have been and 180m retaining wall developed in different location as per plan.</p> <p>Coir mat &amp; Tarpaulin cover photographs enclosed as annexure -2.</p> <p>Surface water quality report enclosed as <b>annexure-05</b>.</p>
<p>xix.</p>	<p>Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operation and in transportation of mineral from mine face to the beneficiation plant. The vehicles shall be covered with a tarpaulin and shall not be overloaded.</p>	<p>Vehicles, only with valid PUC certificates are allowed in mines and records are maintained . All trucks carrying iron ore has been properly covered with tarpaulin and not overloaded.</p>

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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xx.	No blasting shall be carried out after sunset. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Blasting is done only in day time. Presently, NONEL Technology is being used for blasting to control ground vibration & minimize the fly rocks.
xxi.	Drill shall either be operated with dust extractors or equipped with water injection system.	Wet drilling is practiced and Drill Machine is equipped with water injection system.
xxii.	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Water spraying system has been installed in crushers and operated at all transfer points and discharge points of conveyors in the C&S plant.
xxiii.	Consent to operate shall be obtained from the State Pollution Control Board prior to start of enhanced production from the mines.	We have obtained consent to operate for 2.5 MTPA vide letter no. – JSPCB/HO/RNC/CTO-6151106/2019/2650 dated 31/12/2019 and its <b>validity is up to 31/12/2024</b> . The CTO transferred in the name of M/s Tata Steel Limited and Ref No. JSPCB/HO/RNC/CTO-17803141/2023/2062 dated 12.12.23. CTO of Vijay II Iron Ore Mine enclosed as <b>annexure-6</b> .
xxiv.	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during mining operation	NA. There is no any colony in the mine. Persons working at Vijay II are residing at Noamundi where STP has been provided.
xxv.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination and periodical medical examination of the workers, engaged in the project, are done as per the standards of Mines Rules 1955 and latest prescriptions by DGMS and records maintained. During this period total 6 IME and PME 15 Done.



	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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xxvi	<p>The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant, leopard, wolf etc. spotted in the study area. Action plan for conservation of flora and fauna prepared shall be implemented in consultation with the State Forest and Wildlife Department. All the safeguard measures bought out in the Wildlife Conservation Plan so prepared specific to this project site shall be effectively implemented. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.</p>	<p><u>Effective Protective Measures undertaken at Vijay-II Iron Ore Mine</u></p> <p>A Site specific wildlife and Biodiversity conservation plan was approved by PCCF with 10 years financial forecast for implementation.</p> <p>We have already paid 598.55Lakhs to forest department (CAMPA) for different activities of approved Site Specific Wildlife Conservation and biodiversity Plan which is to be executed by Forest Department. We also paid 41.41 lakhs as per demand note of forest department during this year April 23 to Sep. 24 and required equipment to comply the activities of the approved SSWLCP plan.</p> <p>Different activities are being carried out in protection flora and fauna -</p> <ol style="list-style-type: none"> <li>1) Mining pit has been fenced.</li> <li>2) Scientific blasting, using Nonel technology has been adopted to reduce the noise and vibration. The blasting operation is carried out during the day time only.</li> <li>3) Ore dispatches from mines are only in daylight hours with tarpaulin cover Truck.</li> <li>4) Local labor and one Camper for QRT for Saranda forest have been provided to the local forest department (Gua Range Office) to control forest fire in Ghatkuri Reserve forest.</li> <li>5) water pits have been developed in compartment 26 and 29 for fresh water for wild animals.</li> <li>6) Three Watch towers have been constructed in Ghatkuri reserve forest.</li> <li>7) A Modern check Naka which is operated with Solar power developed at Hati Chawk of Saranda reserve forest.</li> </ol>
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	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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		<p>8) A wild life rescue Van (TATA 407 Gold) which was customized for Cage, Dart Gun, other equipment handed over to forest department.</p> <p>We have also paid Rs. 33.79 lakh as a contribution amount for study of comprehensive wild life management plan.</p> <p>A Fire Management Plan also has been approved by DFO Saranda for protection of Flora and fauna in Saranda Reserve forest and according to this plan we have provided:</p> <ol style="list-style-type: none"> <li>1. Camper with Local labour.</li> <li>2. 14 Fire blowers for fire extinguishing in forest.</li> <li>3. Fire protection shoes, Jackets, Bush Cutter, 7 set Mobile phone for better communication</li> </ol>
xxvii.	<p>The entire mining lease area shall be fenced by erecting solar powered electric fencing all around it. The fencing so erected shall be maintained properly and the cost towards erection and maintenance of the solar powered electric fencing shall be borne by the project proponent out of the project cost.</p>	<p>As per Forest letter.-F.No.-125/2014- FC Government of India, MoEF &amp; CC dated 4<sup>th</sup> July 2014, the Mining pit is only fenced as entire lease hold area within reserve forest.</p>
xxviii.	<p>No transportation of ore outside the mine lease area shall be carried out after sunset.</p>	<p>Complied.</p> <p>Ore dispatches from mines is done only in daylight hours.</p>
xxix.	<p>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 healthcare, creche etc. The housing may be in the form of temporary structures to be</p>	<p>There is no labour colony inside the mining lease.</p>

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	removed after the completion of the project.																			
xxx.	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 Years in advance of final mine closure for approval.	Final Mine Closure Plan will be prepared and submitted for approval 2 years in advance as per 24(i) of MCDR Rules 2017.																		
	<b>General conditions</b>																			
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	There is no change in mining technology and scope of work.																		
ii.	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	<p>There is no change in the calendar plan including excavation, Quantum of Iron ore, waste /OB.</p> <table border="1"> <thead> <tr> <th>Financial Year</th><th>Proposed production as per approved Mining Plan</th><th>Iron Ore ROM (In Tonnes)</th></tr> </thead> <tbody> <tr> <td>2019-2020</td><td>2500000</td><td>1809088.85</td></tr> <tr> <td>2020-2021</td><td>2500000</td><td>2499753.171</td></tr> <tr> <td>2021- 2022</td><td>2500000</td><td>2499502.95</td></tr> <tr> <td>2022-2023</td><td>2500000</td><td>2250806.70</td></tr> <tr> <td>2023-2024</td><td>2500000</td><td>711300.96</td></tr> </tbody> </table>	Financial Year	Proposed production as per approved Mining Plan	Iron Ore ROM (In Tonnes)	2019-2020	2500000	1809088.85	2020-2021	2500000	2499753.171	2021- 2022	2500000	2499502.95	2022-2023	2500000	2250806.70	2023-2024	2500000	711300.96
Financial Year	Proposed production as per approved Mining Plan	Iron Ore ROM (In Tonnes)																		
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2020-2021	2500000	2499753.171																		
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2022-2023	2500000	2250806.70																		
2023-2024	2500000	711300.96																		
iii.	Four ambient air quality - monitoring stations should be established in the core zone as well as in buffer zone for RSPM, SPM, SO <sub>2</sub> and NO <sub>x</sub> monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and	<p>Four AAQ monitoring stations in the Core zone as well as buffer zone for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> monitoring have been established. A NABL accredited M/S Anacon environmental engineering lab has been engaged for AAQ monitoring in core zone as well as in buffer zone of lease hold area.</p>																		

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	frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	A continuous Ambient Air Quality Monitoring system has been installed in lease hold area which has been directly connected to JSPCB server.
iv.	Data on ambient air quality (RSPM, SPM, SO <sub>2</sub> & NO <sub>x</sub> ) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.	We are regularly submitting data of ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> ) to the Ministry including its Regional office located at Ranchi and to JSPCB.
v.	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.	<p>Water is sprinkled along the Mine haul road, loading and unloading point and transfer points at regular interval with the help of adequate no. of water tankers which are equipped with sprinkling system to suppress dust.</p> <p>To control dust emission from sources various measures have been taken such as -</p> <ul style="list-style-type: none"> <li>a) Wet drilling is being done.</li> <li>b) Blasting is done by using Nonel technology to reduce dust generation and vibration (for control blasting).</li> <li>c) Water spraying system has been installed at transfer points and discharge points of C&amp;S plants.</li> </ul> <p>Photographs of water sprinkling on haul road is enclosed as <b>Annexure- 07</b>.</p>
vi.	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	<p>Following measures have been taken to keep noise level below 85 dBA.</p> <ul style="list-style-type: none"> <li>a. Sound proof cabins have been provided for workers deployed on heavy machines such as dozer, dumper, and shovels etc.</li> <li>b. Earplugs/muffs have been provided to the workmen.</li> <li>c. Necessary steps are taken to reduce exposure time of workers to high noise through rotation of duties.</li> </ul>

	<p>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</p>	<p>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</p>
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		<p>d. Maintenance of equipment is being done regularly. e. DG sets are within acoustic enclosure. Noise level monitoring report enclosed as <b>annexure -08</b>.</p>
vii.	<p>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.</p>	<p>There is no any workshop in Vijay II Iron Ore Mine.</p>
viii.	<p>Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.</p>	<p>Workers are engaged in mining work after providing adequate training and information on safety and health aspect and with protective respiratory devices( Ear Plug, Nose mask, gloves, Helmet, Goggles, safety shoes etc). IME &amp; PME are being done periodically. Total IME 93 and PME 322 of employee have been done during this period.</p>
ix.	<p>A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.</p>	<p>The following members are looking in to the environmental aspect of Vijay-II Iron Ore Mine headed by Agent Mine, Rajeev Kumar. 1)Mr.Braj Binod Kumar (Mines Manager) 2)Mr. Ashish Kumar (Excavation in-charge) 3)Mr. D. Das (Sr. Manager forest &amp;Environment ) 4)Mr. Ramendra Kumar(Sr. Officer) 5)Mr. Vijay Shankar (Sr. Manager Civil)</p>

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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x.	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 the Ministry and its Regional Office located at Bhubaneswar.	Separate fund is kept to comply forest & environment clearance conditions. The head wise expenditure incurred by us in environmental protection measures from 1 <sup>st</sup> April.24 to 30 <sup>th</sup> Sep 24 is enclosed as <b>Annexure-09</b> .
xi.	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.	Complied.
xii.	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	The requisite data/information/monitoring reports are provided and co-operation is extended to the Regional office of Ministry.
xiii.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board.	Six monthly reports are being submitted on regular basis to MoEF , Regional office Ranchi and SPCB.
xiv.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution	Complied.



	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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	Control Board and State Pollution Control Board.	
xv.	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	Complied.
xvi.	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collectors office / Tehsildar's Office with 30 days.	NA.
xvii.	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 copy of the clearance letter is available with the State Pollution Control Board and also at web site 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 Bhubaneswar.	<p>Complied.</p> <p>Information regarding grant of EC was advertised in following newspapers-</p> <ol style="list-style-type: none"> <li>1. Prabhat khabar (Hindi) dated 30.12.2008.</li> <li>2. The Telegraph (English) dated 29.12.2008.</li> </ol> <p>Same has been informed to Regional office of Ministry vide our letter dated 05.01.2009.</p>
3.	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted for compliance
4.0	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted for compliance.
5.0	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution)	Noted for compliance.

	<b>Vijay-II Iron Ore Mining Project of M/s Tata Steel Limited, Barajamda, Tehsil Noamundi, District West Singhbhum, Jharkhand</b>	<b>Environmental Clearance MOEF Letter No.: No. J-11015/507/2007-IA.II (M). Period : April. 24 to Sep. 24</b>
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	<p>Act, 1974, the Air (Prevention &amp; Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made thereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Jharkhand and any other Court of Law relating to the subject matter.</p>	
6.0	<p>Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997</p>	<p>Noted for compliance.</p>



**10088 sqm back filled area is covered with Coir mat during this period.**





## Annexure – 2

Plantation in safety zone and in barren area and in back filled area -





Settling Pond and settling cum percolation pond developed







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TC-12998

Test Report

ULR No.- TC129982400001642F

Report No.: ALPL/30092024/5-1

Dated: 30/09/2024

Page 1 of 1

Name and Address of Industry:-	<b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.		Work Order No.	4700126596/962-30.05.2024
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Inward No.:-	ALPL/23092024/MON-79-AAQ-1/40 -1 & 2	
Sampling done by	Mr. Biplab Giri (Anacon Representative)	Sample Inward Date:-	9, 16, 23 September-2024	
Test Started On:-	9, 16, 23 September-2024	Test Completed On:-	10, 17, 24 September-2024	
Sampling Procedure	ANtd/7.2/Mon-01	Weather Condition	Satisfactory & Clear	

Sr. No.	LOCATION	Date of Sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Main Gate	02/09/2024	64.7	26.3	12.9	21.8	0.573
		09/09/2024	68.1	31.6	14.7	26.1	0.608
		12/09/2024	57.3	24.9	9.3	18.7	0.524
		19/09/2024	62.8	26.1	11.4	21.9	0.517
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)
AAQ-2	Quarry-1 (Near Weigh Bridge)	02/09/2024	63.9	28.1	13.6	27.4	0.671
		09/09/2024	58.3	26.4	12.9	24.7	0.581
		12/09/2024	61.7	28.6	14.1	31.9	0.652
		19/09/2024	54.8	19.3	9.6	18.6	0.503
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)

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**Remark:** -All Results are within Limit as per NAAQMS Standards.

Verified by  
  
Snehal Raut  
Technical Manager

Authorized Signatory  
  
Chinmay Garway  
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.- TC129982400001643F

Report No.: ALPL/30092024/5-2

Dated: 30/09/2024

Page 1 of 1

Name and Address of Industry:-	<b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.		Work Order No.	4700126596/962-30.05.2024
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/23092024/MON-79-AAQ-1/40 -3 & 4	
Sampling done by	Mr. Biplab Giri (Anacon Representative)	Sample Inward Date:-	9, 16, 23 September-2024	
Test Started On:-	9, 16, 23 September-2024	Test Completed On:-	10, 17, 24 September-2024	

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM2.5 ) $\mu\text{g}/\text{m}^3$	Sulphur dioxide $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen $\mu\text{g}/\text{m}^3$	Carbon Monoxide (as CO) $\text{mg}/\text{m}^3$
Test Method			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)
I	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-3	Quarry-II Near Old Office	02/09/2024	47.3	16.2	7.9	17.6	BLQ (LOQ-0.5)
		09/09/2024	53.8	21.4	11.3	23.9	BLQ (LOQ-0.5)
		12/09/2024	48.1	18.7	8.4	19.2	BLQ (LOQ-0.5)
		19/09/2024	46.2	17.3	7.9	19.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)
AAQ-4	Near B.S. Mining Office	02/09/2024	54.8	21.6	11.4	23.9	BLQ (LOQ-0.5)
		09/09/2024	48.3	16.4	9.3	18.2	BLQ (LOQ-0.5)
		12/09/2024	51.7	23.7	11.9	21.4	BLQ (LOQ-0.5)
		19/09/2024	54.1	21.8	12.4	19.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm authenticity

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**Remark:** -All Results are within Limit as per NAAQMS Standards.

Verified by

*Snehal Raut*  
Snehal Raut  
Technical Manager

Authorized Signatory

*Chinmay Garway*  
Chinmay Garway  
Deputy Quality Manager

-----End of Report-----

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TC-12998

### Test Report

ULR No.- TC129982400001644F

Report No.: ALPL/30092024/5-3

Dated: 30/09/2024

Page 1 of 1

Name and Address of Industry:-	<b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.		Work Order No.	4700126596/962-30.05.2024
Sample Description/ Type	Ambient Air Quality (Buffer Zone)	Sample Ref. No.:-	ALPL/23092024/MON-79-AAQ-1/40 -5 & 6	
Sampling done by	Mr. Biplab Giri (Anacon Representative)	Sample Inward Date:-	9, 16, 23,30 September-2024	
Test Started On:-	9, 16, 23,30 September-2024	Test Completed On:-	10, 17, 24,30 September-2024	

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM2.5 ) $\mu\text{g}/\text{m}^3$	Sulphur dioxide $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen $\mu\text{g}/\text{m}^3$	Carbon Monoxide (as CO) $\text{mg}/\text{m}^3$
Test Method			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)
I	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Baihathu Village (Near School)	06/09/2024	51.9	19.3	7.6	18.4	BLQ (LOQ-0.5)
		10/09/2024	48.3	17.2	8.4	16.7	BLQ (LOQ-0.5)
		14/09/2024	53.7	21.6	11.3	23.8	BLQ (LOQ-0.5)
		17/09/2024	49.1	18.7	8.1	16.4	BLQ (LOQ-0.5)
		21/09/2024	51.9	23.4	11.6	21.7	BLQ (LOQ-0.5)
		28/09/2024	53.7	24.9	12.1	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)
AAQ-6	Baraiburu Village (Near Temple)	06/09/2024	51.4	17.9	12.8	21.4	BLQ (LOQ-0.5)
		10/09/2024	46.3	16.1	9.3	18.7	BLQ (LOQ-0.5)
		14/09/2024	53.8	21.6	11.4	23.9	BLQ (LOQ-0.5)
		21/09/2024	48.3	19.3	9.7	18.4	BLQ (LOQ-0.5)
		28/09/2024	51.6	21.8	11.3	21.7	BLQ (LOQ-0.5)
		NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)

NOTES: ● Please see comments at Q.14.1.1

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**Remark:** -All Results are within Limit as per NAAQMS Standards.

Verified by

*Snehal Raut*

Snehal Raut  
Technical Manager

Authorized Signatory

*Chinmay Garway*

Chinmay Garway  
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982400001645F

Report No.: ALPL/30092024/5-4

Dated: 30/09/2024

Page 1 of 1

Name and Address of Industry:-	<b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.		Work Order No.	4700126596/962-30.05.2024
Sample Description/ Type	Ambient Air Quality (Buffer Zone)	Sample Ref. No.:-	ALPL/23092024/MON-79-AAQ-1/40 -7 & 8	
Sampling done by	Mr. Biplab Giri (Anacon Representative)	Sample Inward Date:-	9, 16, 23,30 September-2024	
Test Started On:-	9, 16, 23,30 September-2024	Test Completed On:-	10, 17, 24,30 September-2024	

Sr. No.	LOCATION	Date of Sampling	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM2.5) $\mu\text{g}/\text{m}^3$	Sulphur dioxide $\mu\text{g}/\text{m}^3$	Oxides of Nitrogen $\mu\text{g}/\text{m}^3$	Carbon Monoxide (as CO) $\text{mg}/\text{m}^3$
Test Method			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)
I	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-7	Gua Village	06/09/2024	46.3	16.2	8.4	17.9	BLQ (LOQ-0.5)
		10/09/2024	52.8	21.6	9.3	23.8	BLQ (LOQ-0.5)
		14/09/2024	48.2	18.4	11.7	21.4	BLQ (LOQ-0.5)
		21/09/2024	47.3	16.2	9.1	18.6	BLQ (LOQ-0.5)
		28/09/2024	52.8	18.3	11.7	21.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)
AAQ-8	Bokna Village	06/09/2024	58.3	24.7	11.9	23.6	BLQ (LOQ-0.5)
		10/09/2024	61.4	26.1	12.7	24.9	BLQ (LOQ-0.5)
		14/09/2024	51.6	19.3	9.4	18.2	BLQ (LOQ-0.5)
		21/09/2024	52.8	23.1	12.6	21.4	BLQ (LOQ-0.5)
		28/09/2024	54.9	19.7	9.7	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2 (8 hrs)

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**Remark:** -All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut

Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

---End of Report---

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# Anacon Laboratories



TC-12998

## Test Report

ULR No.- TC129982400001143F

Test Report No. : ALPL/31082024/1-13A

dated 31/08/2024

Page 1 of 1

Page 1 of 1

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-1	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative )	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Gua Village / Borewell	

### TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Discipline : Chemical</b>	<b>Group : Water</b>	<b>Subgroup : Drinking water</b>			
1	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23) : 1986	200	600	194.26
2	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K) : 2005	0.2	1.0	BLQ (LOQ-0.1)
3	Colour	Hazen units	IS 3025 (Part 4) Clause 4 : 2021	5	15	1
4	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5 : 2021	0.05	No relaxation	BLQ (LOQ-0.005)
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2:1988	250	1000	26.54
6	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5 : 1991	75	200	53.68
7	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7:2021	0.2	1	BLQ (LOQ-0.1)
8	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.0	1.5	0.17
9	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6 : 1994	30	100	11.94
10	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> edition: Method 4500-NO3:2017	45	No relaxation	4.53
11	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
12	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	6.97 at 25°C
13	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6: 1992	0.001	0.002	BLQ (LOQ-0.001)
14	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24/ Sec1) Clause 5 : 2022	200	400	8.53
15	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
16	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	457
17	Turbidity	NTU	IS 3025 : (Part 10): 2023	1	5	0.3
18	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) Clause 5 : 2009	200	600	183.23

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Sampling Method-ANtd/7.2/MON-01 ● Environmental condition – Satisfactory & Clear.

**REMARKS:** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By  
  
Snehal Raut  
Technical Manager

Authorized Signatory  
  
Chinmay Garway  
Deputy Quality Manager

-----End of Report-----

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**Anacon Laboratories Pvt. Ltd. Nagpur Lab**

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## Test Report

Test Report No. : ALPL/31082024/1-13B

dated 31/08/2024

Page 2 of 2

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-1	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative )	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Gua Village / Borewell	

## TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
IV	Discipline : Chemical	Group : Residues contaminants in water		Subgroup : Pesticide		
17	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BLQ (LOQ-0.03)

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**REMARKS:** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By

Pradnya Pillewan  
Deputy Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

-----End of Report-----

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# Anacon Laboratories



TC-12998

## Test Report

ULR No.- TC129982400001144F

Test Report No. : ALPL/31082024/1-14A

dated 31/08/2024

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<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-2	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative )	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Baraiburu Village / Borewell	

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Discipline : Chemical</b>	<b>Group : Water</b>	<b>Subgroup : Drinking water</b>			
1	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23) : 1986	200	600	168.47
2	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	0.2	1.0	BLQ (LOQ-0.1)
3	Colour	Hazen units	IS 3025 (Part 4) Clause 4 : 2021	5	15	2
4	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5: 2021	0.05	No relaxation	BLQ (LOQ-0.005)
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2:1988	250	1000	24.93
6	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5 : 1991	75	200	47.36
7	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7:2021	0.2	1	BLQ (LOQ-0.1)
8	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.0	1.5	0.27
9	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6 : 1994	30	100	9.53
10	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> edition: Method 4500-NO <sub>3</sub> :2017	45	No relaxation	7.26
11	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
12	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.14 at 25°C
13	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6: 1992	0.001	0.002	BLQ (LOQ-0.001)
14	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24/ Sec1) Clause 5 : 2022	200	400	11.62
15	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
16	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	451
17	Turbidity	NTU	IS 3025 : (Part 10): 2023	1	5	0.3
18	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) Clause 5 : 2009	200	600	157.54

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**REMARKS:** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By  
  
Snehal Raut  
Technical Manager

Authorized Signatory

Chiamay Gaway  
Deputy Quality Manager

---End of Report---

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## Test Report

Test Report No. : ALPL/31082024/1-14B

dated 31/08/2024

Page 2 of 2

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b> ALPL/27082024/MON-36-W-1/4-2 <b>Inward Date</b> 27/08/2024 <b>Reference</b> 3000160276/J06/ <b>Reference Date</b> 11/04/2023	<b>Analysis Start</b> 27/08/2024 <b>Analysis End</b> 31/08/2024
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Scaled & Ice Preserved
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative)	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm
		<b>Quantity Received</b> 5.0 Ltr & 250 ml
		<b>Sampling Location/Source</b> Baraiburu Village / Borewell

### TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
IV	Discipline : Chemical	Group : Residues contaminants in water		Subgroup : Pesticide		
17	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaaxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BLQ (LOQ-0.03)

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**REMARKS:** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By

Pradnya Pillewan  
Deputy Technical Manager

Authorized Signatory

Chinmay Garvady  
Deputy Quality Manager

-----End of Report-----

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## Test Report

Test Report No. : ALPL/31082024/1-13B

dated 31/08/2024

Page 1 of 2

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-1	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative )	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Gua Village / Borewell	

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Discipline : Biological	Group : Water	Subgroup : Drinking water			
1	Escherichia coli	MPN/100 ml	IS 1622:1981	Absent	Absent	BLQ (LOQ-2)
II	Discipline : Chemical	Group : Residues and contaminants in water	Subgroup : Trace metal elements			
2	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BLQ (LOQ-0.01)
3	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BLQ (LOQ-0.02)
4	Barium (as Ba)	mg/l	IS 3025 (Part 2) : 2019	0.7	No relaxation	BLQ (LOQ-0.02)
5	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BLQ (LOQ-0.02)
6	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BLQ (LOQ-0.02)
7	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BLQ (LOQ-0.002)
8	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.17
9	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BLQ (LOQ-0.01)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BLQ (LOQ-0.02)
11	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BLQ (LOQ-0.001)
12	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BLQ (LOQ-0.01)
13	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BLQ (LOQ-0.02)
14	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BLQ (LOQ-0.02)
15	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03: 2018	0.1	No relaxation	BLQ (LOQ-0.03)
III	Discipline : Chemical	Group : Residues and contaminants in water	Subgroup : Other			
16	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

Please refer last Page for Note and Remarks.

Verified By

Nidhi Dubey  
Deputy Technical Manager

Pradnya Pillewan  
Deputy Technical Manager

Authorized Signatories

Pooja Kathane  
Technical Manager

Chinmay Garway  
Deputy Quality Manager



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## Test Report

Test Report No. : ALPL/31082024/1-14B

dated 31/08/2024

Page 1 of 2

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-2	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative)	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Baraiburu Village / Borewell	

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Discipline : Biological</b>	<b>Group : Water</b>	<b>Subgroup : Drinking water</b>			
1	<i>Escherichia coli</i>	MPN/100 ml	IS 1622:1981	Absent	Absent	BLQ (LOQ-2)
<b>II</b>	<b>Discipline : Chemical</b>	<b>Group : Residues and contaminants in water</b>	<b>Subgroup : Trace metal elements</b>			
2	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BLQ (LOQ-0.01)
3	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BLQ (LOQ-0.02)
4	Barium (as Ba)	mg/l	IS 3025 (Part 2) : 2019	0.7	No relaxation	BLQ (LOQ-0.02)
5	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BLQ (LOQ-0.02)
6	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BLQ (LOQ-0.02)
7	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BLQ (LOQ-0.002)
8	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.16
9	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BLQ (LOQ-0.01)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BLQ (LOQ-0.02)
11	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BLQ (LOQ-0.001)
12	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BLQ (LOQ-0.01)
13	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BLQ (LOQ-0.02)
14	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BLQ (LOQ-0.02)
15	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03: 2018	0.1	No relaxation	BLQ (LOQ-0.03)
<b>III</b>	<b>Discipline : Chemical</b>	<b>Group : Residues and contaminants in water</b>	<b>Subgroup : Other</b>			
16	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

☐ Please refer last Page for Note and Remarks.

Verified By

Authorized Signatories

Nidhi Dubey  
Deputy Technical Manager

Pradnya Pillewan  
Deputy Technical Manager

Pooja Kathane  
Technical Manager

Chinmay Garway  
Deputy Quality Manager

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# Anacon Laboratories



TC-12998

## Test Report

ULR No.- TC129982400001145F

Test Report No. : ALPL/31082024/1-15A

dated 31/08/2024

Page 1 of 1

Page 1 of 1

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-3	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative )	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Baihatu Village / Borewell	

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Discipline : Chemical</b>	<b>Group : Water</b>	<b>Subgroup : Drinking water</b>			
1	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23) : 1986	200	600	147.29
2	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	0.2	1.0	BLQ (LOQ-0.1)
3	Colour	Hazen units	IS 3025 (Part 4) Clause 4 : 2021	5	15	1
4	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5: 2021	0.05	No relaxation	BLQ (LOQ-0.005)
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2:1988	250	1000	36.53
6	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5 : 1991	75	200	52.17
7	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7:2021	0.2	1	BLQ (LOQ-0.1)
8	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.0	1.5	0.16
9	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6 : 1994	30	100	9.27
10	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> edition: Method 4500-NO <sub>3</sub> :2017	45	No relaxation	7.63
11	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
12	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.31 at 25°C
13	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6: 1992	0.001	0.002	BLQ (LOQ-0.001)
14	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24/ Sec1) Clause 5 : 2022	200	400	12.68
15	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
16	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	457
17	Turbidity	NTU	IS 3025 : (Part 10): 2023	1	5	0.3
18	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) Clause 5 : 2009	200	600	168.49

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced (except in full) without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Sampling Method-ANTd/7.2/MON-01 ● Environmental condition - Satisfactory & Clear.

**REMARKS:** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By

*Snehal Raut*  
Snehal Raut  
Technical Manager

Authorized Signatory

*Chinmay Garway*  
Chinmay Garway  
Deputy Quality Manager

-----End of Report-----

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## Test Report

Test Report No. : ALPL/31082024/1-15B

dated 31/08/2024

Page 1 of 2

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b> ALPL/27082024/MON-36-W-1/4-3 <b>Inward Date</b> 27/08/2024 <b>Reference</b> 3000160276/J06/ <b>Reference Date</b> 11/04/2023	<b>Analysis Start</b> 27/08/2024 <b>Analysis End</b> 31/08/2024
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative)	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm
		<b>Quantity Received</b> 5.0 Ltr & 250 ml
		<b>Sampling Location/Source</b> Baihatu Village / Borewell

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Discipline : Biological	Group : Water	Subgroup : Drinking water			
1	Escherichia coli	MPN/100 ml	IS 1622:1981	Absent	Absent	BLQ (LOQ-2)
II	Discipline : Chemical	Group : Residues and contaminants in water	Subgroup : Trace metal elements			
2	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BLQ (LOQ-0.01)
3	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BLQ (LOQ-0.02)
4	Barium (as Ba)	mg/l	IS 3025 (Part 2) : 2019	0.7	No relaxation	BLQ (LOQ-0.02)
5	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BLQ (LOQ-0.02)
6	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BLQ (LOQ-0.02)
7	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BLQ (LOQ-0.002)
8	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.17
9	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BLQ (LOQ-0.01)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BLQ (LOQ-0.02)
11	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BLQ (LOQ-0.001)
12	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BLQ (LOQ-0.01)
13	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BLQ (LOQ-0.02)
14	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BLQ (LOQ-0.02)
15	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03: 2018	0.1	No relaxation	BLQ (LOQ-0.03)
III	Discipline : Chemical	Group : Residues and contaminants in water	Subgroup : Other			
16	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

Please refer last Page for Note and Remarks.

Verified By

Authorized Signatories

Nidhi Dubey  
Deputy Technical Manager

Pradnya Pillewan  
Deputy Technical Manager

Pooja Kathane  
Technical Manager

Chinmay Ganway  
Deputy Quality Manager



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## Test Report

Test Report No. : ALPL/31082024/1-16B

dated 31/08/2024

Page 1 of 2

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.</b>	ALPL/27082024/MON-36-W-1/4-4	<b>Analysis Start</b>	27/08/2024
	<b>Inward Date</b>	27/08/2024	<b>Analysis End</b>	31/08/2024
	<b>Reference</b>	3000160276/J06/		
	<b>Reference Date</b>	11/04/2023		
<b>Sample Name</b> Drinking Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml	
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative )	<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.50 am to 4.15 pm	<b>Sampling Location/Source</b> Bichaikiri Village / Borewell	

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Discipline : Biological</b>	<b>Group : Water</b>	<b>Subgroup : Drinking water</b>			
1	Escherichia coli	MPN/100 ml	IS 1622:1981	Absent	Absent	BLQ (LOQ-2)
<b>II</b>	<b>Discipline : Chemical</b>	<b>Group : Residues and contaminants in water</b>	<b>Subgroup : Trace metal elements</b>			
2	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BLQ (LOQ-0.01)
3	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BLQ (LOQ-0.02)
4	Barium (as Ba)	mg/l	IS 3025 (Part 2) : 2019	0.7	No relaxation	BLQ (LOQ-0.02)
5	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BLQ (LOQ-0.02)
6	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BLQ (LOQ-0.02)
7	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BLQ (LOQ-0.002)
8	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.17
9	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BLQ (LOQ-0.01)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BLQ (LOQ-0.02)
11	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BLQ (LOQ-0.001)
12	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BLQ (LOQ-0.01)
13	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BLQ (LOQ-0.02)
14	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BLQ (LOQ-0.02)
15	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03: 2018	0.1	No relaxation	BLQ (LOQ-0.03)
<b>III</b>	<b>Discipline : Chemical</b>	<b>Group : Residues and contaminants in water</b>	<b>Subgroup : Other</b>			
16	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

□ Please refer last Page for Note and Remarks.

Verified By

Authorized Signatories

Nidhi Dubey  
Deputy Technical Manager

Pradnya Pillewan  
Deputy Technical Manager

Pooja Kathane  
Technical Manager

Chinmay Garway  
Deputy Quality Manager

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## Test Report

Test Report No. : ALPL/31082024/1-17

dated 31/08/2024

Page 1 of 1

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.		<b>Sample Inward No.</b> ALPL/27082024/MON-36-EW-1/4- 1 & 2	<b>Analysis Start</b> 27/08/2024
		<b>Inward Date</b> 27/08/2024	<b>Analysis End</b> 31/08/2024
		<b>Reference</b> 3000160276/J06	
		<b>Reference Date</b> 11/04/2023	
<b>Sample Name</b> Surface Water	<b>Sample Source</b> 1. Upstream 2. Downstream	<b>Sample Particulars</b> Sample Code-SW-1 & 2	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative)		<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.35 am to 4.20 pm
		<b>Sampling Location</b> 1. Karo River (Upstream) (SW-1) 2. Karo River (Downstream) (SW-2)	
<b>Sampling Procedure</b>		<b>Weather Condition</b>	Satisfactory & Clear

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	Discipline : Biological		Group : Water	Subgroup : Surface water		
1	Coliform	MPN/100ml	IS 1622:1981	5000	BLQ (LOQ-2)	BLQ (LOQ-2)
II	Discipline : Chemical		Group : Water	Subgroup : Surface water		
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.53 at 25 <sup>o</sup> C	6.92 at 25 <sup>o</sup> C
3	Colour	Hazen units	IS 3025 (Part 4) Clause 4 : 2021	300	21	16
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) :1989	4.0	6.7	6.3
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	24	18
6	BOD (3 days at 27 <sup>o</sup> C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.91	2.76
7	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	9.18	6.57
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 2023	1500	1387	1254
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.08	0.06
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2:1988	600	254.76	193.82
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24/ Sec1) Clause 5 : 2022	400	164.29	147.63
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> edition: Method 4500-NO3:2017	50	28.46	16.94
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.5	0.38	0.27
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5: 2021	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43/Sec 1) Clause 6: 1992	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
III	Discipline : Chemical		Group : Residues and contaminants in water	Subgroup : Trace metal elements		
17	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.37	0.31
18	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
19	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Lead (as Pb)	mg/l	3025 (Part 2) : 2019	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
22	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Hexa Chromium (as Cr <sup>+6</sup> )	mg/l	IS 3025 (Part 52) :2003	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
24	Mercury (as Hg)	mg/l	IS : 3025 (Part 48) : 1994	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
25	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	--	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

**NOTES:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● BLQ= below limit of quantification, LOQ= limit of quantification.

**REMARKS :** As requested by the client, sample was tested for above parameters only.

Verified By

Authorized Signatories

Nidhi Dubey  
Deputy Technical Manager

Snehal Raut  
Technical Manager

Pooja Kathane  
Technical Manager

Chinmay Garware  
Deputy Quality Manager

-----End of Report-----

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## Test Report

Test Report No. : ALPL/31082024/1-T8

dated 31/08/2024

Page 1 of 1

<b>Issued To :</b> <b>Vijay II Iron Ore Mines</b> M/s TATA Steel Limited Badajamda-833 221.		<b>Sample Inward No.</b> ALPL/27082024/MON-36-EW-1/4- 3 & 4	<b>Analysis Start</b> 27/08/2024
		<b>Inward Date</b> 27/08/2024	<b>Analysis End</b> 31/08/2024
		<b>Reference</b> 3000160276/J06	
		<b>Reference Date</b> 11/04/2023	
<b>Sample Name</b> Surface Water	<b>Sample Source</b> 1. Upstream 2. Downstream	<b>Sample Particulars</b> Sample Code-SW-3 & 4	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Mr. Biplab Giri (Anacon Representative)		<b>Sampling Date</b> 24/08/2024	<b>Sampling Time</b> 11.35 am to 4.20 pm
		<b>Sampling Location</b> 1. Koina River (Upstream) (SW-3) 2. Koina River (Downstream) (SW-4)	
<b>Sampling Procedure</b>		<b>Weather Condition</b>	<b>Quantity Received</b> 2.0 Ltr & 250 ml each
			Satisfactory & Clear

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Biological		Group : Water	Subgroup : Surface water		
1	Coliform	MPN/100ml	IS 1622:1981	5000	BLQ (LOQ-2)	BLQ (LOQ-2)
II	Discipline : Chemical		Group : Water	Subgroup : Surface water		
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.71 at 25°C	7.18 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) Clause 4 : 2021	300	32	24
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) :1989	4.0	6.4	5.8
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	36	24
6	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.73	2.19
7	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	8.16	7.53
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 2023	1500	1428	1167
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.06	0.03
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2:1988	600	301.92	287.64
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24/ Sec1) Clause 5 : 2022	400	153.76	139.27
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> edition: Method 4500-NO <sub>3</sub> :2017	50	24.52	18.36
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.5	0.36	0.28
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5: 2021	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43/Sec 1) Clause 6: 1992	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
III	Discipline : Chemical		Group : Residues and contaminants in water	Subgroup : Trace metal elements		
17	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.41	0.38
18	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
19	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Lead (as Pb)	mg/l	3025 (Part 2) : 2019	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
22	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) :2003	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
24	Mercury (as Hg)	mg/l	IS : 3025 (Part 48) : 1994	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
25	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	--	BLQ (LOQ-0.02)	BLO (LOQ-0.02)

**NOTES:** • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • 'mg/l' is equivalent to 'ppm'. • BLQ= below limit of quantification, LOQ= limit of quantification.

**REMARKS:** As requested by the client, sample was tested for above parameters only.

Verified By

Authorized Signatories

Nidhi Dubey  
Deputy Technical Manager

Snehal Raut  
Technical Manager

Pooja Kathone  
Technical Manager

Chinmay Garway  
Deputy Quality Manager

## End of Report

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavor towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on [feedback@anacon.in](mailto:feedback@anacon.in).



## JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004

Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-17803141/2023/2062

Dated : 2023-12-12

### **Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981**

1. Application (s) dated 2023-11-22 of Vijay-II Iron Ore Mines(Tata Steel Limited), Occupier Name :T V Narendran for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981..
2. **Documents Relied Upon:**
  - (a)The content of Environmental Clearance (EC), Ref No. J-11015/ 48/2001-IA.II(M) dated 19.04.2005,Corrigendum even letter dated 29.05.2006, Corrigendum even letter dated 02.02.2007 & Ref No. J- 11015/507/2007-IA.II(M) dated 22.12.2008 issued by MoEF, Govt. of India, New Delhi.
  - (b)The content of Consent-to-Establish (CTE), Ref No. N-227, dated 17.04.2004 & Ref. No. 3676 Ranchi, Dated 11.10.2007.
  - (c)The content of Consent to Operate (CTO) vide Ref No. JSPCB/HO/RNC/CTO-6151106/2019/2650 Dated : 2019-12-31 At- As per EC Area As per EC Investment 13580.375 lac for Iron Ore -2.5 Million Ton/annum valid till 31/12/2024 in the name of Vijay-II Iron Ore Mines (M/S Tata Steel Long Products Limited);
  - (d) The content of Inspection report (IR) vide Ref. No. 1680 dated 26.09.2019 of Regional Officer, JSPC Board, Jamshedpur;
  - (e) The content Forest Clearance ref. no. 12(21)51/2004-FCE dated 12.07.2005 and Forest Clearance ref. no. 8-88/2007-FC(Pt) dated 09.11.2012.
  - (f) The content of mining lease transfer vide ref.no. 432 dated 9-3-2019.
  - (g) The content of letter submitted vide Ref. No. VII/Mines/23-24/245 Dated: 16.11.2023 for Change of name in the Consent to Operate of Vijay-II Iron Ore mine and Bokna Storage and Handling plot from Tata Steel Long Products Limited to Tata Steel Limited;
  - (h) The content of supportive documents as:
    1. Copies of the orders dated 18.10.2023 and 20.10.2023 passed by Hon'ble NCLT Cuttack and Mumbai Bench approving the Scheme of Amalgamation.
    2. Copy of Form INC-28.
    3. Certified copy of intimation of effective date of scheme of Amalgamation dated 15.11.2023.
3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -Ghatkhuri RF , P S - , District -WEST SINGHBHUM , as follows:



Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			Date of issue To
Before Expansion	As per EC	As per EC	13580.375 lac	Iron Ore -2.5 Million Ton/annum	31/12/2024

**(A) Specific Conditions:**

1. That, the occupier shall establish and operate well equipped environmental laboratory with facilities to monitor at least all regulatory parameters and duly accredited by NABL/ISO 9001 with OHSAS 18001.
2. That, the occupier shall comply all the conditions imposed in Environmental Clearance issued vide letter No. J-11015/48/2001-IA.II(M) dated 19.04.2005, Corrigendum even letter dated 29.05.2006, Corrigendum even letter dated 02.02.2007 & Ref No. J-11015/507/2007-IA.II(M) dated 22.12.2008 issued by MOEF, Govt. of India within the consent period.
3. That, the occupier shall comply with the condition of clearance under Forest (Conservation) Act, 1980 stipulated by MOEF vide letter no. 12 (21) 51/2004-FCE dated 12.07.2005 & letter no. F.No. 8- 88/2007-FC(Pt) dated 09.11.2012
4. That, the occupier shall submit a copy of six monthly report regarding compliance of conditions imposed in Environmental Clearance which is presently being submitted to Regional Office, MOEF, Govt. of India, Bhuwneshwar.
5. That, the occupier shall take appropriate mitigative measures to prevent pollution of Karo river and the Koina river.
6. That, the occupier shall do sprinkling of water time to time on haul roads and dusty areas.
7. That, the occupier shall reclaim the mined out area and plantation should be done at the reclaimed site.
8. That, the over burden dump shall be made in accordance with conditions imposed in Environmental Clearance. Retaining wall shall be provided at the toe of over burden dump to check run off.
9. That, the occupier shall provide adequate no. of high efficiency dust extraction system in mineral handling area, loading and unloading areas including transfer points.
10. That, the transportation shall be done through covered vehicle to avoid fugitive dust emission.
11. That, the occupier shall provide STP for colony and ETP for Workshop and waste water generated during mining operation.

12. That, the occupier shall not exceed the annual production as granted by MOEF in the environmental clearance order issued vide letter no. J-11015/507/2007-IA.II (M) dated 22.12.2008 and submit six monthly production figure duly certified by the Dist. Mining Officer, Chaibasa, West Singhbhum.
13. That, the occupier shall maintain and operate special water jets with mist water spray at dumper platform and loading points to suppress fugitive emission.
14. That, the mining operations shall be restricted to above the ground water table and it should be not intersect the ground water table.
15. That, the top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The top soil shall be used for land reclamation and plantation
16. That, the occupier shall do blasting operation only during the day time.
17. That, the occupier shall fully implement rain water harvesting system as per design approved by CGWB/State Ground Water Board.
18. That, the occupier shall grant of this Consent-to-Operate is issued from the Environmental angle only and does not absolves the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry /unit/project proponent.
19. That the occupier shall establish CAAQMS and shall provide online connectivity to the Board server and will also provide online connectivity of PM 10 analyser.
20. That, the occupier shall submit applications for renewal of consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent i.e. 31.12.2024, with requisite fee and documents showing compliance of all of the above conditions.
21. This CTO supersedes previous Consent to Operate (CTO) granted vide Ref No. JSPCB/HO/RNC/CTO-6151106/2019/2650 Dated : 2019-12-31 and stands revised up to this extent.

**(B) General Conditions :**

- (1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

S N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual 24 hours	40 60	40 60
5.	Ozone(O <sub>3</sub> ), µg/m <sup>3</sup>	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m <sup>3</sup>	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual 24 hours	100 400	100 400
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m <sup>3</sup>	Annual	01	01
11.	Arsenic (As) ng/m <sup>3</sup>	Annual	06	06
12.	Nickel (Ni) ng/m <sup>3</sup>	Annual	20	20
<b>Note : Serial no. 1 to 4 – Mandatory</b> <b>Serial no. 5 to 12 As applicable for specific type of industry.</b>				

- (2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S N	Parameter	Standard
1	Particulate Matter	100 ug/ Nm <sup>3</sup>

- (3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

- (4) That, the occupier shall dispose of solid wastes as follows:

S N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of Soil or Mineral

- (5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.
- (6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.
- (7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.
- (8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.
- (9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

- (10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.
- (11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.
- (12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.
- (13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.
4. That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.
5. That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.
6. The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.
7. The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.

**This is issued with the approval of the Competent authority**

Yatindra  
Kumar  
Das

Digitally signed  
by Yatindra  
Kumar Das  
Date: 2023.12.12  
22:09:19 +05'30'  
(Y. K. Das)  
Member Secretary

Memo No. : JSPCB/HO/RNC/CTO-  
17803141/2023/2062

Dated : 2023-12-12

**Copy to:** Vijay-II Iron Ore Mines(Tata Steel Limited), Tata Steel Limited, Vijay-II Iron Ore Mines, Ghatkuri RF, Post-Barajamda, Thana -Gua, Block Noamundi, Dist West Singhbhum/ Chief Inspector of Factories, Ranchi/ Director of Industry, Government of Jharkhand, Ranchi / Dy. Commissioner, West Singhbhum / D.F.O. Saranda Division, Chaibasa, West Singhbhum / Dist. Mining Officer, West Singhbhum /Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur for information & necessary action.

Yatindra  
Kumar  
Das

Digitally signed  
by Yatindra  
Kumar Das  
Date: 2023.12.12  
22:09:35 +05'30'  
(Y. K. Das)  
Member Secretary



Water sprinkling on Haul road with water Tanker -







**Anacon  
Laboratories**



TC-12998

Test Report

ULR No.- TC129982400001646F

Test Report No.: ALPL/30092024/5-10

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> M/s Vijay II Iron Ore Mines M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-1 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733	<b>Name of Anacon Representative:</b> Mr.Biplab Giri <b>Date of Sampling :</b> 12/09/2024 to 13/09/2024 <b>Date &amp; time of sampling :</b> 12/09/2024 & 12:20 <b>Sampling location :</b> <u>Near Main Gate</u> <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation: (If applicable) :</b> -	

Discipline: Chemical							
Group: Atmospheric Pollution							
Test Results							
Ambient Noise Level							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
1.	Near Main Gate	IS 9989	62.7	54.9	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

----End of Report----

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**Anacon Laboratories Pvt. Ltd. Nagpur Lab**

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**Anacon  
Laboratories**



TC-12998

Test Report

ULR No.- TC129982400001647F

Test Report No.: ALPL/30092024/5-11

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> M/s Vijay II Iron Ore Mines M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-2 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733	<b>Name of Anacon Representative:</b> Mr.Biplab Giri <b>Date of Sampling :</b> 13/09/2024 to 14/09/2024 <b>Date &amp; time of sampling :</b> 13/09/2024 & 12:50 <b>Sampling location :</b> <u>Quarry-II (Near DG Set)</u> <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation: (If applicable) :-</b>	

Discipline: Chemical							
Group: Atmospheric Pollution							
Test Results							
Ambient Noise Level							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
1.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
2.	Quarry-II (Near DG Set)	IS 9989	71.3	64.8	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

*Snehal Raut*

Snehal Raut

Technical Manager

Authorized Signatory

*Chinmay Garway*

Chinmay Garway

Deputy Quality Manager

-----End of Report-----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on [feedback@anacon.in](mailto:feedback@anacon.in).

**Anacon Laboratories Pvt. Ltd. Nagpur Lab**

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Test Report

ULR No.- TC129982400001648F

Test Report No.: ALPL/30092024/5-12

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> M/s Vijay II Iron Ore Mines M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-3 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733	<b>Name of Anacon Representative:</b> Mr. Biplab Giri <b>Date of Sampling :</b> 14/09/2024 to 15/09/2024 <b>Date &amp; time of sampling :</b> 14/09/2024 & 13:20 <b>Sampling location :</b> Quarry-II (Near Crusher) <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation: (If applicable) :</b> -	

<b>Discipline:</b> Chemical							
<b>Group:</b> Atmospheric Pollution							
<b>Test Results</b>							
<b>Ambient Noise Level</b>							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
3.	Quarry-II (Near Crusher)	IS 9989	67.2	56.1	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.- TC129982400001649F

Test Report No.: ALPL/30092024/5-13

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> M/s Vijay II Iron Ore Mines M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-4 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733	<b>Name of Anacon Representative:</b> Mr.Biplab Giri <b>Date of Sampling :</b> 16/09/2024 to 17/09/2024 <b>Date &amp; time of sampling :</b> 16/09/2024 & 11:20 <b>Sampling location :</b> <u>Near Quarry-II (Mining Area)</u> <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation: (If applicable) :</b> -	

Discipline: Chemical							
Group: Atmospheric Pollution							
Test Results							
Ambient Noise Level							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
4.	Near Quarry-II (Mining Area)	IS 9989	71.2	64.1	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.- TC129982400001650F

Test Report No.: ALPL/30092024/5-14

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> M/s Vijay II Iron Ore Mines M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-5 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733	<b>Name of Anacon Representative:</b> Mr.Biplab Giri <b>Date of Sampling :</b> 17/09/2024 to 18/09/2024 <b>Date &amp; time of sampling :</b> 17/09/2024 & 12:20 <b>Sampling location :</b> Quarry-II (Near Screen Plant) <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation: (If applicable) :</b> -	

Discipline: Chemical							
Group: Atmospheric Pollution							
Test Results							
Ambient Noise Level							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
5.	Quarry-II (Near Screen Plant)	IS 9989:1981	61.7	51.6	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

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**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.- TC129982400001651F

Test Report No.: ALPL/30092024/5-15

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> M/s Vijay II Iron Ore Mines M/s TATA Steel Limited Badajamda-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-6 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733.	<b>Name of Anacon Representative:</b> Mr.Biplab Giri <b>Date of Sampling :</b> 18/09/2024 to 19/09/2024 <b>Date &amp; time of sampling :</b> 18/09/2024 & 12:50 <b>Sampling location :</b> <u>Near Quarry-I ( Mining Area)</u> <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation: (If applicable) :</b> -	

Discipline: Chemical							
Group: Atmospheric Pollution							
Test Results							
Ambient Noise Level							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
6.	Near Quarry-I ( Mining Area)	IS 9989	68.2	52.7	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

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Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982400001655F

Test Report No.: ALPL/30092024/5-16

Dated: 30/09/2024

Page 1 of 1

<b>Issued To:</b> <b>Bokna Storage &amp; Handling Plot</b> M/s TATA Steel Long Products Limited Barajamda, Jharkhand-833 221.	<b>Sample Inward No.:</b> ALPL/23092024/MON-79-NQ-1/7-7 <b>Inward Date:</b> 23/09/2024	<b>Report Issue Date:</b> 30/09/2024
<b>Sample Subgroup :</b> Ambient Noise	<b>Sample Particulars:</b>	
<b>Samplings details:</b> <b>Instrument ID :</b> ALPL-TSL/CEIS-SLM/2024/05 <b>Calibration Status :</b> 23/08/2024-22/08/2025 <b>Make &amp; Model :</b> HTC-SL-1356 <b>Serial No.:</b> 202405733.	<b>Name of Anacon Representative:</b> Mr. Biplab Giri <b>Date of Sampling :</b> 19/09/2024 to 20/09/2024 <b>Date &amp; time of sampling :</b> 19/09/2024 & 13:20 <b>Sampling location :</b> <u>Near Bokna Plot</u> <b>Reference to sampling procedure:</b> ANtd/7.2/Mon-01 <b>Reference to sampling plan:</b> ANtd/7.3/Mon-02/Sept-2024/5 <b>Weather Conditions :</b> Satisfactory & Clear <b>Any other observation:</b> (If applicable) : -	

Discipline: Chemical							
Group: Atmospheric Pollution							
Test Results							
Ambient Noise Level							
Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Noise				
7.	Near Bokna Plot	IS 9989	63.7	54.8	Industrial Area	75	70
					Commercial Area	65	55
					Residential Area	55	45
					Silence Zone	50	40

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Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Chinmay Garway  
Deputy Quality Manager

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## Annexure: 9

<b>Expenditure for Environment Management at Vijay II Iron ore Mines ((1st April 2024 to 30th September 2024))</b>		
<b>Sl. No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
<b>1</b>	<b>Water Sprinkling to suppress dust</b>	<b>4273450.00</b>
<b>2</b>	<b>Environmental Monitoring in core and buffer zone</b>	<b>472553.00</b>
<b>3</b>	<b>Water Tax Payment</b>	<b>133465.00</b>
<b>4</b>	<b>Plantation and Plantation maintenance</b>	<b>2409996.00</b>
<b>5</b>	<b>Provided vehicle to Gua range office for patrolling to control forest fire</b>	<b>791333.00</b>
<b>6</b>	<b>Bolder wall development at buffer zone of mines and dry bolder check dam development and maintenance</b>	<b>2764852.00</b>
<b>7</b>	<b>Retaining wall development in lease</b>	<b>4204565.00</b>
<b>8</b>	<b>AMC charge of continuous Ambient Air quality monitoring station</b>	<b>254880.00</b>
<b>9</b>	<b>Coir mat supply &amp; Installation</b>	<b>1991514.00</b>
<b>10</b>	<b>Garland drains Development</b>	<b>262500.00</b>
<b>11</b>	<b>De-siltation of check dam at buffer zone of mines</b>	<b>252235.00</b>
<b>12</b>	<b>Occupational Health check-up (IME &amp; PME)</b>	<b>172225.00</b>
<b>13</b>	<b>Demand note payment of Site-Specific wildlife conservation plan, Fire management Plan &amp; Chausingha Conservation plan in respect of Vijay II Iron Ore Mine of M/s Tata Steel Long Products Limited</b>	<b>1718936.00</b>
<b>14</b>	<b>Tarpaulin covering on fines stack &amp; maintenance</b>	<b>259400.00</b>
	<b>Total</b>	<b>19961904.00</b>